Food for bats - Swamp Mahogany, flowering now
Photo Tim Pearson

Friends of Bats
newsletter
Issue 101, June 2011

A big step towards ending shooting of flying-foxes in NSW

Robyn Parker, MP, NSW Environment Minister, announced on 25th June that the NSW Government will provide orchardists with funding to protect crops from flying foxes and will phase out licensed shooting of flying-foxes in NSW by 2014.

NSW is the only state in Australia still issuing licenses to shoot grey-headed flying-foxes, which are listed as a threatened species under both state and federal legislation.

The new scheme commenced on 1st July 2011. It will provide orchardists in the Sydney Basin and Central Coast with financial assistance towards the installation of full exclusion netting. Together, these areas comprise 90 per cent of licences issued since 2001; they have experienced the greatest rate of change in terms of flying-fox incursions.

Most importantly, the financial assistance will be accompanied by the phasing-out over a three year period of the licensed shooting of flying-foxes throughout NSW, with licences issued after this period only in exceptional circumstances.

Grants will be 50% of the cost of the netting up to a ceiling of $20,000 per hectare. Minimum area is one hectare. The type of netting must be full exclusion netting with canopy and sides.

In a joint statement, Humane Society International, Nature Conservation Council of NSW, Bat Advocacy and Ku-ring-gai Bat Conservation Society expressed their support for the scheme, saying they looked forward to working with the Government in the coming years to successfully implement the scheme and end licensed shooting of flying-foxes.

A further benefit for flying-foxes in eastern Australia from this announcement is that it strengthens the Queensland Government position of no longer issuing 'damage mitigation permits' to kill flying-foxes. There has been strong lobbying by some fruit growers to return to shooting. With NSW phasing out shooting it brings Queensland, NSW, Victoria and South Australia into alignment.

For more information go to:
www.environment.nsw.gov.au/animals/endtoshooting.htm

Funding is for full exclusion netting with canopy and sides, to avoid wildlife injuries.

KBCS Inc.
Annual General Meeting

Wednesday, 7 September, 2011
8.00 pm
4 Taylor St, Gordon
See page 4 for details

Another (short) reprieve for flying-foxes

KBCS welcomed the news that the flying-fox camp in the Sydney Botanic Garden will not be evicted until next year, as the authorities decided that more research is required before the disturbance (one could say harassment) can commence.

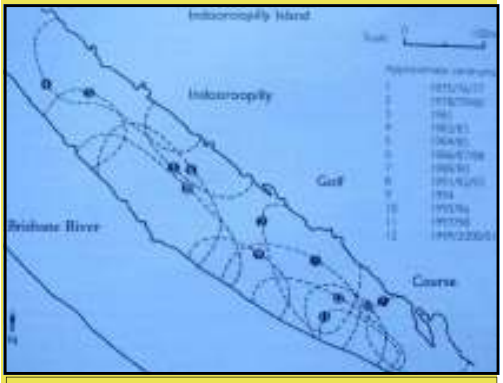
Why do flying-fox camps move?

Nancy Pallin

By this I mean, why do flying-foxes occupy different parts of the available habitat for resting during the day? Whether there are only 100 animals or 50,000, the group is known as a camp. In eastern Australia, grey-headed flying-foxes use more than 200 camps. Sometimes these camps are empty because there is no food in the area for a while but are re-occupied when trees flower or fruit in nearby forests. So far researchers agree that flying-foxes move between these camps as individuals.

At camps occupied over many decades, some more than a century, flying-foxes occupy different parts of the available habitat, moving the location of the camp slightly over the years. The question is particularly important in relation to camps that continue to be occupied. Understanding the causes would help us to know how best to protect and restore roosting habitat for flying-foxes.

Dr Les Hall mapped the areas occupied by flying-foxes on Indooroopilly Island on the Brisbane River - Brisbane from 1975 to 2001[1]



The map shows where the flying-foxes camped between 1975 and 2000 and how the camp has shifted from one place to another on the island.

He observed that "The area of vegetation, in which the flying-foxes roost at the Indooroopilly Island camp, often changes with the arrival of bats at the beginning of the birthing season (September – October). . . Most roosting areas were occupied for a maximum of only 3 years. . . .These shifts appear to be determined by recently arrived bats, with the over-wintering permanent residents moving to the new roosting site."

This timing of when the camp shifts is an interesting observation.

Ku-ring-gai Bat Conservation Society has been collating information on the changing location of the flying-fox camp in Ku-ring-gai Flying-fox Reserve, Gordon, using observations of researchers, neighbours, bush regenerators and its members.

Early Observations

- 1962, the gardener at Lady Gowrie Nursing Home in Edward Street reported that bats were camped next to the property.
- Martyn Robinson, from the Australian Museum, reported in 1972 that about 2,000 grey-headed flying-foxes were camped in Stoney Creek near the nursing home and they were breeding.
- Rhys Puddicombe studied the camp in 1979-80 and recorded the location of the camp.

