

Submission into the Parliamentary Inquiry into the Status of Flying Foxes – Lucy Norman

This submission will argue strongly against developing recommendations that will allow native Flying Foxes to be removed from the 'vulnerable species' list at this time.

The fact that Flying Foxes are vulnerable and the fact that they are inconvenient are two totally unrelated facts. When we talk about Flying Foxes, we are talking about the last survivors of a dying species. They are not vulnerable because of their numbers. Unquestionably, there are a lot of the animals alive and dwelling along Australia's east coast. They are vulnerable because of their rate of decline.

95% of the species perished in the last 100 years because of interaction with humans. 30% have died since 1990. If the current trend continues, the species will be functionally extinct within the next 20 – 100 years.

When we look at changes to polar ice, we are not concerned because there is no ice. We are concerned because of the rate at which the ice is diminishing, and we can project what that decline means for the future. It is exactly the same with Flying Foxes – their decline is exponential.

Dr. Kerry Parry-Jones speculates that the incursion of Flying Fox colonies into urban areas in the last few years has been due to the long-term effects of logging and habitat destruction. This problem has been 30 years in the making, and it cannot be solved overnight.

It may appear as though there are more Flying Foxes than ever before – that is entirely untrue. We are *seeing* more of them than ever before. As stated previously – only 5% of the species remains – but that 5% is now in serious conflict with human populations.

This is not a robust species. Tens of thousands of them have died in a single day, when temperatures rise over 40 degrees. Below is the effect of such a day on a colony of Grey-headed Flying Foxes in Queensland.



Already this year, carers throughout NSW are already over capacity – and the season has not started yet. Adults and juveniles are being taken into care underweight and emaciated. There is a food shortage this year for Flying Foxes, and they are starving. This may cause them to do unusual or desperate things.

Many orphans are being taken into care, having been abandoned by mothers too hungry and weak to care for them. This is extremely unusual – Flying Foxes are excellent mothers, with love for their newborn pups comparable to that of human mothers for their infants. This is heartbreaking for Flying Foxes, and those that care about them.



They need our help, not to be put through further trauma through violent dispersals, or actual threat of death (shooting, burning, and poisoning) because their status has been negatively reviewed.

Flying foxes are a 'keystone species'; they play a vital role in our ecosystem, and they are a species upon which many other plants and animals depend. Removing their protection is an act so remiss in its duty of care to vulnerable species that it will one day be referred to as “catastrophic”.

Ecological importance -

No flying foxes means insufficient pollination and seed dispersal for many types of native flora. This does not mean just growing new plants. It means cross-pollinating plants in one geographic area with those in a different area to maintain healthy plants that are not "inbred" by having only local pollen available. Without flying foxes, plants become less robust, less resilient to change over time. They weaken. And eventually die. They are then not replaced - because flying foxes are not just the linchpin pollinators, they are the seed dispersers.

So that's gum trees, eucalyptus, wattle, at least 700 species of trees - dead and dying. Not immediately, but they will. The entire east Australian coastline is – without question – dependent on Flying Foxes. And I remind you that the natural 100% of the population that helped to create and maintain this ecosystem has already been reduced to 5%.

For a look at what this means, let's go to a case study in China. In parts of rural China, humans are doing the work bees once did. Striking new photos show farm workers painstakingly applying pollen to flowers by hand. Pesticide use led to a drastic reduction in the area's bee population.

In some places, hand pollination can actually cost less than renting bees to pollinate crops. Farmers began pollinating by hand because human labour was so cheap in China (obviously that is not the case in Australia). Declining fruit yields are calling the long-term viability of hand pollination into question.



25% of the bees in the United States have died. The same is happening in every country except Australia, which is sending bees to other countries hand over fist. They pollinate one crop - then they die too. If whatever is killing the bees worldwide infects Australian bees, there is likely to be a global food shortage unlike anything the world has ever seen.

Joel Fitzgobbon, the shadow Minister for Agriculture, Forestry, and Fisheries, should know better than anyone what effect eliminating a linchpin pollinator will do to our ecology and our agriculture. No pollinators means no food production.

If allow our native flora to be condemned to death because of the extinction of Flying Foxes, we lose all the fauna that rely on them. Flying Foxes are a cornerstone of the Australian environment.

Climate change is already changing our ecosystems. Fish from Queensland are now down here in southern NSW. Our fish are in Tasmania. Because the current has changed and sea temperatures are too warm. The Barrier Reef is bleached.

Our biodiversity is fragile, and climate change alone will be enough to destroy it. Do we *really* have to destroy it faster by killing off Flying Foxes - the animals that effectively function as the circulatory and reproductive systems of our forests?

