



ROYAL ZOOLOGICAL SOCIETY OF NEW SOUTH WALES

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Standing Committee on the Environment and Energy
PO Box 6021
Parliament House
CANBERRA
Canberra ACT 2600

17 November 2016

Dear Committee Members,

Submission regarding the standing committee inquiry into flying-fox management in the eastern states

The Royal Zoological Society of New South Wales (RZS NSW) is Australia's oldest and largest zoological society, comprising approximately 1100 members, including professional zoologists and ecologists and members of the broader community passionate about the conservation of Australia's unique animals.

The Society and our members have approached our submission on the management of flying foxes in the eastern states of Australia backed by a long history of interest in and involvement with the conservation and management of this group of animals: through research, development of legislation and management plans, and through academic inquiry and dissemination of information. The current RZS NSW Council includes past or serving members on the NSW Scientific Committee (including members of the committee at the time of the listing of the grey headed flying fox in NSW) as well as recognised experts in bat ecology.

In 2002, the Society published the proceedings of a symposium, titled "Managing the Grey headed Flying Fox as a Threatened Species in NSW" (Eby and Lunney 2002a). Fourteen years later, the issues addressed in the book are still relevant as evidenced by your standing committee inquiry. We recommend that committee members review this earlier work so that you have a solid understanding of the history of work on this topic.

The RZS NSW sustained its interest in bats with the publication in 2011 of the book: *The biology and conservation of Australasian bats* (Law *et al.* 2011). Bats comprise a quarter of Australia's mammal species, and indeed a quarter of the world's mammal species. Thus bats are of world importance for anyone interested in biodiversity conservation. Flying foxes are covered in Law *et al.* (2011) in many papers: for example, the paper on the Priorities Action Statement for the threatened bats of NSW the Grey headed Flying fox (Lunney *et al.* 2011) has a list of 31 actions which, if implemented, would materially assist in the management of this species as well as addressing the matters currently under consideration by the standing committee.

The Royal Zoological Society of New South Wales has the dual objectives of promoting and advancing the science of zoology and protecting, preserving and conserving the indigenous animals of Australia and their associated habitats

The RZS NSW believes that the management and conservation of flying foxes is important, while also recognising that balancing two potentially conflicting aims is complex (see Gilligan 2002). We believe that the answer will come largely from a better understanding of the ecology and biology of the species, combined with a change in public perception of their value (Eby and Lunney 2002b). We further believe that the current best known answers are already presented in the draft 'National Recovery Plan for the Grey headed Flying fox *Pteropus poliocephalus*' (Department of Environment Climate Change and Water 2009) and that government should as a priority finalise and implement this plan.

We have provided comments below on the five terms of reference of the committee. Members of the RZS NSW Council would be happy to expand on these points if it will help the committee.

Yours sincerely,

Dr Martin Predavec

**President,
Royal Zoological Society of NSW**



Comments relate to the five terms of reference of the inquiry into flying-fox management in the eastern states. The main point of each comment is highlighted in bold, references are included within the text and supplementary information is provided in footnotes.

The circumstances and process by which flying-foxes are listed and delisted as threatened species at both the state and Commonwealth levels

- The Society strongly supports the current situation where the listing (and delisting) of threatened species is based on strong ecological principles that are widely used and accepted both in Australia and internationally. Economic and social consequences of such listings are not, and should not be, part of the listing process. Management of any consequences should form part of a subsequent recovery plan. The process of listing of the Grey-headed Flying Fox in NSW has been explained in Dickman and Fleming (2002).
- While national counts of flying foxes are underway (Department of the Environment and Energy 2013) there have not been a sufficient number taken over a sufficient period of time to assess current status of grey-headed flying foxes (Westcott *et al.* 2012). Without such data, no assessment of recovery can be made and no change should be made to the threatened status of this species.
- While the current population trend is not known, we do know, however, that the threats to flying-foxes that resulted in their original listing (at both state and federal levels) are still operating. The national recovery plan (Department of Environment Climate Change and Water 2009) has not been finalised and actions are largely not being acted on.
- A recent assessment of the status of mammals within Australia (Woinarski *et al.* 2014) concluded that the status of grey-headed flying foxes had not changed.
- Given the above, the Society strongly urges that there is no downgrade of the status of flying foxes, at either the state or national level.

