



Mammal Mail

The Newsletter of the Tree-Kangaroo & Mammal Group

Published 4X a year

Vol 13 No 3 January 2013

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

Feb 7th: 5:30pm TKMG Committee meeting @ the Malanda Hotel, followed at 7:00 pm by a presentation by Katrien Geurts on Native Rainforest Rats.

March 7th: 5:30pm TKMG Committee meeting @ the Malanda Hotel

April 4th: 5:30pm TKMG Committee meeting @ the Malanda Hotel, followed by a presentation (speaker yet to be confirmed) at 7:00pm

RATS OF THE RAINFOREST

by Katrien Geurts

Katrien Geurts originally formed the idea to study Tree-kangaroos in Belgium, being fascinated by this extraordinary species. She succeeded in receiving a PhD scholarship at James Cook University and was given the opportunity to proceed with her plan. However, due to several limitations and restrictions she was dealt another hand and had to step away from tree-kangaroos and find another model species. As native rainforest rats are plentiful and easy to study, they became her main research subjects. They were also useful as indicator species for possums and tree-kangaroos co-occurring in her study sites. By studying the population dynamics and genetics of rainforest restricted rats she is trying to reveal the varying impacts fragmentation has and how to best proceed with managing these patchy populations. She has been zooming around the Tablelands for two years now, performing trapping and spotlighting surveys in the Malanda and Upper Barron area. The talk she will be giving will focus on how size of forest patches

are affecting the rats and through video footage she will also be taking you on a field trip and show you a little bit of the life as a rainforest researcher.

Join TKMG at the Malanda Hotel 7:00PM on Thursday, February 7th to hear more about rats of the rainforest and the life of a researcher in the rainforest.

**Follow-On to the "Alphabet Soup: What's it all mean?" article
(Mammal Mail Vol 13 No2)**

Committee member, Dave Hudson suggested that anyone who found the article "Alphabet Soup: What's it all mean?" (Mammal Mail Vol 13 No 2) interesting might also want to read some further thoughts along these lines by checking out the following article by Chris McGrath:

<http://theconversation.edu.au/australias-scrambled-egg-of-government-who-has-the-environmental-power-9582>

TKMG Projects Update: January 2013

by Dave Hudson

The Mt Fisher Connectivity Project (East Evelyn) is almost complete. The late start to the wet season has necessitated a delay in the planting, but Conservation Volunteers should have this done by the end of January. A more detailed report will be provided in the next newsletter.

The Peterson Creek Community Action Grant project has been progressing well under Larry Crook's guidance. He reports

Site 1: the landholder is in the process of preparing the site for planting. The trees to be planted have been ordered. A planting date with volunteers has been set for 2nd March 2013

Site 2: the landholder has prepared the site and 150 trees were planted on 24th November. The landholder is able to irrigate the trees. The eroded gully and the watercourse have been planted with appropriate species and hay bales have been installed to mitigate excessive water run-off. These bales have been staked into various positions in the gully and along the watercourse and will be replaced throughout the life of the project and then beyond.

Site 3: work has commenced and the contractor on clearing the site of *Asparagus plumosus* and *Turbina* vine has made considerable progress.

TKMG has been invited to submit a full application to the Norman Wettenhall Foundation for funding to expand the "kickstart" natural regeneration (pasture conversion) trials, with the results to be announced in February.

Account of Tree Kangaroo Feeding on Fruits of a Rainforest Tree

by Dr. Barry Traill-Director, Outback to Oceans Program, Pew Environmental Group-Australia

In January my partner Susie Duncan and I were lucky to enjoy a house sit at the property of local Ruth Whiston's (thanks Ruth!) in Fig Tree Close- the pocket of rainforest out from Malanda on the Lake Eacham Road.

Susie and I live in a similar landscape to the Atherton— good volcanic soils, high rainfall on a mountain plateau- but much further south, at Maleny on the Blackall Range in the Sunshine Coast Hinterland. Everything on the Atherton was familiar for us- but pleasantly different in many ways to south-east Queensland mountain country. Boyd's Forest Dragons instead of the smaller Angle-headed Dragons of SEQ. There seemed to be little or no Broad-leaved Privet as a weed in the Atherton but around Maleny it's the major tree weed, forming dense forests. There are Riflebirds and Catbirds but they are different species. The same Pied Currawongs fly around but with a different accent in the call. And there are similar community organisations, working to re-connect fragmented rainforests. The Atherton has *TREAT*, the Blackall has *Hinterland Bushlinks* (which Susie is the coordinator of).

And then of course there are the things that are completely different in the Wet Tropics. Mostly species that were never on the Blackall, or if they were it was in the early Pleistocene. The charismatic and strange beasts of the north, like Cassowaries, Musky Rat-Kangaroos, and of course Tree Kangaroos.

Susie and I were keen to see a Tree Kangaroo if we could while in the area. I'd only seen Lumholtz's Tree Kangaroos once before with a group on Alan Gillander's excellent guided spotlight to Curtain Fig National Park. But Susie hadn't seen one in the wild before.

