

Friends of Bats

newsletter

Issue 114 September 2014



Exclusion netting subsidy extended to all of NSW

Nancy Pallin

On 1 July 2011, the NSW Government introduced a \$5 million scheme, funded by the NSW Environmental Trust, to subsidise the cost of installing flying-fox exclusion netting for commercial orchardists in the Sydney Basin and Central Coast regions. The scheme was introduced to eliminate the need to issue shooting licences to mitigate flying-fox damage to crops. Once a netting subsidy was received, the orchardist was no longer eligible for a shooting licence for the netted area of the property.

There has been a lower than expected uptake of the funding, so with the support of the NSW Flying-fox Consultative Committee, the netting subsidy has now been extended to cover the whole of NSW.

Funding is available for full exclusion netting and 'throw-over' netting with an aperture size no larger than 5 mm, which is properly fitted to reduce the risk of harm to wildlife.

\$4 million is now available for subsidies until 30 June, 2016. Subsidies will meet half the cost of installing netting, and will be capped at \$20,000 per hectare. Orchardists will be responsible for all ongoing maintenance and replacement costs.

'Special circumstances' under which commercial fruit growers will be able to apply for licences to kill flying-foxes are still being negotiated. It is expected they will be finalised by mid-September. Representatives from Humane Society International, Bat Watch Australia and Nature Conservation Council of NSW have pressed for the clearest and most limited 'Special Circumstances'. Consultation is currently being undertaken with fruit growers.

More information is on the website of the NSW Office of Environment and Heritage:

www.environment.nsw.gov.au/animals/flyingfoxes.htm



Fixed netting requiring modification



Throw-over netting tied to trees

KBCS is on social media!

The *Sydney Bats* Facebook page, launched on June 30, is a platform for sharing our society's knowledge and love of flying-foxes with the vast Facebook community.

We currently have 100 followers, who receive regular updates: from the latest article on bat research, invitations to KBCS events & interesting bat facts, to cute photos of our furry friends. Followers of the page can also educate friends and family on flying-foxes by sharing *Sydney Bats*' posts on their own personal page. "Like" us on Facebook and help spread the word!

<https://www.facebook.com/SydneyBats>



Ku-ring-gai Bat Conservation Society Inc. Annual General Meeting

KBCS held its Annual General Meeting on Tuesday, 26 August, 2014. After a great meal and a chance to catch up with friends, including guest of honour, Bella the grey-headed flying-fox, more than 20 attendees were treated to a fascinating talk by Leroy Gonslaves on the microbats of North Sydney. Leroy described his research into six species of bat utilising a highly urbanised environment and how his findings could be used to protect and enhance microbat habitat.

The formal part of the evening followed. KBCS Committee for the coming year is:

Chair: Tim Pearson

Deputy Chair: Jen O'Meara

Secretary: vacant

Treasurer: Jocelyn Chenu

Other Members: Nancy Pallin, Lyn Burns, Cary Kuiper, Mina Bassarova, Katherine Russell and Tina Hsu.

If you were unable to attend and would like to receive the annual report which includes the audited financial statement, contact: web@sydneybats.org.au

A bat's hairstyle reflects its lifestyle

Adapted from an article by Sarah C P Williams, published 20 June, 2011 in Science Magazine

Whether flying upside down, changing direction in a split second, or hovering, bats are truly the acrobatic experts of the sky. Their airborne skills are so good that some engineers want to design planes that mimic bats instead of birds. Now, thanks to new research revealing how bat wings sense airflow, engineers are one step closer to doing so.

Scientists suspected that short hairs found on bat wings played a role in their flight. The hairs are unusual in several ways. They're very sparse, so they're unlikely used for warmth or waterproofing. Moreover, researchers have found sensory receptors not usually associated with hair. All these features suggest that these hairs are somehow important for flight, but the hypothesis had never been directly tested.

