



# ROYAL ZOOLOGICAL SOCIETY OF NEW SOUTH WALES

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## **Comment on the Draft Recovery Plan for the Grey-headed Flying-fox *Pteropus poliocephalus***

The Royal Zoological Society of New South Wales (RZS NSW) is pleased to provide comment on the Draft Recovery Plan for the Grey-headed Flying-fox *Pteropus poliocephalus* (the draft Plan).

The 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 the draft Plan backed by a long history of interest in and involvement with the biology, conservation and management of the Grey-headed Flying-fox (GHFF), through research, academic inquiry, grassroots involvement, development of legislation and policy, and dissemination of information. The current RZS NSW Council includes past or serving members on the NSW Scientific Committee, including members actively involved in making the Final Determination to list the GHFF as Vulnerable in New South Wales under Schedule 2 of the *Threatened Species Conservation Act 1995*, as well as recognised experts in bat ecology.

Immediately after the listing of GHFFs on the *NSW TSC Act* in May 2001, the RZS NSW was invited by the then National Parks and Wildlife Service to host a forum to debate the controversies and complexities of managing GHFFs as a threatened species, taking a dispassionate and balanced approach. The forum, held in July 2001 preceded by six months listing of the species under the *Environment Protection and Biodiversity Conservation Act 1999*. The proceedings were published by the RZS NSW (Eby and Lunney 2002). In 2007, the Australasian Bat Society and the RZS NSW held a joint symposium on bat biology and conservation in Australasia which included various papers that advance knowledge of GHFFs. The forum led to publication by the RZS NSW of *The Biology and Conservation of Australasian Bats* (Law *et al.* 2011).

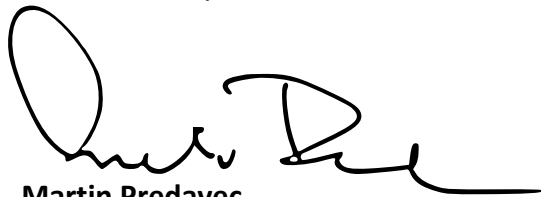
The Royal Zoological Society of New South Wales advances the science of zoology and helps conserve the indigenous animals of Australasia and their habitats

The RZS NSW has also provided comment on legislation and policy pertinent to GHFF conservation and management, most recently the NSW Biodiversity Reforms and Draft Biodiversity Legislation, and the House of Representatives standing committee inquiry into flying-fox management in the eastern states (House of Representatives Standing Committee on the Environment and Energy 2017).

The controversial nature of GHFF conservation and management has persisted throughout the 16 years since the listings, and the paucity of robust information on which to base sound management and conservation decisions remains a central problem. The RZS NSW recognises the challenges associated with developing a recovery plan that attracts unified support at federal and state level as well as community acceptance. We acknowledge the large number of individuals who have contributed to the document through its lengthy gestation, and the focussed attention and perseverance required to bring the recovery plan to the point of public comment.

The RZS NSW believes a recovery plan for GHFFs is long overdue and is key to progressing conservation of the species and improving public perceptions and management outcomes. We urge the Department of the Environment and Energy to finalise and implement the plan as a matter of priority.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Martin Predavec', with a long horizontal flourish extending to the right.

**Martin Predavec**

President, Royal Zoological Society of New South Wales  
president@rzsnsw.org.au



The Royal Zoological Society of New South Wales (RZS NSW) 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. To this end we have provided comments on the Draft Recovery Plan for the Grey-headed Flying-fox *Pteropus poliocephalus* (the draft Plan).

### Recommendations from the House of Representatives inquiry into flying fox management

The RZS NSW supports the recommendations set out in the report on the House of Representatives Standing Committee on the Environment and Energy inquiry into flying-fox management in the eastern states (House of Representatives Standing Committee on the Environment and Energy 2017) and recommends the draft Plan be revised to incorporate those recommendations.

