

Friends of Bats

newsletter



Issue 111 December 2013

Bats. We need them: do they need us?

Adapted from an article by Dawn Starin which appeared in 'In these Times', 26 May, 2013:

http://inthesetimes.com/article/15007/we_need_bats/

Bats, the only mammals capable of powered flight, have a bad reputation. Weighed down with sinister cultural baggage and often thought of as simply disease vectors, it is often forgotten that bats provide indispensable services to ecosystems and economies.

According to Bat Conservation International, more than 300 plant species in the Old World tropics alone rely on the pollinating and seed dispersal services of bats, and additional bat-plant relationships are constantly being discovered. Many important crops depend on bats to pollinate their flowers or distribute their seeds, including mango, banana, avocado, dates, figs, cashews, peaches, guava and baobab.

Bats also disperse plant seeds essential for reforestation and timber production. Studies done in the Neotropics have shown that bats were more responsible than birds for dropping seeds in the centre of large openings in forests. Desert ecosystems also rely on nectar-feeding bats. Organ pipe and saguaro cacti owe their very existence to bats. According to bat biologist Bill Rainey, on islands with few wildlife species, fruit bats play a "keystone" role in forest maintenance as the sole pollinators and seed dispersers of local plants.

Because bats are the slowest reproducing mammals on earth for their size, most producing only one young annually, they are exceptionally vulnerable to extinction—and not just in the tropics.

According to Rob Mies, Executive Director of the Organization for Bat Conservation, "Most bat species in the world are in decline. We estimate that about half of the over 1,200 known bats are at risk of extinction in the next 100 years." A decline in bat populations could seriously threaten the health and livelihood of people. Research published in *Science*

concludes that bats save U.S. farmers more than \$3.7 billion per year (possibly as much as \$53 billion per year) in avoided crop damage and reduced pesticide needs. A single brown bat can catch 1,200 mosquito-sized insects in just one hour. In Missouri alone, gray bats eat 540 tons of insects per year, while the 20 million Mexican free-tails from Bracken Cave, Texas, eat approximately 200 tons of insects nightly.

Merlin Tuttle, a leading bat expert and founder of Bat Conservation International, says, "[Bat] populations are needlessly declining, often the result of thoughtless human acts. We cannot ignore their plight without jeopardizing our own future." Alice Hughes, who studies the conservation and biogeography of Southeast Asian bats, agrees: "Bat species worldwide are endangered by a variety of different threats, ranging from hunting, habitat and roost loss, pollution, pesticides, persecution, climate change and disease."

In eastern North America, White Nose Syndrome, a fungal disease, has killed at least six million bats since 2006 and is now moving west, threatening the existence of all North American bat species that hibernate. The cause of this malady is thought to be a fungus found in caves in Europe that was introduced to North America by European spelunkers.

And sometimes the dangers to bats come from unexpected sources. Tens of thousands of bats are killed each year by barotrauma, a condition caused by sudden changes in air pressure, related to wind-energy turbines.

According to Hughes, "On a worldwide basis, our lack of knowledge often makes targeting conservation measures and assessing population trends difficult or even impossible." And Nikky Thomas, Scientific Officer at the Harrison Institute,



Photo: Tim Pearson

**Wishing all
friends of bats the very
best for the festive
season with the fervent
hope that 2014 will be a
much better year for bats!**

points out that while "new species of bats are still being discovered and the total number of known species increasing, unfortunately the number of individuals in some populations are (*sic*) declining, especially in areas where conservation measures are hard to implement."

We need bats to survive, but will bats survive the impact of recent human development and destruction? Or, will the soft fluttering of fragile wings no longer be heard, the nightly departure of furry hordes no longer be seen? For 64 million years, bats have inhabited our planet. How much longer do they have here?

And if they go, can we survive?

“No tree, No me”

TED^xCanberra—then, now, next was held 7 September 2013. KBCS deputy Chair, Tim Pearson gave a presentation entitled ‘No tree, No me’ promoting flying-fox conservation. To see a video of his engaging, entertaining and factual talk use the following link:

<http://www.youtube.com/watch?v=qnOhS5jVBFk&list=PL1iwr5GZcrgbJ0Pmuuit1m9rf5F-fb9R2&index=5>



More new bat species identified

Adapted from Bat Conservation International e-Newsletter September 2013, Volume 11, Number 9

Bats are an incredibly diverse group of animals – and that diversity gets richer with each passing year. The increasing use of DNA analyses, plus new discoveries in little-studied parts of the world, have produced another sharp increase in the "official" number of worldwide bat species.

