

## The National Flying-fox Monitoring Program

### Report on the November 2016 survey

#### Background

The National Flying-Fox Monitoring Program (NFFMP) is a collaborative program that brings the community and local, state and the Commonwealth governments together to provide quarterly snapshots of the size and distribution of flying-fox populations in Australia. The data collected provides unique insights into the ecology and dynamics of flying-fox populations and represents an essential underpinning for their conservation and management.

Monitoring of flying-foxes is useful for a variety of reasons but is especially important because flying-foxes are so often in conflict with humans while at the same time being of conservation concern. Two species, the grey-headed flying-fox (GHFF) and the spectacled flying-fox (SFF), are listed as threatened under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and legislation in some states. The NFFMP provides key data for decision making not just for flying-fox conservation but also to inform responses to public concerns about the impact of flying-foxes on industry, amenity and public health.



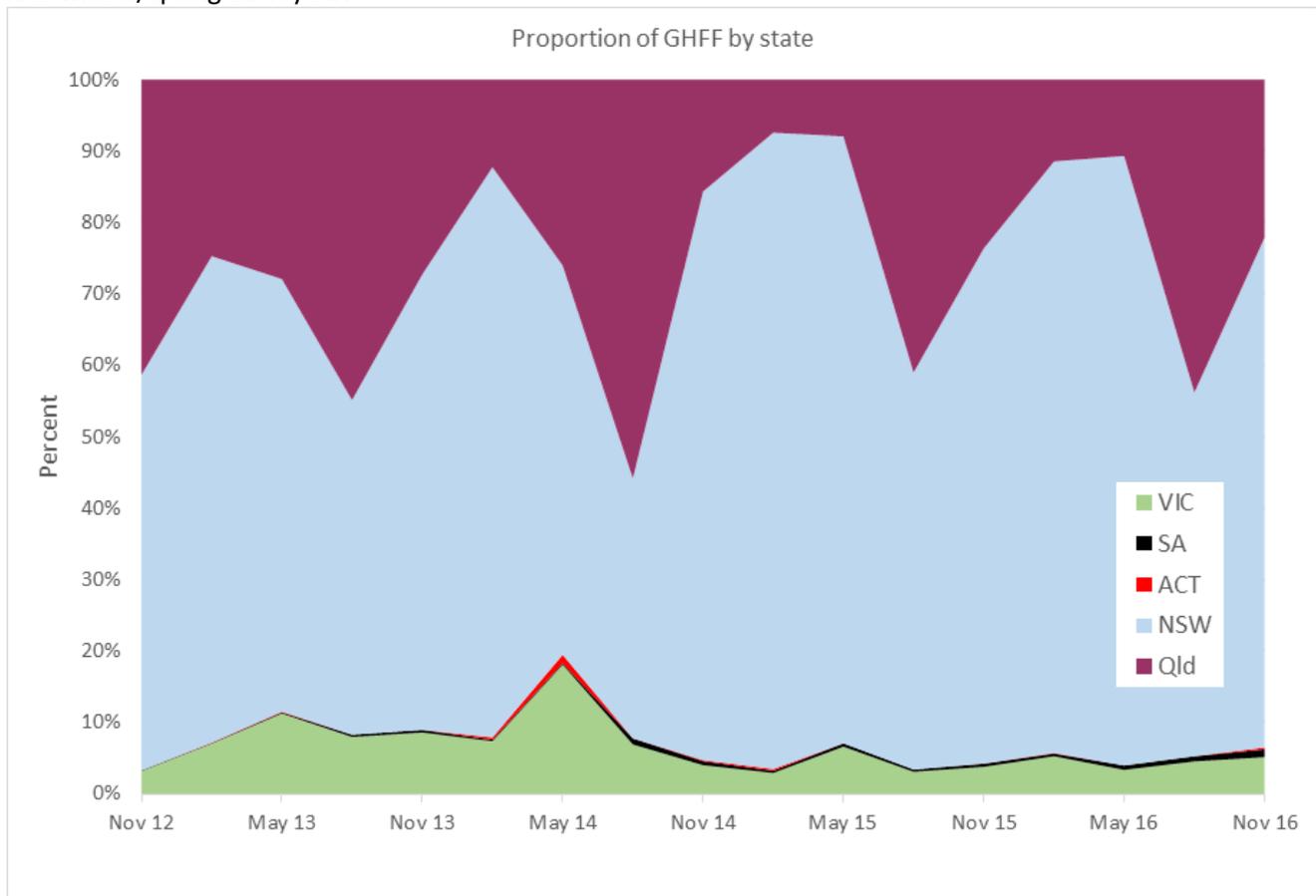
GHFF flyout (A McKeown)

**The November 2016 Survey Results - a Summary.**

The November 2016 survey was the 17th count of the project. During the November count, 306 camps were surveyed, 165 in Qld, 127 in NSW, 10 in Vic, four camps around Katherine in the NT, and one each in the ACT & SA.