They include:

1. formation of a national or eastern states flying-fox consultative committee or working group under the Council of Australian Governments to be responsible for centrally compiling information on referrals and management actions, and identifying priorities for legislative harmonisation, research and funding for future action in the management of nationally protected flying-foxes;
2. establishment of a dedicated funding pool for flying-fox research and conservation actions, to enable:
  - continued funding of the National Flying-fox Monitoring Programme for at least the next 10 years (but see Recovery objective 3 below);
  - committed funding for the priority actions outlined in the draft Plan;
  - targeted national research into flying-fox roosting behaviours and habitat loss impacts; and
  - other research that allows for the timely evaluation of flying-foxes under the *Environment Protection and Biodiversity Conservation Act 1999*, informed by rigorous data.
3. in consultation with relevant state and local governments, development of a tool that assists councils to make decisions on action, referral and education in the most appropriate way, relevant to the flying-fox impacts in their jurisdiction;
4. in consultation with all relevant organisations, development of a suite of education resources for Australian communities regarding flying-fox ecology, behaviour, environmental significance, health impacts, and management options. These resources should be promoted by the Australian Government to local councils, communities, businesses and all relevant stakeholders in affected jurisdictions and potentially affected jurisdictions.



## General comments on the draft Plan

### BIOLOGICAL INFORMATION

Information in the final recovery plan should present the current state of understanding of Grey-headed Flying-fox (GHFF) biology. There are areas in the Biological Information section where material could usefully be updated. They include the following (statement from the draft Plan in italics, followed by recommendation):

#### 2.8 Roosting behaviour and habitat

1. *“The locations of camps are generally stable through time ...”* This statement was true at the time the initial draft of the recovery plan was compiled, but is not currently the case. It is contradicted by the recent, rapid increase in the number and density of camps in coastal areas and the inland expansion to the distribution of consistently occupied camps. We recommend the rapid increase in camps observed in the past 10-15 years be described in this section.

2. *“Camps occur in vegetation ranging from continuous forest to remnants as small as 1 ha.”*

Again, this was the case at the time of the initial draft, but it no longer holds. Numerous sites established in the past 10 years occur in community gardens and other sites of smaller area than 1ha. We are aware that this trend has not been described in the literature. However, we recommend that potential shifts in the characteristics of recently established camps be referred to in this section of the draft Plan. We also recommend research to elucidate the change (see Recovery objective 2 below).

#### 2.11 Distribution

1. *“The Grey-headed Flying-fox is endemic to Australia, with a distribution ranging from Bundaberg in Queensland, to Adelaide in South Australia.”* The northern range boundary of GHFFs extends beyond Bundaberg. We recommend this statement be edited with reference to Roberts *et al.* (2012) and Figure 1 in the draft plan.

2. *“There are records of individuals on Bass Strait islands (Tidemann 1998) and mainland Tasmania (Driessen 2010).”* These records are rare – 2 incidents since 1960, the most recent being during the 2010 acute food shortage (Driessen 2010 and Driessen *et al.* 2011). We recommend the rarity of sightings in Tasmania and Bass Strait be clarified.

3. *“In recent years Grey-headed Flying-foxes have also appeared in areas such as Adelaide, Canberra and Orange in central western NSW where they have rarely been seen previously. The factors driving these unusual occurrences, and therefore whether they are a rare events or more permanent shifts, are poorly understood.”* GHFFs have occupied the camp in Canberra every summer since 2003 (M. Pennay pers comms,



NFFMP web viewer: accessed 20 April 2017). They have been present in Adelaide, Bendigo and Albury/Wodonga continuously since 2010. (Their presence in Orange is less frequent.) We believe these occurrences can no longer be considered as unusual and suggest the following wording.

“In recent years Grey-headed Flying-foxes have consistently occupied camps in areas where they had rarely been seen previously, such as Adelaide, Canberra, Albury and Bendigo. The factors driving these occurrences are poorly understood.”