Nancy Simmons of the American Museum of Natural History reported a new total of at least 1,293 living bat species during the recent International Bat Research Conference (IBRC) in Costa Rica. That's more than 20 percent of all mammal species.

She also noted that about a dozen other potentially new species are in the process of being confirmed and named. And another 247 bat species are listed as extinct. Simmons had raised the total to 1,232 at the 2010 IBRC in Czech Republic, and in 2003 she boosted the number of bat species to 1,105 – from the 925 cited

since 1993.

She says the main factor behind the increases is that more researchers are using new technologies, "which are playing a powerful role in showing a lot of hidden diversity in what were once thought to be wide-ranging species.

"But some genuinely new bats – never before seen – are captured and identified every year," Simmons said. "These discoveries are often made in parts of the world where there has been little previous work or where past surveys only began to scratch the surface. Still other new species are discovered in museum drawers where close examinations and comparisons show that specimens collected years ago are not what they were originally thought to be.

"All of these kinds of discovery," she said, "are part of the picture that is showing bats to be more diverse than we thought."



Little pied bat or panda bat of Sudan (above) seen for the first (and last) time in 1939, was recently re-discovered during a research trip into the Democratic Republic of Congo.

<http://www.businessinsider.com.au/badger-panda-bat-discovered-in-sudan-2013-4#>

“Bat Awareness” events February & March 2014

Two events are planned for early 2014, jointly hosted by KBCS Inc. and Ku-ring-gai Council. KBCS members, their families and friends are very welcome.

These events are free but please remember it is essential to book (P: 9424 0893 - Ku-ring-gai Council). Both events will be held at 2nd Gordon Scout Hall, Rosedale Rd, Gordon, opposite Glenview St, and will go ahead rain or shine.

Maximum number: 50 (due to space on bridge when watching fly-out)

Children must be accompanied by an adult.

Saturday 1 February, 6.30 - 8.30 pm:

Meet live flying-foxes, displays, talks, refreshments and view the fly-out spectacle at about 8.20 pm.

Saturday 29 March, 5.00 – 7.30 pm:

Bats Galore! Children's author, Aleesah Darlison, will present an educational interactive talk based on her picture book about a micro-bat called Warambi. Using powerpoint, video, loads of crowd involvement and craft activity, Aleesah will bring her love of bats and her story to life. (Suitable for children ages 5 – 12 years).

Learn all about bats, what they eat, where they live and how we can protect some of the more vulnerable species.

Have a close encounter with a live flying-fox.

Watch the spectacular fly-out as thousands of bats leave the nearby reserve on their nightly search for food around 7.15 pm.

2nd Gordon Scout Group will be hosting a BBQ (nominal charge - funds go to scout group).

Yellow Poo

Nancy Pallin

Question: What is THIS on my deck?



What is THIS on the path?

Answer: bright yellow bat poo!

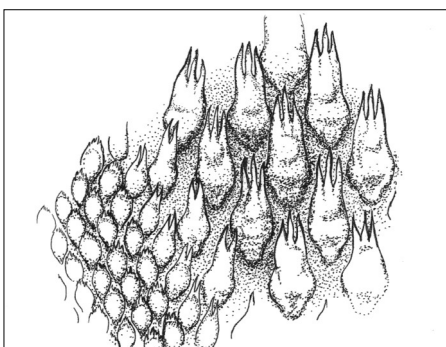
Where does this yellow poo come from?

The droppings were located under flowering turpentine trees where grey-headed flying-foxes were feasting in October.

Here is proof that that they lick and swallow pollen. Researchers have studied their droppings under microscopes and found that the pollen grains were opened and the protein extracted in their gut.

The tongues of flying-foxes and lorikeets are similar because they both lick nectar and pollen from flowers.

The papillae on top of the tongue of a grey-headed flying-fox looks like the image (right). The larger papillae in the middle have three lobes and are different in size and shape from those on the side. The drawing below is by Anne Bowman and was done from the same image of the tongue under a microscope.



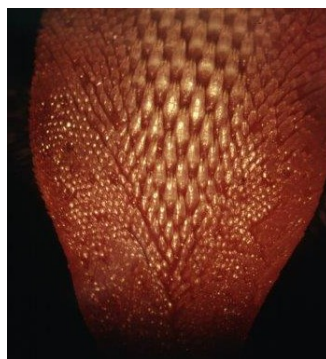
This female grey-headed flying-fox carries her young pup with her

Photo: Nick Edards



Above: Turpentine (*Syncarpia glomulifera*) flowers

Below: Grey-headed flying-fox tongue



What's that hanging on the powerline?