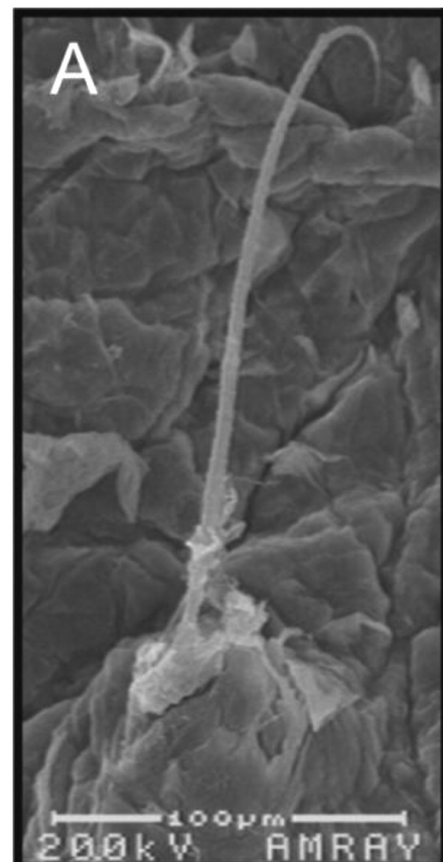
Neuroscientist Susanne Sterbing-D'Angelo of the University of Maryland, College Park and her colleagues studied the function of the wing hairs in big brown bats and short-tailed fruit bats. When the researchers blew a stream of air across the hairs, simulating flying, neurons in a sensory area of the brain were activated. When the airflow blew in the reverse direction across the wing—suggesting drafts that could upset flight—the neurons were even more

active, leading the researchers to hypothesize that the sensors tell the bat when it's flying in unusual winds, so it can adjust its flying technique.

The researchers next trained bats to fly through an obstacle course in the lab, lit only by dim red light to simulate the nighttime conditions during which bats are active. The big brown bats flew through a roomful of artificial trees, and short-tailed fruit bats were trained in a roomful of nets. When the team removed the wing hairs from the trained bats (using a hair-removal cream), the animals flew through the course less efficiently. In particular, the bats didn't turn as sharply or fly as fast; their average speed decreased from 3.5 to 2.5 metres per second. The study concludes that the wing hairs translate airflow information for flight behavior.

This means that the patterns of hairs on a bat's wings reflect their foraging strategy.

From this information it is hoped that artificial sensors that mimic these sensors on bats can be developed to improve the flight capabilities of planes. Planes equipped with such sensors could better predict changes in airflow that could lead to sudden drops, a problem aviation technology has struggled to solve.



An enlargement of the hair of a bat wing

Bats for breakfast - or any time!

Jen O'Meara

Flying-foxes roosting in their camp must be a tempting sight for predators. Leonie Bayley and Jocelyn Chenu have recently reported regularly observing white-bellied sea-eagles swooping over Ku-ring-gai Flying-Fox Reserve, sending bats into the air in a frenzy early in the morning and also later in the day.

Leonie also observed a sea-eagle perching on a branch on one of the reserve's fly-out routes. The bird swooped into the flying stream of bats but Leonie was unable to see if any bats were taken.

This is not unusual behaviour on the part of sea-eagles, with flying-foxes a well-known part of their diet. In 2013, EagleCAM, a 24 hour live stream from a nest of white-bellied sea-eagles in Sydney Olympic Park, recorded sea-eagles bringing in a flying-fox to feed their two young chicks.

Many other animals will eat flying-foxes

including humans, pythons and owls but bat populations are largely controlled by climate and availability of food. Large numbers of bats can be lost during extreme weather events and through starvation.

The sea-eagles seen by Leonie and Jocelyn are probably nesting in Middle Harbour and once their eaglets are hatched may feel the need to visit the reserve on a more frequent basis!



White-bellied sea-eagle eaglet snoozes after its meal

Flying-foxes monitoring

Fly-out counts of flying-foxes have found that bat numbers are decreasing over the winter period in Ku-ring-gai Flying-fox Reserve.

The last count in August estimated 7470 bats currently roosting in the reserve.

June 30063

July 15750

Ku-ring-gai Flying-fox Reserve Bushcare Group

meets every Tuesday
8.30am - 12.30pm

New volunteers always welcome!

For more information call

Nancy Pallin

9416 7334

or email

web@sydneybats.org.au

Knee-jerk reaction to bushfire hazards by NSW politicians

Nancy Pallin

The NSW Government has implemented the 10/50 rule for removing bushfire hazards from around houses.

This allows residents living within 350 metres of bushfire prone land, to clear their property of trees within 10 metres of the dwelling and shrubs within 50 metres of the dwelling.

It will also allow people to clear threatened ecological communities on their property as this legislation overrides the NSW threatened species legislation.