Susie and I lucked out with Alan this time around (though we did have a wonderful night and saw many Leaf-tailed Geckos and Green Ring-tailed Possums). And wandering around Lake Eacham and the Malanda town Conservation Reserve didn't produce any sightings despite the good looking road-signs with a Tree-roo silhouette on them.

Walking along Fig Tree Close one afternoon I looked up at some birds and, for some reason, focused on a brown lump like an old dead stag-horn fern, and behold- it came into focus as a Tree Kangaroo, 15 metres up, staring down at me.

Susie came along later and was delighted that we could get such clear views of it in daylight. It was a male, scarred around the head and ears and looked a little old, but otherwise seemed healthy and chipper. After staring at us for a while it went back to feeding on the fruit of the tree it was in, which we later identified (thanks to confirmation from Wendy Cooper) as Robert's Tuckeroo, *Rhysotoechia robertsonii*. We were able to watch it for some time. It was definitely selecting the fruit, reaching out to pull in clusters. It presumably got what it was after in nutrition but the getting it down to the stomach seemed a little fraught as it was salivating *a lot*. While we watched, great

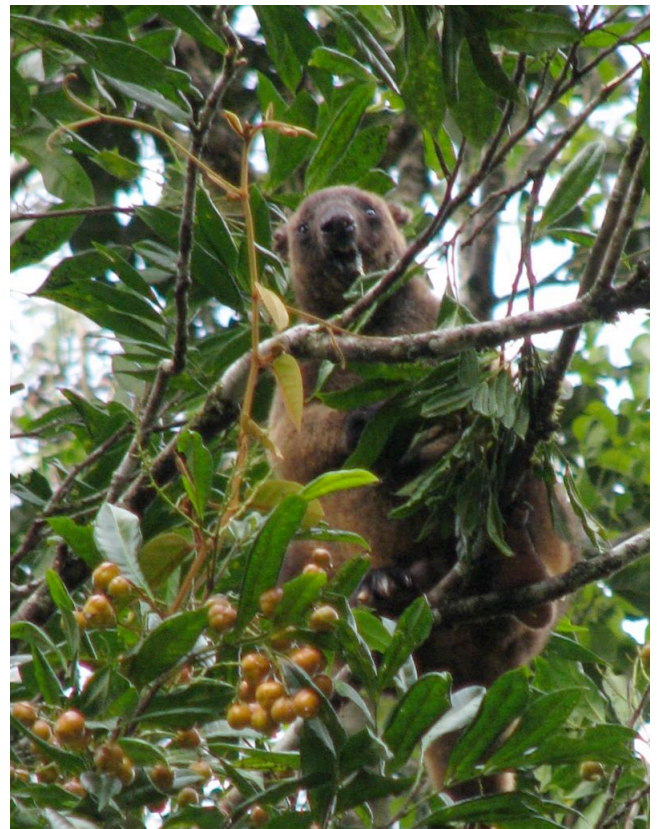


Photo by Susie Duncan

long gobs of spit were coming down as it fed.

A neighbor came out and saw us watching and said it was an old male he'd seen around a bit, and that there was a female with a young one usually just down the road as well. After watching for ½ hour or so we went off very pleased. Susie checked on it a couple of times the next day and it was still there in the same tree, in fact on the same branch, for the next 24 hours before it disappeared. Below were lots of chewed fruit.

It was wonderful to see this most strange of creatures so clearly. Particularly as it seemed to be doing well in rainforest fragmented by clearing. Thanks to everyone we met on the Tablelands for a wonderful and friendly holiday time.

Focus on Food Trees

by Amy Shima



Another interesting, recent observation of a tree-kangaroo feeding was by Roger Martin. On January 1st he discovered a male tree kangaroo happily taking the top out of a grapefruit tree (*Citrus x paradisi*) in his garden (see photo). We had previously been attributing the damage to this citrus tree to the local coppery brushtail possums! Based on the enthusiasm this tree-kangaroo showed for the grapefruit tree leaves, we suspect that he's been the one doing the nocturnal pruning of this

tree. The tree-kangaroo appeared to be in good condition. There was considerable evidence that tree-kangaroos had also been feeding on nearby *Schefflera actinophylla* (umbrella tree).

Neither *Rhysotoechia robertsonii* nor *Citrus x paradisi* are found on the food plant lists previously published by either TKMG or TREAT. These observations remind us that we still have a great deal to learn about tree-kangaroos and the importance of reporting interesting observations about what tree-kangaroos are eating.

Introduced, Non-Native Rats in Australia

by Amy Shima

The speaker at the February meeting of TKMG, Katrien Geurts, will be giving a presentation on her work on native rainforest rats. As such, I thought that the readers might find some information on introduced (non-native) rats of interest.

First some general background information. Rats are rodents. Rodents make up 40% of all living mammalian species. Rodents have highly specialized dentition (teeth) which are greatly modified and reduced compared to other mammals. The primary characteristic of rodents is their single pair of incisors in each of the upper and lower jaws. Incisors are the first (central) 4 front teeth present in heterodont mammals (that is, mammals with varying size/shape teeth), the name derived from the Latin *incidere*, meaning "to cut". These incisors are used for gnawing; grow continuously and, due to the hard enamel on the outer surface and softer dentine internally and their chisel-like shape are self-sharpening.

