Progress Report STP 2019-057 (FY 2018-2019)

Influence of fire history and seed distribution on the movements of granivorous finches in the East Kimberley

Fire Science

Project Core Team

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Project Team	granted
Program Leader	granted
Directorate	granted

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I Radford

Progress Report

Populations of the granivorous Gouldian finch have not recovered from historical population declines prior to the 1980's. It is hypothesised that this lack of recovery is due to a decline in grass seed diversity in response to higher frequency and intensity fires across the landscape, which is forcing Gouldian finches to move longer distances to meet their dietary requirements in a more homogeneous landscape. The project aims to estimate the activity range, habitat use and dispersal for threatened Gouldian finches, and compare this with the more common masked and long tailed finches, to look at reasons for rarity in Gouldians and also to design management options to improve Gouldian finch status. This presents technical challenges due to the small size and high mobility of study animals using automated radio telemetry.

Automated radio-telemetry was used to track the local and broader-scale movements of Gouldian finches in the East Kimberley. This technology provides location data with high temporal (up to every 11s) and spatial precision when animals are within range of a receiving tower. This technology is being used to develop methods to estimate home range size of individual finches, and test whether and how home range size varies with fire history and grass seed availability.