The interaction between the state and Commonwealth regulatory frameworks

- The RZS NSW agrees that there must be interaction between the state and Commonwealth regulatory frameworks and there must be consistency in management actions regarding threatened species.
- The RZS NSW does not, however, agree with the ongoing pattern of devolving responsibility for approving flying-fox dispersals from commonwealth to state approvals. Legislation and approvals under state and federal jurisdictions should operate independently, but with cooperation and consistency in the management approach and actions.
- Given the wide geographic range of flying-foxes and their nomadic nature, the RZS NSW believes the worst possible outcome would be further devolution from the state level to a smaller management unit (e.g. local government). Flying foxes must be managed across their range (Fleming and Eby 2003).

Strategic approaches to managing species at a regional scale

- The RZS NSW agrees that there must be a strategic approach to managing flying-foxes at the regional scale and that this approach must be brought together in a plan (i.e. a national recovery plan).
- RZS NSW notes that it has been 10 years since the first *draft* of the National Recovery Plan for the Grey-headed Flying-fox (Department of Environment Climate Change and Water 2009).
- The recovery plan *must* be ratified, actions implemented, outcomes tested and the plan revised. RZS NSW believes that the answers are largely known and that the solution lies in



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the implementation of the existing recovery plan. In too many cases recovery plans for threatened species are prepared with the best possible intent and then left unendorsed and not implemented.

- The RZS NSW is disappointed that the failure of federal environment department to finalise and implement the recovery plan has now left the Australian Parliament with having to deal with issue of threatened species.

Opportunities to streamline the regulation of flying-fox management

- RZS NSW agrees that there must be better coordination and streamlining of flying-fox management and that this must operate at the scale of the population.
- At present, it largely falls to local governments to appeal to the State government to move/disperse flying-fox camps that are perceived to be problematic. These calls are made independently of each other, yet often relate to the same, highly mobile, flying-foxes without any coordination of provisions to try to alleviate the problem.
- Where camps are moved, few records are taken or kept of how many animals affected, where they have gone or the change in the impact on humans in many cases the 'problem' is simply moved to another location. Nor is any medium-term impact on the animals assessed.
- RZS NSW regards the issue as serious. While we have no objection to managing a species to reduce human/animal conflict, we believe there must be a better understanding of the ecology of the species being managed and the consequences of management actions (for both the species and humans). Management actions must be based on sound science and backed up by robust monitoring.

The success or otherwise of management actions, such as dispersal of problematic flying-fox camps.

- RZS NSW agrees that the public need assistance with problematic camps. However, dispersal has proven to be a high-risk management approach high cost, high rate of failure, high likelihood of moving problems to others.
- At present, we do not believe we are in a position to provide better alternatives since insufficient resources have been put into understanding the root causes of the problem.
- The number of urban camps is increasing we need to find the root cause and work to resolve this rather than blindly reacting on a case by case basis.
- Types of information required are:
 - systematic and regular monitoring of populations and their movements;
 - large-scale analyses to better understand drivers of nectar production for flying-foxes (e.g. using remote sensing data);
 - large-scale monitoring and analyses to better understand the drivers of the increase in urban camp sites;
 - strategic assessment of roost sites where there is human conflict and an assessment of opportunities for restoring potential alternative camp sites in nearby areas where there would be no conflict.
- RZS NSW believes we are decades behind where we should be in our knowledge of the management and conservation of flying foxes. This has been the result of years of inaction related to robustly monitoring the species and monitoring management actions. It is recognised that some native species can be considered overabundant and pests (Lunney *et al.* 2007): This is the case with some species of kangaroo (Coulson 2007), the solution to which has been to conduct thorough research and counts at highest level of scientific endeavour. This is the level of attention required in the effective management of flying-foxes.



Current RZS NSW Council

This submission has been prepared and approved by the current council of the RZS NSW. Current members of the RZS NSW Council include:

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| Dr Martin Predavec (President) | Dr Peggy Eby |
| Dr Pat Hutchings (Senior Vice-president) | Dr Brad Law |
| Paul Maguire (Junior Vice-president) | Associate Professor Noel Tait |
| Professor Peter Banks (Honorary Treasurer) | Dr Arthur White |
| Dr Adele Haythornthwaite (Honorary Secretary) | JC Herremans |
| Dr Dan Lunney | Hayley Bates |
| Professor Chris Dickman | Associate Professor Ricky Spencer |
| Dr Stephen Ambrose | Dr Catherine Herbert |