There are 4 species of introduced rats in Australia. Of these four, there are no records of *Rattus exulans* (the Pacific Rat) on the Australian mainland. The three species of introduced *Rattus* found on mainland Australia are:

| | |
|--------------------------|---|
| <i>Rattus norvegicus</i> | Common names: brown rat, sewer rat, lab rat, white rat, Norway rat |
| <i>Rattus rattus</i> | Common names: Black rat, European black rat, fruit rat, roof rat, ship rat, house rat |
| <i>Rattus tanezumi</i> | Common name: Asian black rat |

Rattus norvegicus (brown rat) is native to the cool and temperate regions of northern Asia. It arrived in Australia with the first European settlement and is found throughout Australia (including Tasmania). *Rattus norvegicus* is a colonial species, occupying deep and extensive burrows and having a complex social organization. *R. norvegicus* are prolific breeders, having litters of 7-10 babies after a 21-23 day gestation. The young are weaned at about 20 days and animals can live up to 2 years. The brown rat is omnivorous, feeding on a wide range of food (including human food, grain, small mammals and birds, shellfish and eggs). *Rattus norvegicus* will aggressively and repeatedly attack when cornered. If you do get one 'in hand', distinguishing features are that, the ears, when folded forward, do not cover the eye and the tail is shorter or of equal length to the head and body length. Several diseases are associated with *Rattus norvegicus*, including leptospirosis, cryptosporidium, Q fever, hantavirus and toxoplasmosis.

Rattus rattus (black rat) is thought to have first been brought to Western Australia by early Dutch explorers but does not appear to have become established on the continent until after the First Fleet arrived at Sydney Cove. *Rattus rattus* is not, as its name might suggest, black--its colour ranging from black to light brown or grey, with black individuals being relatively rare. Like *Rattus norvegicus*, the black rat is a carrier of diseases like leptospirosis, typhus, toxoplasmosis and *Yersinia pestis* (the organism responsible for bubonic plague). *Rattus rattus* shows a preference for forest habitats, especially where there is a deep layer of leaf litter and a structurally complex understory (the kind of conditions found in rainforest patches on the Atherton Tablelands!) and is a strong swimmer, frequently occupying streamside habitats. Black rats are omnivorous, eating fruit, fungi, eggs, young birds and mammals, grains, insects and pet food. While the lifespan of *Rattus rattus* is thought to only be a year in the wild (up to 3 in captivity), they are prolific breeders having up to 6 litters of 5-10 young per year. As rats go, *Rattus rattus* is an attractive rat with sleek fur, a long tail (longer than the head&body length--a feature that distinguishes the black rat from other species) and large ears which, when bent forward, extend past the middle of the eye. *Rattus rattus* has a 'gentle' disposition--when cornered, it cowers in fear (as do native rats) rather than aggressively attacking as *R norvegicus* would. It is believed that black rats exploit niches that are either unoccupied by native species or have been newly created by human disturbance.

Rattus tanezumi, the Asian black rat is the fourth species of introduced rat in Australia. It looks quite similar to *Rattus rattus* and they can only be distinguished on the basis of genetic analysis.

Information for this piece was taken from "Mammals of Australia, 3rd Ed" by Steve Van Dyck and Ronald Strahan; Queensland Museum website; Wikipedia and Walkers Mammals of the World.

Notice to All Members of the Tree-Kangaroo and Mammal Group, Inc.

In keeping with requirements under the Associations Incorporation Act, the Tree Kangaroo and Mammal Group, Inc. (TKMG) is herein notifying all members that, through Aon Risk Services Australia Limited and Queensland Water and Landcarers, Inc., TKMG holds public liability insurance in the amount of \$20,000,000. A copy of the certificates of insurance and further details about the public liability insurance held by TKMG is available to any member by contacting the Secretary, Simon Burchill, either via e-mail (sbburchill@gmail.com) or telephone: 0407-091-347



Mammal Mail

Newsletter of the Tree Kangaroo & Mammal Group, Inc.

P.O. Box 1409

Atherton, QLD 4883

Please Post to:

Tree Kangaroo and Mammal Group, Inc. (TKMG)

e-mail: info@tree-kangaroo.net

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

President: Alan Gillanders 07-4095-3784 alan@alanswildlifetours.com.au

Vice-President: Keith Smith 0407-968-129 keithsue.smith@bigpond.com

Treasurer: Ilona Moerman 4095-2509 tkmgtreasurer@exemail.com.au

Secretary: Simon Burchill 0407-091-347 sbburchill@gmail.com

Newsletter Editor: Amy Shima 0499-180-961 tkmgnewsletter@gmail.com

The opinions expressed in Mammal Mail are not necessarily those of the Tree Kangaroo & Mammal Group, Inc.



The TKMG Website:

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

is maintained on a volunteer basis by

Pesavento Web Development & Marketing

<http://www.pesavento.biz>

A Big THANK YOU to Pesavento Web Development & Marketing for your invaluable assistance in enabling TKMG to get their message out to the community and to the world.