The following maps are snapshots of flying-fox camp in Ku-ring-gai Flying-fox Reserve, Gordon, at different times.

Area occupied in October 1985, mapped by Robyn Buchanan, ecological consultant

The 1985 Site Assessment Report by Robin Buchanan highlighted that trees were dying and being enveloped in vines. Large blackbutts and angophoras died and two decades later had fallen over or been consumed by termites.

Maximum area occupied in summer 1988 -1989 mapped by KBCS members

In July 1989 most of the camp remained in the western part of the reserve but some hundreds also occupied an area to the east.

The following summer most of the camp moved eastward along Stoney Creek and has not returned to the western section.

1990 -1998 the camp expanded and contracted with the seasons in this central part of the reserve.

Area occupied from September 1998 -March 1999

In the mating season of April 1999, numbers increased and the camp moved up the gully to the North.

Maximum area occupied summer 2010 – 2011

Last summer (2010/11) the flying-foxes camped in the tallest trees in the northern gully, causing distress to householders whose homes adjoin the reserve. Perhaps this move has occurred because of deterioration of the habitat on the southern side of Stoney Creek which was the core area of the camp for the previous decade.

Based on observations and research it is likely that several causes are at

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play and there might be many more that we don't yet understand.

Two Hypotheses

First, KBCS has noticed at Gordon that rapid increases of numbers of flying-foxes - up to 40,000 or even 70,000 can occur in a few weeks. These big increases usually coincide with abundant flowering of native trees such as the red bloodwoods. They do not occur every year but the hypothesis is that the sudden increase in numbers is a major trigger for occupying a new area of the reserve. It appears to be a different trigger from that observed by Les Hall at Indooroopilly Island.

A second hypothesis is that the amount of roosting space in parts of the reserve where the flying-foxes have camped has declined. Trees become partially defoliated, branches are worn and eventually break. This leads to fewer branches on which to roost and at the same time weeds take over the understorey, preventing recruitment of new trees. In addition, and as Robin Buchanan predicted, some tree species in this bushland suffer more from the increase in nutrients added by flying-fox droppings than others, dying within a decade.

Habitat Restoration Objectives

The key objective of the habitat restoration project is to increase more suitable roosting trees away from the periphery of the reserve to make it more attractive to flying-foxes, but of course it will take many years before the canopy is re-established in areas where the flying-foxes have previously camped. Nobody can tell where they will go next and how long they will stay where they are at the moment.

(1) Leslie S Hall Management of flying-fox camps: what have we learnt in the last twenty five years? In Managing the Grey-headed Flying-fox as a Threatened Species in New South Wales, edited by Peggy Eby and Daniel Lunney, 2002. Royal Zoological Society of New South Wales.

Release of hand-reared grey-headed flying-fox orphans in Ku-ring-gai Flying-fox Reserve, Gordon, 2011

Marjorie Beck

Orphans in crèche (Photo John Armston)

This summer 19 hand-reared grey-headed flying-fox orphans were released to join the wild population of flying-foxes camped in Ku-ring-gai Flying-fox Reserve, Gordon (KFFR). These orphans were rescued and reared by Sydney Metropolitan Wildlife Service (SMWS) members.

After being crèched at Kukundi Wildlife Shelter in Lane Cove National Park, where they learnt to be bats not humans, the orphans were banded and transferred to the release cage in KFFR mid February.

A week later the hatch on the release cage was opened and the young flew out to join the wild flying-foxes. They were support-fed until mid to late April when they stopped returning for food. During that time the orphans were adapting to their new life in the wild,

KBCS received no calls to rescue lost young, nor were any reported seeking food from residents living near the reserve. This was a positive sign that they were coping well.

KBCS would like to congratulate the dedicated carers who have yet again done such a wonderful job in rescuing and raising another batch of these important little animals to be released back into the wild.

KBCS release managers Marjorie Beck and Jocelyn Chenu would like to extend their special thanks to SMWS release manager Jodi Lewis who did a great job of juggling the many demands of this role .

Cairns airport: flying-fox strike risk study and strategies

Thousands of spectacled flying-foxes are attracted to the stands of melaleuca, which flower in the Cairns region from March to June each year. At dusk, they fly out from their camps, in what has been found to be a predictable pattern, placing them at risk of aircraft strike.

Cairns airport commissioned a study from the CSIRO to discover more about flying-fox behaviour, in order to better manage the potential aircraft strike hazard.

This study revealed that from March to June, up to 17,000 flying-foxes track north, at heights of between 200 and 300 feet above ground level, crossing an airport runway. The study identified three main flying-fox camps: Yorkey's Knob to the north of the airport, Central Swamp to the south west and Cairns library to the south. It found that the large Central Swamp camp posed the greatest potential risk, because the flying-foxes' flight path to the northern stands of paperbark took them directly over the airport.