References

- Coulson, G. (2007). Exploding kangaroos: assessing problems and setting targets. In 'Pest or Guest'. Forum of the Royal Zoological Society of New South Wales. pp. 174–181. (Royal Zoological Society of New South Wales.) Available at: <http://publications.rzsnsw.org.au/doi/abs/10.7882/FS.2007.021> [Verified 15 November 2016]
- Department of Environment Climate Change and Water (2009). Draft National Recovery Plan for the Grey-headed Flying-fox *Pteropus poliocephalus*. Prepared by Dr Peggy Eby. Department of Environment, Climate Change and Water NSW, Sydney.
- Department of the Environment and Energy (2013). Monitoring Flying-Fox Populations. Available at: <http://www.environment.gov.au/biodiversity/threatened/species/flying-fox-monitoring> [Verified 16 November 2016]
- Dickman, C., and Fleming, M. (2002). Pest, or Passenger Pigeon? The New South Wales Scientific Committee's assessment of the status of the Grey-headed Flying-fox. In 'Managing the Grey-headed Flying-fox'. pp. 20–28. (Royal Zoological Society of New South Wales.) Available at: <http://publications.rzsnsw.org.au/doi/abs/10.7882/FS.2002.030> [Verified 15 November 2016]
- Eby, P., and Lunney, D. (2002a). Managing the Grey-headed Flying-fox *Pteropus poliocephalus* as a threatened species: a context for the debate. In 'Managing the Grey-headed Flying-fox *Pteropus poliocephalus* as a threatened species in NSW'. (Eds P. Eby and D. Lunney.) (Royal Zoological Society of New South Wales: Sydney.)
- Eby, P., and Lunney, D. (2002b). Managing the Grey-headed Flying-fox *Pteropus poliocephalus* as a threatened species in NSW: adjusting to a long-term vision. In 'Managing the Grey-headed Flying-fox'. (Eds P. Eby and D. Lunney). pp. 273–284. (Royal Zoological Society of New South Wales.) Available at: <http://publications.rzsnsw.org.au/doi/abs/10.7882/FS.2002.060> [Verified 15 November 2016]



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- Fleming, T., and Eby, P. (2003). Ecology of Bat Migration. In 'Bat Ecology'. (Eds T. Kunz and B. Fenton.) pp. 156–208. (University of Chicago Press: Chicago.)
- Gilligan, B. (2002). Managing the Grey-headed Flying-fox as a threatened species in NSW: finding a balanced solution. In 'Managing the Grey-headed Flying-fox'. (Eds P Eby and D. Lunney). pp. 16–19. (Royal Zoological Society of New South Wales.) Available at: <http://publications.rzsnsw.org.au/doi/abs/10.7882/FS.2002.029> [Verified 15 November 2016]
- Law, B., Eby, P., Lunney, D., and Lumsden, L. (eds) (2011). 'The Biology and Conservation of Australasian Bats'. (Royal Zoological Society of New South Wales.) Available at: <http://publications.rzsnsw.org.au/doi/book/10.7882/9780980327243> [Verified 16 November 2016]
- Lunney, D., Baker, J., Matthews, A., Waples, K., Dickman, C., and Cogger, H. (2007). Overabundant native vertebrates in New South Wales: characterising populations, gauging perceptions and developing an ethical management framework. In 'Pest or Guest'. pp. 158–173. (Royal Zoological Society of New South Wales.) Available at: <http://publications.rzsnsw.org.au/doi/abs/10.7882/FS.2007.020> [Verified 30 May 2016]
- Lunney, D., Parnaby, H., Pennay, M., Haering, R., Law, B., Eby, P., Schulz, M., and Turbill, C. (2011). The Priorities Action Statement (PAS) for the threatened bats of New South Wales. In 'The Biology and Conservation of Australasian Bats'. pp. 340–356. (Royal Zoological Society of New South Wales.) Available at: <http://publications.rzsnsw.org.au/doi/abs/10.7882/FS.2011.035> [Verified 16 November 2016]
- Westcott, D. A., Fletcher, C. S., McKeown, A., and Murphy, H. T. (2012). Assessment of monitoring power for highly mobile vertebrates. *Ecological Applications* **22**, 374–383. doi:10.1890/11-0132.1
- Woinarski, J., Burbidge, A., and Harrison, P. (2014). 'The Action Plan for Australian Mammals 2012'. Available at: <http://www.publish.csiro.au/book/7010/> [Verified 15 November 2016]