Health Risks

I would like to highlight that the flying foxes do not pose an actual health risk to humans, merely a perceived one. They are inconvenient, but in reality, they are not harmful. I have argued with people for hours on end in recent months, trying to dispel misconceptions about flying foxes carrying rabies, ebola, and other airborne disease. As I am sure you are aware, Flying Foxes may carry Lyssavirus and / or Hendra virus. Lyssavirus is only contractable via exchange of body fluids, so unless someone:

- 1) finds an injured bat;
- 2) handles it with bare hands;
- 3) gets bitten by the infected bat;
- 4) the bite breaks the skin; and
- 5) the human refuses to get the post-exposure vaccination, the chances of a human being contracting the Lyssavirus are zero. **In fact, only three people have ever contracted Lyssavirus in Australia** (one case each in 1996, 1998, and 2013). Nobody has died after exposure that has received the post-exposure vaccine.

Likewise, Hendra virus is very, very rare. It is impossible for humans to contract the disease directly from bats. Infected bats must communicate the disease to horses, and then infected horses must deliver the virus to humans. **Only four cases of Hendra virus have ever been reported in humans in Australia.**

Australians are statistically more likely to be kicked to death by cows than to become sick due to flying foxes. Realistically, the risks are statistically negligible.

Government decisions in 2016

Below is a transcript of a Question and Answer session with then Minister for the Environment, Greg Hunt – held in Batemans Bay in May 2016 in relation to Grey-headed Flying Foxes.

Question: Why not get the army and burn them, like they did in Queensland?

Answer: (Greg Hunt) We have given Council the complete freedom to do as they choose. Any Federal barrier is now removed.

We are working through exemptions so that there is a free hand. If you want to clear the water gardens, we can and will give money to support that. I question whether their status as threatened is legitimate. Their status is, however, no barrier to dispersal. We just need to make sure they don't go from one place to another.

“They were previously listed as threatened by a previous government. It's our watch now”.

Those statements are reprehensible, and, together with other statements made at that meeting, clearly indicate that the previous minister viewed the Flying Fox issue as a campaign tool. A hot issue of convenience to be used for political advantage.

In reviewing the federal, state, and local government policies that govern the management of flying foxes, I have noticed a distinct lack of uniformity, collaboration, and leadership. Similar to the Terms of Reference to be discussed by this inquiry, I have proposed research thesis that I plan to undertake at the PhD level. A summary of the proposed work is included below, and my thesis proposal is attached for your reference. I have yet to find a PhD supervisor with whom to work on this research, but I am committed to completing it.

Thesis Summary

This thesis will provide information about the Grey-headed flying fox (GHFF) species including its role in the Australian ecosystem, its importance as a keystone species, and our dependence on GHFFs as primary pollinators in Australia's agriculture. It will also provide information on GHFF biology and behaviour in order to support conclusions to be made about the position of the species in conservation of biodiversity policy as well as primary industry and public opinion.

An examination of Government policy will be undertaken at the Federal level, as well as the state level (Victoria, New South Wales, and Queensland), and local government (local councils).

The proposed research will bring together information gathered from both political and ecological sources to provide an in-depth analysis of the management of the GHFF species across Australia. GHFFs are a vulnerable species, and have been listed as such by the Federal Government not because they are currently few in numbers, but because 95% of the species has perished in the last 100 years.

Australia relies on the GHFF species as primary pollinators both for agriculture, and for the maintenance of native forest species, including Eucalyptus trees. Without pollinators such as the GHFF and bees, many agricultural industries could become financially non-viable, and the east coast Australian ecosystem could be irreversibly changed by the decline of native species that rely on the GHFF for pollination and seed dispersal.

Dispersal of Flying Foxes

Dispersal does not work. It is directly comparable with having a vendetta against mosquitoes for carrying Dengue fever, and sinking money into having them dispersed from urban areas. It is not possible. It is not a responsible investment of money, and it is environmentally criminal.

Dispersal in my local area

In attendance at a Eurobodalla Shire council meeting on 14 June 2016 was local ecologist, Hugh Pitty. Mr Pitty collects data on Grey-headed flying foxes for the CSIRO's National Flying Fox Monitoring Program. He strenuously advised the ESC not to approve dispersal because of the extremely low likelihood of success, saying "you need to listen to the experts. You shouldn't even consider this. It's just too high risk". He spoke for over half an hour.

Some key excerpts from several pieces of expert advice are included below.

ECOSURE - *"Ecosure is arguably the most experienced flying-fox management consultancy in Australia and has been involved in numerous dispersal programs. In our opinion, this is the highest risk dispersal scenario we have assessed..... As such, we strongly recommend against dispersal. A one-off dispersal is considered highly unlikely to achieve any medium or long-term outcome..."*

Further, given such large influxes appear tied to the exceptional C. maculata flowering events and evidence suggests such flowering is on a seven-year cycle, it is considered likely that such large influxes will not occur again for some years".