Armed with this knowledge, the airport has developed a predictive risk model and a strategy to minimise the risk of flying-fox strikes. Airport safety officers and apron co-ordinators monitor and report on flying-fox movements, numbers, direction and height. Bat watch condition reports are then issued to airlines and air traffic control during times of peak flying fox activity. They classify flying-fox activity into four levels with escalating responses. These reports allow the airlines to avoid operating during peak flying-fox movements, which is usually for a period of up to 15 minutes. Other strategies include changing runways and reviewing flight schedules if mass fly-outs recur.

Airline operators have responded positively to the airport's initiative. For example, they carry additional fuel and authorise their pilots to use their discretion in delaying arrivals or departures during times of peak flying-fox activity.

Summary of an article *Strike One: wildlife Is it a bird or a Plane? No, it's a flying fox* by Margo Marchblank. In Flight Safety Australia, Mar-Apr 2011.

Cairns airport schedules flights to fit in with local spectacled flying-foxes fly outs (Photo CSIRO)

Hendra virus vaccine closer

A Hendra virus vaccine for horses could be available as early as next year, after the CSIRO has had early success with testing.

CSIRO pathologist, Dr Deborah Middleton, who is based at the Animal Health Laboratory in Geelong, spoke about the breakthrough at a recent veterinary conference in Adelaide.

The prospect of taking horses out of the picture will considerably reduce the risk to humans. Dr Middleton said "all human infections have come about following contact with infected horses, so using immunisation of horses, we have the potential to absolutely break the chain of transmission from flying-foxes to horses to people".

Extract from an ABC News report, Wed May 18, 2011

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

Wednesday 7th September, 2011 at 8.00 pm
4 Taylor St, Gordon (corner Waugoola St)
Please join us at 7.00 pm for a light meal and bat chat.
Tim Pearson will talk about 'Flying-fox vocalisations – more complex than previously thought'
RSVP by 2/9 for catering purposes to: Jocelyn Chenu P 9498 1420 E chenu@bigpond.net.au

Protect flying foxes: help trees survive climate change

A major new report prepared by Tim Low for the Queensland Government: 'Climate Change and Queensland Biodiversity' emphasises the importance of protecting flying foxes to help trees survive climate change. The Management chapter includes a section called 'Promote pollen migration', which says this:

"Eucalypts lack dispersal structures on their seeds (apart from small wings on Coymbia seeds), implying limited potential for range expansions in response to climate change. Instead, they invest heavily in pollination, evolution having favoured pollen-mediated gene movement ahead of seed movement (Reid and Potts 1998). Eucalypts dominate today despite the extreme climate change of the recent past. McKinnon et al. (2004a) suggested that various species 'have merged and been resurrected to varying degrees following the climatic perturbations of the Quaternary glacial cycles', implying that hybridisation promoted by pollination could be important to their future. If long-range pollinators are protected, eucalypt genes that confer adaptation to aridity could circulate widely. The most important pollinators may be those that travel furthest. Flying foxes and birds often fly very large distances and carry far more pollen on their bodies than insects. With eucalypt pollen often remaining viable for a week or more (Barbour et al. 2008), a flying fox carrying pollen south from Gladstone could greatly increase the chances of eucalypts and paperbarks (*Melaleuca quinquenervia*) around Brisbane producing offspring adapted to higher temperatures…

"More could be done to advertise the role of flying foxes in aiding eucalypts to survive climate change, and to explain that bat-transmitted infections are extremely rare. More research into flying fox movements, roosting choices, and camp regeneration would be beneficial. A recent trend is towards smaller, more numerous urban camps, leading to more conflicts with residents (Craig Walker pers. comm.). Little red flying foxes (*Pteropus scapulatus*) are potentially the most important of all pollinators under climate change because they travel very large distances in very large numbers and seldom feed on anything other than nectar. They have been described as 'at the forefront in the genetic preservation of many bioregional ecosystems' (Van Dyck and Strahan 2008). But they elicit the most complaints, visiting urban camps in immense numbers, damaging trees and increasing noise levels."

The report is available at: www.derm.qld.gov.au/wildlife-ecosystems/biodiversity/climate-change-report.html

Membership Renewal & Donations

Membership renewal is now due - the annual subscription has not been increased and remains at $20.00 per year.

PLEASE CHECK THE LABEL ON THE ENVELOPE IN WHICH YOUR NEWSLETTER ARRIVED FOR YOUR SUBSCRIPTION EXPIRY DATE.

A renewal form is included with all newsletters – even if you don't have to renew your membership, we always welcome donations and you can use the same form to donate.

Newsletters - Thank you to everyone (more than half our membership) who elected to receive the newsletter by email. You can opt to receive the newsletter electronically - contact us at web@sydneybats.org.au

Jocelyn Chenu KBCS Treasurer

Friends of Bats

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Bat Conservation Gift Fund News

Donations received from April to June 2011 totalled $3292.00 (for the year $7081).
Donors: S Guntrip, Northside Mayors Association, E Sehmer and D Lennard, Westpac Gift Matching,

Thank you all for your generosity!

Donations over $2 are tax deductible - receipts are mailed with your next newsletter unless otherwise requested.