The estimate for the total GHFF population in these camps was 447,000 animals and these were recorded from 134 active camps across the species range. The majority of the animals were in NSW (71%), with 22% in Qld, and 5% in Vic while SA and ACT had <1%. No massive camps (>50,000 GHFF) were recorded during this survey, however several camps of more than 20,000 animals were recorded in the Northern Rivers of NSW and the Sydney region. Overall the average size of the occupied GHFF camps was 3,700 GHFF, quite a lot smaller than the camps sizes encountered in recent surveys.

In the figure below we show how the GHFF population has distributed itself across the states since the beginning of the NFFMP surveys. The strongest signal here is the movement of the population north during late winter/spring each year.

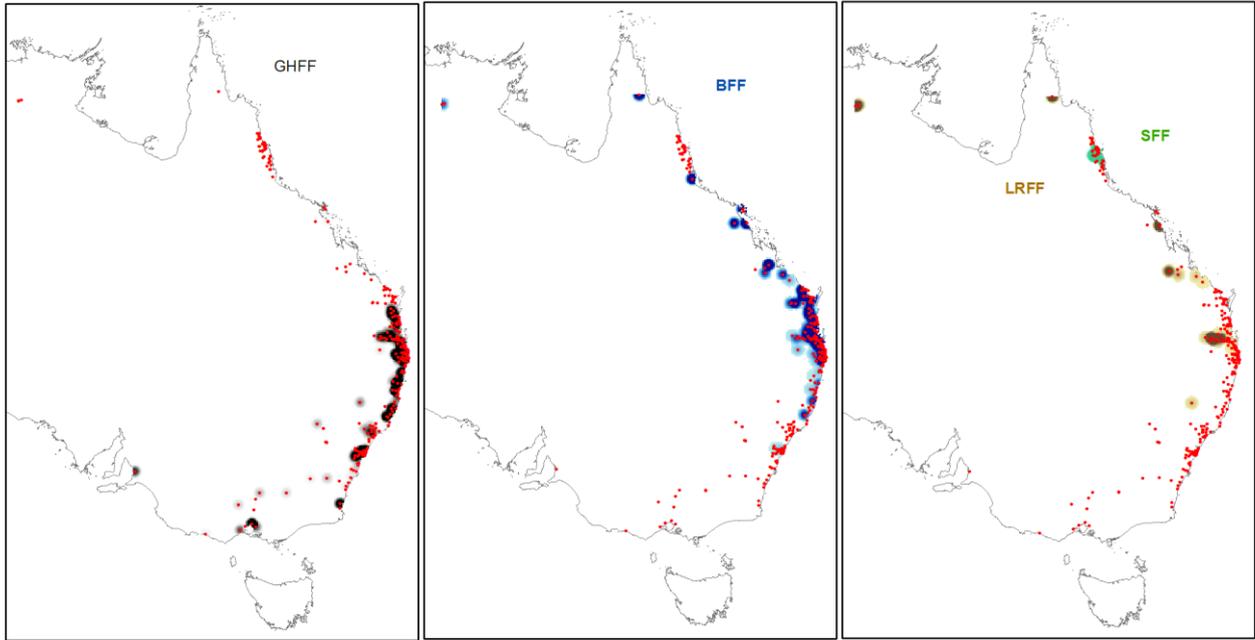


SFF numbers were low in this count with just 26,000 animals recorded from 7 active camps. This was a surprisingly low number for a November count. However the surveys are conducted at the beginning of the month, and by mid-November our "out of survey" observations indicated that both the number of occupied camps and the total number of animals had increased significantly. It is possible that the animals were simply delayed in their return to the camps – our January counts will determine if this is in fact the case.