ECO LOGICAL (from the proposed dispersal plan) - *"Dispersal activities have unpredictable outcomes, are very costly, require ongoing commitment and maintenance, are often not successful and rarely achieve desirable outcomes for all stakeholders. Dispersal also often leads to flying-fox stress, injuries or fatalities, and may lead to increased human and animal health risk, nuisance issues, or human / flying-fox conflict at other sites".*

"The logistical challenge of recruiting the large number of vaccinated and non-vaccinated personnel required for a dispersal action and generally preparing to implement the plan make it highly unlikely that a successful attempt of dispersal could be achieved at this time".

REVIEW OF PAST FLYING FOX DISPERSAL ACTIONS BETWEEN 1990-2013. (Prepared by Billie Roberts and Peggy Eby June 2013) – Australia's leading field researchers

- * *In all cases, dispersed animals did not abandon the local area*
- * *In 16 of the 17 cases, dispersals did not reduce the number of flying-foxes in a local area.*
- * *Dispersed animals did not move far (in approx. 63% of cases the animals only moved <600m from the original site, contingent on the distribution of available vegetation). In 85% of cases, new camps were established nearby.*
- * *In all cases, it was not possible to predict where replacement camps would form.*
- * *Conflict was often not resolved. In 71% of cases conflict was still being reported either at the original site or within the local area years after the initial dispersal actions.*
- * *Repeat dispersal actions were generally required (all cases except extensive vegetation removal).*
- * *The financial costs of all dispersal attempts were high ranging from tens of thousands of dollars for vegetation removal to hundreds of thousands for active dispersals (e.g. using noise, smoke etc).*

The following was made available *after* Minister Hunt's commitment, but *before* Minister Baird's:

AUSTRALIAN BAT SOCIETY PRESIDENT JUSTIN WELBERGEN - (I would argue that Justin is the most highly-respected ecologist specialising in flying foxes in the world).

“The ABS considers dispersal of flying foxes from the Water Garden in Batemans Bay to be ill-advised. With the exceptional flowering of spotted gum currently attracting vulnerable greyheaded flying-foxes to the region from across Australia’s southeast, any local attempt at dispersal risks multiplying the problem by forcing flying-foxes into other people’s backyards. Thus, the dispersal is likely to make an already difficult situation worse, while most flying foxes will depart the region when the spotted gums stop flowering.

ABS president Dr Justin Welbergen says that “there is now ample evidence to show that dispersals are extremely costly and by and large unsuccessful (e.g., see here), with most resulting in the flying-foxes re-occupying their original roost soon after the dispersal activities have ceased. In those cases where flying-foxes do not return to the original roost site, they usually establish new roosts a few hundred metres away. We cannot predict where the animals may go; therefore, dispersals generally exacerbate the human-wildlife conflicts that they aim to resolve, and have negative consequences for both human and animal welfare”.

Dr Kerryn Parry-Jones . - *“this [investment] is like pouring money down a hole. It won't work. They will split into groups, and they will go to people's backyards. The money would be better spent re-planting plants that are their native habitat out in country areas, making them more attractive to bats. And also “bat proofing” affected properties to reduce the impact on them. There has always been a colony of roughly this size here, it has always just been on forestry land before now. It's going to multiply the problem, and that's why scientists do not agree with relocation”.*

You cannot disperse Flying Foxes. You cannot remove the protections that prohibit people from harming or killing Flying Foxes. You need to invest in innovative research to find strategies to reduce the human / wildlife conflict.

Perhaps that involves working to re-establish their natural environments. Perhaps it involves creating sanctuaries close to their inappropriately-chosen roosting sites that they will prefer, turning problem roost sites into sanctuaries that can provide eco-tourism opportunities. Perhaps it involves providing affected people with access to car / clothesline covers, pressure washers, and rebates for solar panel cleaning and tank water sanitisation devices. It could involve a plethora of strategies, but in good conscience, you CANNOT remove a species from the 'vulnerable species' list because it is inconvenient.

Their inconvenience and their vulnerability are two entirely different questions. To confuse them would be a disaster for the species, for the ecosystem, and for the future of Australia.



Grey-headed flying foxes. Orphaned juveniles are given pacifiers (top image) to calm them after the loss of their mother. Being highly social creatures, orphaned babies cannot be raised in isolation – they need to be in a creche with other juveniles and infants. Any Flying Fox kept on its own will show signs of depression.



Spectacled Flying Foxes are one of our most endangered Flying Fox species.



This Little Red Flying Fox was not able to be rehabilitated, and was euthenised.



This Little Black Flying Fox is doing one of a Flying Fox's most important duties: grooming. Unlike other animals that determine social status via aggressive fighting or displays of size or power, Flying Foxes value individuals that are well groomed, with fur well-cared for and scented, have good chatter, and are popular.

These animals are unique and are found nowhere else on Earth. We have the entire planet's supply of these wonderful creatures and should be focusing on conservation efforts, not holding inquiries looking to have them de-listed from the vulnerable species list and driven into total extinction.

This inquiry **MUST** be guided by science – by data, and by expert advice. Thank you.