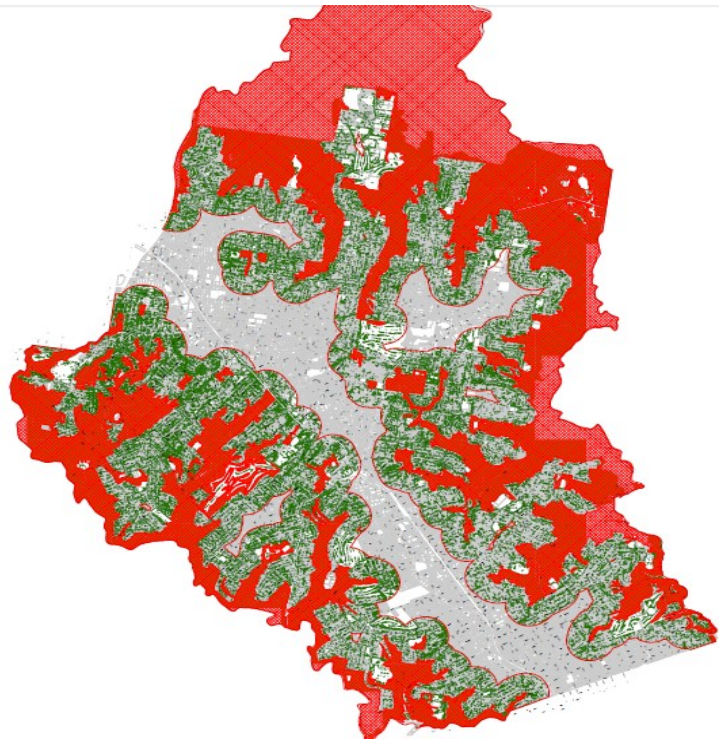
This will have devastating impacts on the tree canopy and understorey habitats in large parts of urban areas like Ku-ring-gai.

The map of Ku-ring-gai Local Government Area (right) shows in red the Bushfire Prone Land mapped in 2008 and in green, all vegetation identified within the 350m buffer where residents are now entitled to clear vegetation without gaining approval.

KBCS is alarmed that this legislation, passed with little public consultation, will remove substantial foraging habitat for flying-foxes. KBCS has written to the NSW Premier, plus Member for Ku-ring-gai, Barry O'Farrell and Member for Davidson, Jonathon O'Dea, objecting to this poorly considered response to bushfire management. KBCS has asked the Mayor and Councillors of Ku-ring-gai to also object to it.

More Information on the 10/50 rule is available from the Rural

Fire Service website: <http://www.rfs.nsw.gov.au/news-and-media/general-news/1050-vegetation-clearing>



Ku-ring-gai Flying-fox Reserve - update

Nancy Pallin

Private Lands Conservation grant

KBCS has received the third instalment of \$5000 grant funding for habitat restoration from the PLC Grants Program (eligible because Ku-ring-gai Flying-fox Reserve is protected by a Conservation Agreement). This money will be transferred to Council to employ the contract bush regeneration team once KBCS is satisfied with the Bush Regeneration Site Management Plan which is being drafted by Council bushland staff.

NSW Environmental Trust grant to Ku-ring-gai Council

The project entitled "Stage 1: Ku-ring-gai Flying-fox Reserve canopy restoration project" has received a grant of \$70,095 from the NSW Environmental Trust under the Restoration and Rehabilitation (State and Local Government) Program. This will be expended over 3 years and will include fencing of regenerating areas, planting of canopy species and a regeneration burn which will also be fenced.

Bushcare Volunteers

The team was unable to work in the reserve during days of high winds and the rain that broke the winter drought. Exclosure #4 was thoroughly weeded and Exclosure #2 was enlarged.

A flock of red-browed finches was seen feeding on the seeds of the tall herb *Sedgesbeckia orientalis* in Exclosure #6. Despite the winter drought, *Acacia parramattensis* flowered and more seedlings of blueberry ash are growing sturdily.

Bird excitement

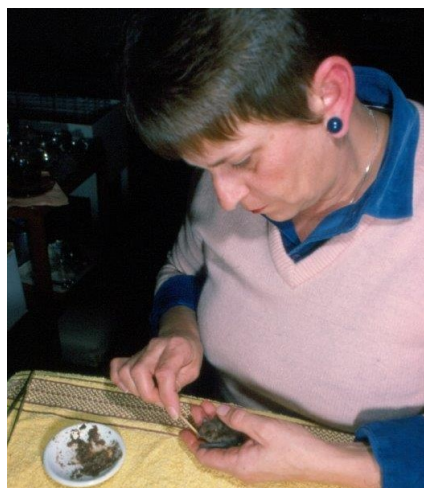
I was excited to see for the first time, a Noisy Pitta (*Pitta versicolour*) hopping around amongst logs and clumps of ferns. Within minutes I also saw, for the first time in many years, a pair of Bassian Thrushes (*Zoothera lunulata*). Both these species spend a lot of time on the ground so their presence suggests that the reduction of foxes and recovery of the understorey are benefiting these native species.



