

Bat Survey and Trapping on KI

Background

We started the survey of the bats of KI in December 2019, and alas lost our (borrowed!) bat detectors in the bushfires. We obtained grant funding to purchase more bat detectors based on the importance of learning more about KI bats. Very little is known about the bats of the island, and some could be sub-species unique to KI. In addition, it is important to ascertain the impact the bushfires have had on bat populations.

All our bats are insectivorous; they eat huge numbers of invertebrates (including moths, flies and mosquitoes) each night and have important ecosystem functions. We have a special interest in determining the role of bats in agricultural production.

Bat activity from sound files

As we continue to monitor bats acoustically at a few of our 97 sites across the island, additional evidence shows that more than the 7 species known to exist on KI occur. Research partner MB Stonor has so far identified bats from 161 of 640 nights (25%) of data, manually. Some nights have over 10,000 sound files, which must be examined individually, so it is quite an achievement. We have not yet analysed the data, but bat activity seems low in many places. Unfortunately, bat numbers cannot be determined from the numbers of sound files.

Bat trapping

The abundance of dams means that bats do not concentrate at a single water point, and catching a bat represents more work than finding a needle in a haystack. We only trapped 8 bats, all released on site after measurements and collection of a wing punch for DNA. They consisted of lesser long-eared bats and possibly two species of forest bats (very difficult to differentiate visually; see Figure 1). We are planning to trap again next summer.



Figure 1: Forest bat captured this summer at Pelican Lagoon (Photo by MB Stonor)

Example of bat work at a farm on the Harriet River

Despite valiant efforts by awesome bat trappers Aedan and Venetia Bolwell, we were unsuccessful in trapping at this site. Bats that obviously live in the beautiful riparian vegetation teased us by flying around at dusk, and then left for undisclosed locations (pattern observed at all sites). The acoustic files examined so far show that all known bat species (and more) were at the river site 25 and 26 January 2020, immediately after the bushfires, but 26 January 2021 and 27 December 2021, the white-striped freetail bat and the southern freetail bats were missing. Bat activity across years cannot be compared from just one night, but on the same nights, it was always higher at the river site than at the small remnant vegetation site surrounded by paddocks, which also had fewer species.

The work continues all over the island, including in parallel an evaluation of the role of nest boxes for bats in bushfire recovery (with volunteer coordinator Peter Hammond).

We would like to thank our volunteers for their contribution to this project.

Funding/Sponsors

Partners, nest box project (with volunteer coordinator Peter Hammond): KI Conservation Landowners Association, KI Wildlife Network, KI Research Station, KI Dance School, Friends of Parks KI Western District, University of South Australia, and many fabulous landholders.

Funding: Lirabenda Endowment Fund Grant, University of South Australia's Vice Chancellor's Fund for KI, Foundation for National Parks & Wildlife, WIRES-Landcare, Nature Foundation Wildlife Recovery Fund, Landcare Led Bushfire Recovery Grant, Albert & Barbara Tucker Foundation, Patagonia. Note: all the work is volunteered.

Further Information

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Visit the KI Research Centre website to find out more:

