

# Grey-headed Flying-fox

*Pteropus poliocephalus* Temminck, 1825

## Conservation Status

The Grey-headed Flying-fox is listed as a **Vulnerable Species** on Schedule 2 of the NSW *Threatened Species Conservation Act, 1995* (TSC Act), and as a **Vulnerable Species** under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

Population estimates indicate that this species has declined by approximately 30% over the last 10 years (Tidemann *et al.*, 1999).

**Description** (from Tidemann, 1995 and Eby, 1995)

*Head and body length*

230 - 289 mm

*Forearm length*

138–180 mm

*Weight*

600 - 1000 g



F. Myers/NPWS

Grey-headed Flying-fox

The Grey-headed Flying-fox has dark grey fur on the body, lighter grey fur on the head and a russet collar encircling the neck. This species can be distinguished from other flying-fox species by leg fur which extends to the ankle. Wing membranes are black and the wingspan can be up to one metre.

## Distribution

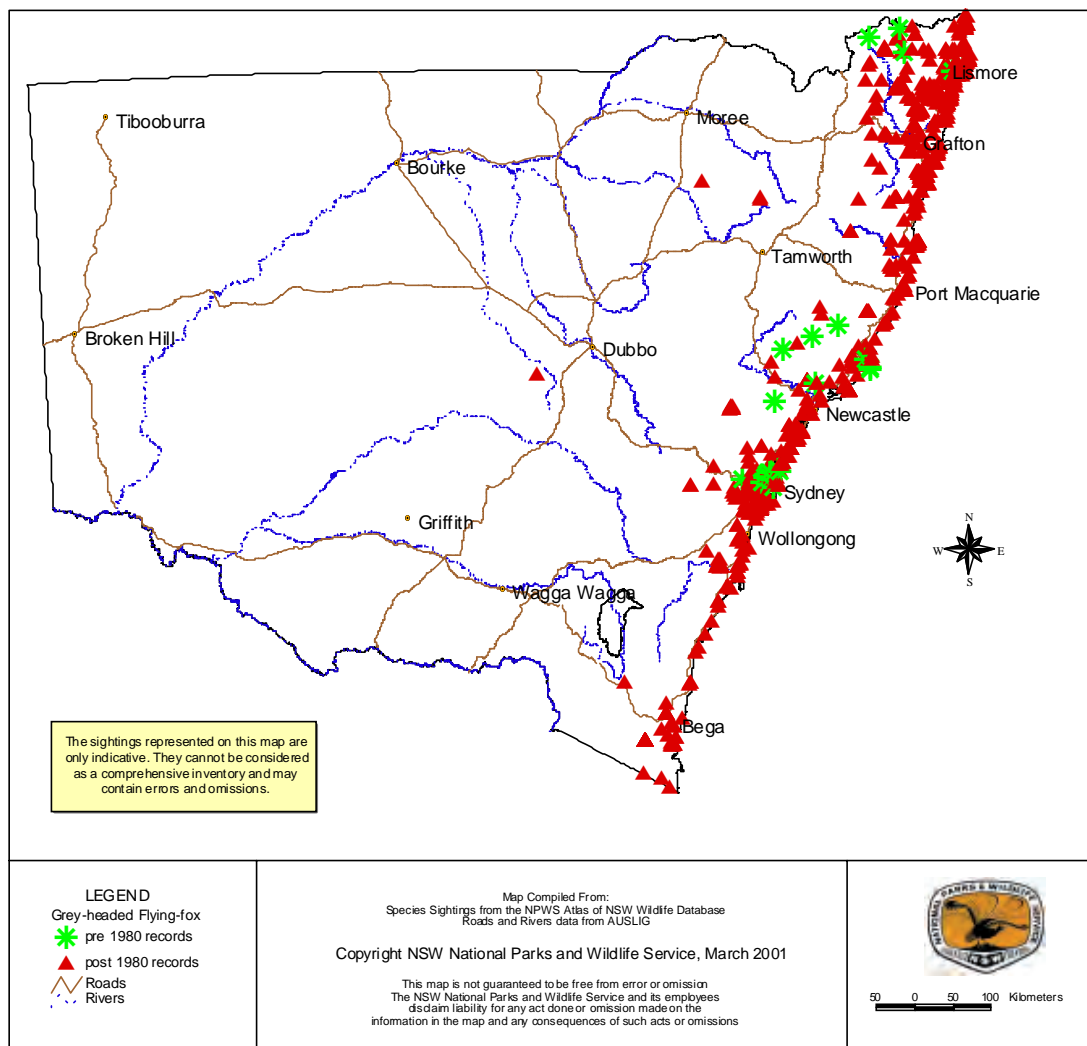
The Grey-headed Flying-fox is endemic to Australia. It occurs along the east coast from Bundaberg in Queensland to Melbourne, Victoria (Eby, 2000a). The distribution of this species has contracted south, formerly ranging north to Rockhampton (Eby, 2000a). This species may range to the western slopes of the Great Dividing Range in northern NSW (Eby, 1991). At any one time, the majority of animals only occupy a small proportion of this entire range.

## Recorded Occurrence in Conservation Reserves

In NSW, Grey-headed Flying-foxes have been recorded in numerous conservation reserves along the east coast, and the tablelands and eastern slopes of the Great Dividing Range.

## Habitat

The Grey-headed Flying-fox occurs in “subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps” (Eby, 1995). Urban gardens and cultivated fruit crops also provide habitat for this species. The Grey-headed Flying-fox is ineligible for critical habitat declaration given its status as a Vulnerable Species.



NPWS records of the Grey-headed Flying-fox in NSW

## Ecology

Grey-headed Flying-foxes forage on the nectar and pollen of native trees, in particular *Eucalyptus*, *Melaleuca* and *Banksia* (Eby, 2000a), and fruits of rainforest trees and vines. This species is an important pollinator and seed-disperser of native trees.

The availability of native fruits, nectar and pollen varies over time and throughout the range of the species. Grey-headed Flying-foxes accommodate this by migrating in response to food availability, sometimes travelling hundreds of kilometres. In addition, during periods when native food is limited, Grey-headed Flying-foxes disperse from colonial roosts, often foraging

in cultivated gardens and fruit crops. This species occasionally inflicts severe crop damage during periods of native food shortage.

A number of studies have noted the annual southerly movement of animals in spring and summer and their return to the coastal forests of north-east NSW and south-east Queensland in winter (Ratcliffe, 1932; Eby, 1991; Parry-Jones & Augee, 1992). This results in large fluctuations of the numbers of this species in NSW from as few as 20% of the total population in winter up to around 75% of the total population in summer (Eby, 2000a).

This species roosts in large aggregations or 'camps' of up to tens of thousands of animals, depending upon the abundance of

locally available food sources. Camps are generally located in close proximity (20 km or less) to a regular food source, often in stands of riparian rainforest, Paperbark or Casuarina forest (Eby, 1995). Site fidelity is high and some camps in NSW have been used for over a century (Eby, 2000b).

Grey-headed Flying-foxes breed annually with mating commencing in January. Males use strongly-scented secretions to mark mating territories and loud calls are made while defending territories and during mating. This species has a sophisticated array of vocalisations (Tidemann, 1995) and noise at camps can be substantial.

The majority of reproductively mature females give birth to a single young each October/November after a 6-month gestation. Females carry their dependent young during foraging flights for 3 weeks following birth. For the next 2 months, flightless young remain at the camp while adults forage. At around 3 months, young are able to fly and forage outside the camp, and at 6 months they are weaned.

### Threats

- Destruction of habitat by clearing for urban development and agriculture, particularly critical winter foraging habitat in the coastal forests of north-east NSW (Eby, 2000a). Loss of foraging habitat increases the severity of food shortages leading to starvation of animals, spontaneous abortion and high infant mortality;
- Disturbance at roosting sites, particularly during the last few weeks of pregnancy when females can spontaneously abort;
- Unregulated shooting;
- Electrocutation on power lines;
- Competition and hybridisation with the Black Flying-fox *Pteropus alecto*.

### Management

- Research into the biology and ecology of the species, in particular recruitment rates and longevity;
- Continuing synchronous annual counts to track population trends and monitor success of management actions;
- Conducting education programs to increase awareness about Grey-headed Flying-foxes;
- Encouraging and supporting industry groups in conducting research to identify alternative non-lethal crop protection mechanisms and encouraging horticulturalists to employ those mechanisms;
- Implementing strict enforcement of licence conditions and taking appropriate action against unlicensed shooting;
- Consultation and negotiation with Local Government and residents to resolve existing conflict with roost sites;
- Identification and protection of key foraging areas to ensure foraging resources are available throughout the year;
- Protection of roost sites through conservation mechanisms such as Local Government zonings or Voluntary Conservation Agreements;
- Provision of appropriate buffer zones around roost sites in Local Environment Plans to restrict development which may result in conflict between residents and flying-foxes.

### Recovery Plans

Under the *Threatened Species Conservation Act 1995*, a Recovery Plan for the Grey-headed Flying-fox is required to be prepared by 2006.

## References and Further Reading

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