Harry Leung and Bruce Taylor making a Lantana raft to prevent re-sprouting



Ken removing Trad (*Tradescantia fluminensis*) with experienced care



Julie Spence feeding a microbat

In Memory of Julie Spence

At the Julie Spence Viewing Platform at Cabramatta Creek Flying-fox Reserve, a new sign has been installed. The Cabramatta Creek Flying-fox Committee is organising its unveiling with Fairfield City Council. Julie was an active member of KBCS before she began conservation work as a volunteer at Cabramatta Creek flying-fox camp.

Some members of KBCS may remember her and will be welcome to attend the unveiling.

If you would like to attend and be advised of the date contact Tim Johnson TJohnson@fairfieldcity.nsw.gov.au
Natural Resources Team Leader, Fairfield City Council

Microbat fact

Microbats are amazing mums. Most females give birth to a single young each year, although some species typically have twins. The young are very large when born—about 30% of the mother's body weight (equivalent to a human female giving birth to a 20kg baby)! The pups are born in early summer when there is plenty of food available to support the mother and developing young. The mother suckles her young until it is ready to fly at 1-2 months of age.

For more bat facts visit the Australasian Bat Society website:

<http://ausbats.org.au/cool-facts-about-bats/>

An abstract from Australasian Bat Society conference papers

Flying-fox dispersal from the Royal Botanic Gardens, Sydney: an update

John Martin, Royal Botanic Gardens and Domain Trust, Sydney -
John.Martin@rbgsyd.nsw.gov.au

In June 2012 the dispersal of the Grey-headed (GHFF) and Black Flying-foxes from the Royal Botanic Garden Sydney (RBG), Australia, commenced under strict approvals from the New South Wales (NSW) and Commonwealth Governments. In less than one week of predawn and sunset noise disturbance the colony of ~5000 flying-foxes no longer roosted within the RBG during the day.

The implementation of noise has continued pre-dawn to prevent the colony from re-establishing. During the first six months following the initial dispersal, a peak of 2100 ($x = 565 \pm 436$ SD, $n = 182$ counts) flying-foxes were observed pre-dawn attempting to resume roosting; whereas, during the latter stages of the second six months this number was observed to reduce to zero ($x = 194 \pm 190$ SD, $n = 79$ counts).

To monitor where the flying-foxes dispersed we fitted 50 males and 50 females with satellite transmitters. This sample of flying-foxes visited 204 colonies over a 12-month period; from Geelong in Victoria to Gladstone in Queensland.

The movement data collected supports previous studies that demonstrate that GHFF form a single population across its distribution, with individuals readily moving between colonies.

The RBG dispersal demonstrates that in certain circumstances this method may be effective; it also demonstrates that it is an expensive method with no guarantees.

Bat Conservation Gift Fund News

Thank you to all our generous donors, whether anonymous or acknowledged below. We have received donations since 1 July, 2014, from:

C Austin, M Bassarova, J Chenu, G Cohen, K Cox-Witton, L Desmond, B Dowsett, H Dunne, M Eade, J Fairlie-Cunningham, J Green, J Gye, S & J Hills, J Hutchinson, N Jones, E Jones, C Kuiper, P Langley, H Leung, G Limburg, J Madden, N Myers, C Nolder, Oatley Flora & Fauna Conservation Society Inc., S O'Grady, D Ondinea, K Parkhouse, J Sinclair, C Shuetrim, V Smith, T Spurling, J Stockard, B Taylor, T Hsu, M Warner, A Whitney, A & V Wiggers de Vries, M Wood, M Worley. **Total: \$1935.00**

Meet bats at:

Sun, 28 September - 10am-3 pm

[Cumberland Forest Fair](#)

Join us at Cumberland for a fantastic family day out with games, stalls and entertainment.

October/November -

Bat's birthday party at

[Australia Walkabout Wildlife Park,](#)

Calga. (date to be finalised).

Sat & Sun 25-26 October - 9am-6pm

[Australasian Bird Fair](#) at Newington

Armory, Sydney Olympic Park

This bird and wildlife fair offers plenty of fun and educational activities for all.

And we'll keep you posted about bat nights at Rosedale Rd bridge, Gordon.

Friends of Bats

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