The NFFMP covers only a part of the ranges of the black flying-fox (BFF) and the little-red flying-fox (LRFF). This means that our estimates for BFF and LRFF are indicative only of the survey region and not of the entire population. In total 190,000 BFF were recorded, with 76% of those in Qld, 23% in NSW, and 1,140 around Katherine in the NT. As was the case in August, LRFF numbers were extremely low, just 32,000 animals, with 90% being found in Qld and 10% around Katherine.

### Where were the flying-foxes in November?

The heat maps below show the distribution of the different flying-fox species across the region of the NFFMP. The darker the colour the greater the abundance of flying-foxes in an area, black shading refers to GHFFs, blue to BFFs, green to SFFs and orange to LRFFs. Red dots indicate visited camps



### NFFMP data in use

A key objective of the NFFMP is to inform public debate, and decision and policy making about flying-foxes by providing quality and current data on flying-fox populations. To date NFFMP data has informed decisions about the management of a number of individual camps but has also underpinned the development of policy and guidelines at both state and Commonwealth levels.

A recent example of how the data you are collecting is contributing to flying-fox conservation comes from the recent House of Representatives Standing Committee on the Environment and Energy's Inquiry into Management of Flying-Foxes in the Eastern States. Data from the NFFMP was used in submissions to the Inquiry from a number of individuals, groups, and agencies. In addition, CSIRO presented an overview of the NFFMP and provided detailed and up-to-date analyses focused on the Inquiry's Terms of Reference. This included data on population estimates and trends for the two EPBC-Listed species and on the dynamics in how flying-foxes distribute themselves relative to urban areas.

This is a reminder of the value of the data collected by everyone participating in the NFFMP. Your efforts are making a difference and the data is being used to improve our interaction with flying-foxes. The proceedings and submissions can be viewed on the House of Representatives website and the Committee's report is due early in 2017.

## The NFFMP

A map of the camps covered in the NFFMP surveys can be viewed at <http://www.environment.gov.au/node/16393>. Clicking on a camp icon will show a plot of species composition and numbers recorded at that camp during NFFMP surveys.

The aim of the program is to establish a reliable baseline estimate of the flying fox populations and over time to estimate trends. This will take a number of years since each quarterly count will be subject to various factors which will influence the results, making assessment of population size more difficult. A report reviewing the data from the first phase of the program can be viewed at the Australian Government Department of the Environment's website at <https://www.environment.gov.au/biodiversity/threatened/publications/status-and-trends-australias-epbc-listed-flying-foxes>. This analysis suggests that while the GHFF population appears to be at approximately 700,000 individuals, the population of the SFF has declined by as much as 50% over the last decade to approximately 100,000 individuals.

In order to achieve the best possible estimate it is important that surveys are performed using the methods correctly. We are continuing to conduct training sessions and the CSIRO urges any counters who have any questions or concerns about count methodology to contact David Westcott at [david.westcott@csiro.au](mailto:david.westcott@csiro.au) or Adam McKeown at [adam.mckeown@csiro.au](mailto:adam.mckeown@csiro.au).

Thank you to all the counters who put in the hours to assist the program. Your effort is greatly appreciated.

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If you would like to participate please contact:

New South Wales – [Mike.Roache@environment.nsw.gov.au](mailto:Mike.Roache@environment.nsw.gov.au)

Queensland — [Pauline.Fitzgibbon@ehp.qld.gov.au](mailto:Pauline.Fitzgibbon@ehp.qld.gov.au)

If you know of additional camps or have questions about the counts please contact:

[david.westcott@csiro.au](mailto:david.westcott@csiro.au) or [adam.mckeown@csiro.au](mailto:adam.mckeown@csiro.au)

Additional information about the program can be found at:

[www.environment.gov.au/biodiversity/threatened/species/flying-foxes-monitoring-program.html](http://www.environment.gov.au/biodiversity/threatened/species/flying-foxes-monitoring-program.html)

The National Flying-fox Monitoring Program is collaboration between the Australian Government, the South Australian, Victorian, New South Wales, Australian Capital Territory and Queensland governments, CSIRO, local governments and volunteers in New South Wales and Queensland. The CSIRO was contracted by the Rural Industries Research and Development Corporation to undertake this research project. This research was funded by the Commonwealth of Australia, the State of New South Wales, the State of Queensland and RIRDC under the National Hendra Virus Research Program.