It's a bat and it's dead!
Does it matter?

After all lots of bats (and possums) come to grief on power lines. While most of the year the body could just hang there until decayed enough to drop, now is the time to have a closer look. From late September until about the end of January (the period seems to keep extending each year) flying-foxes give birth to their young (called pups) - just one per year.

In its early weeks the pup is totally reliant on mum and hangs on for dear life, especially when she's flying! For the first few weeks mums fly out to feed at night carrying their pups with them. The way our powerlines are installed (above-ground cables spread out rather than bundled or buried underground) pretty much means certain death for any wildlife that has the misfortune to touch more than one line. While a lot of flying-fox mums come to grief on power lines and are electrocuted, miraculously, in most cases the pup survives.

If the pup is rescued, it can be assessed for any injuries, raised by a dedicated wildlife carer (and we mean dedicated!), then released back into the wild with other orphans in late summer. For the next few months (at least 'til the end of February), if you see a dead flying-fox on power lines, please report it to one of the wildlife rescue groups. They will send someone to check for a live pup and if necessary contact power line authorities to arrange its retrieval.

And if the pup isn't rescued? It will simply starve to death over a number of days.

So please keep your eyes peeled and call for rescue:

Sydney WIRES - 1300 094 737

Sydney Wildlife - 9413 4300

For other areas please contact your local wildlife rescue group.

Singing about echolocation!

Ever needed an easy way of explaining how echolocation works? Visit the following site for a cute song to teach the kids all about echolocation:

<http://www.youtube.com/watch?v=Hr-Y2Tt8gFE&feature=youtu.be>

Ku-ring-gai Flying-fox Reserve Bushcare Group

meets every Tuesday 8.30 am - 12.30 pm. New volunteers always welcome!

For more information call Nancy Pallin 9416 7334

or email web@sydneybats.org.au

Flying-fox finger puppets now available

KBCS recently received a shipment of hand-knitted finger puppets which we will be including in the activity packs we give to children attending bat events (such as those coming up Saturday 1st February and Saturday 29 March, 2014 - see page 2 for more information about these events and how to book).

Sourced from a UK company <http://finger-puppets.co.uk/>, the puppets were knitted in Peru for Little Fingy, a charity organisation providing work and funds to support Peruvians in the Andean villages where the knitters live. The funds are used to improve community facilities such as providing desks and computers in schools or mattresses and blankets for the knitters' families.

More information: <http://finger-puppets.co.uk/charity-fundraising/>

Our thanks to Maryanne Large for arranging our order.

If a flying-fox finger puppet is high on your wish-list and you are happy to help with postage, contact us: web@sydneybats.org.au and we will endeavour to make your wish come true!



Above: A flying-fox finger puppet poses for the camera. Each individually-knitted puppet has its own characteristics, just like the real thing (below)! - Photo: Cary Kuiper

2013 Bats' Birthday - Australia Walkabout Wildlife Park, Calga



On Saturday 2 November, the annual "bats' birthday" was held at Australia Walkabout Wildlife Park. This year we were celebrating Hannah's 25th birthday; the oldest of the education bats.

All the education bats have been rescued for one reason or another and cannot be released back into the wild. They include Fleur, Jackson, Sparky, Stephanie, Koda, Bella, Lily, Lukey, Gulget, Ariel, Scribbly and Kirsty.

Despite the heat and smoke from close fires, Cary, Tim and Leonie from KBCS held a presentation day for all who visited the park.

Left: Birthday girl, Hannah, meets her newest admirers: Harrison and Rowan.



E-Newsletter!

Would you like to receive this newsletter by email rather than as a posted paper copy? It would help KBCS save paper, money and volunteer time. If you are happy to take the E-FOB option please send a blank email to: web@sydneybats.org.au with "Please add me to your e-FOB list" in the subject line.

Bat Conservation Gift Fund News

Thank you to all our generous donors, whether anonymous or acknowledged below. Donations received from July to December 2013:

M Bassarova, M Bell, J Fairlie-Cuninghame, B Guntrip, J Gye, B Law, S O'Grady, S Payne, C Rippon, H Seaton, J Sinclair, T & J Spurling, C Wheatley.

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