## OTHER THREATS

### 3.3.1 Camp disturbance

1. *“The number of camps in urban areas and the number of individual flying-foxes using these urban camps have increased, particularly in urban areas of Qld and NSW in recent years and some are now continuously occupied (Birt et al. 1998, Hall 2002, Richards 2002, van der Ree et al. 2006, Eby pers.comm).”* The relationship between increasing numbers of camps and total number of flying-foxes using those camps is uneven and not always direct. For example, the total population of flying-foxes in urban Brisbane / Ipswich has decreased over the period when the number of camps has increased 5-fold; and there has been a significant reduction in the number of GHFFs in those sites (as confirmed by the NFFMP).

We suggest the following wording: “The number of camps in urban areas has increased in recent years, particularly in urban areas of Qld and NSW. Some are now continuously occupied.”

2. We recommend that reference be made in this section to the lack of understanding of the impacts of increasing numbers of dispersal actions on the long-term fitness of GHFFs. (see Recovery objective 6 below)

### 3.3.4 Entanglement in backyard netting

1. We suggest this section be expanded to include entanglement on barbed wire.

## RECOVERY OBJECTIVES, PERFORMANCE CRITERIA AND ACTIONS

The RZS NSW believes there are areas in the draft plan where additional information is required to achieve recovery objectives, but where actions to support the necessary research are not proposed. We make the following recommendations under the relevant Recovery objectives.



Recovery objective 2: Identify, protect and enhance roosting habitat of Grey-headed Flying-fox camps.

1. The RZS NSW recommends research to improve understanding of the criteria GHFFs use to select roost sites, and clarify changes to these criteria that may have occurred in recent years. This work is essential to identifying, protecting and enhancing roosting habitat.

Recovery objectives 2, 4 and 6.

1. We recommend research to better understand the drivers of increasing camp densities, increasing urbanisation, increasing presence in inland areas, etc to assist with management and conservation planning, to help build capacity for communities to coexist with flying-foxes and to enable interventions to be developed.

Recovery objective 3: Determine population trends in Grey-headed Flying-foxes so as to monitor the species' national distribution and conservation status.

The NFFMP is central to assessing recovery of GHFFs, parameterising models of population dynamics, supporting various research programs and providing information to land managers.

1. The RZS NSW is mindful that the NFFMP attracts criticism from various stakeholders and recommends a transparent review by independent scientists with relevant expertise of the methods, field program, analysis of results and predicted time to trend, with the aim of improving the NFFMP and increasing confidence in the outcomes.

Recovery objective 6: Improve the management of Grey-headed Flying-fox camps in sensitive areas.

Background information to this recovery objective refers to mitigation standards set out in the *Referral guideline for management actions in grey-headed and spectacled flying-fox camps* (Department of the Environment 2015) "to assist in avoiding or reducing significant impacts on EPBC Act-listed flying-foxes arising from management actions at their camps". In the absence of supporting research, the measures recommended in the guideline are limited to those where benefits can be inferred from straightforward concepts, such as the absence of pregnant females or flightless young at the time the action is taken.

1. The RZS NSW believes that the recent, substantial increase in the number and rate of camp dispersals in the range of GHFFs (Ecosure 2016), necessitates targeted research to improve understanding of the impacts of camp management options on fitness of GHFFs (reproductive output, etc) and highly recommends an Action to that effect.



2. Following on, we suggest an addition (in bold) to Action 6.2: Review the referral guideline in collaboration with state and territory governments as significant new information comes to hand around management techniques, **their impact on the species**, or population size and trends.

## 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:

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

## References

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- Driessen, M. 2010. Recent sightings of flying-foxes in Tasmania. *The Tasmanian Naturalist* 132.
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- Eby, P. and Lunney, D. (Eds) 2002. *Managing the Grey-headed Flying-fox as a Threatened Species in NSW*. Royal Zoological Society of NSW, Mosman, NSW.
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