

# Monitoring malleefowls with camera traps in Western Australia's Wheatbelt: a case study in citizen science

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## **Abstract**

Staff from a biodiversity project engaged landholders to conserve privately owned remnant vegetation in the heavily cleared Wheatbelt agricultural region of South West Australia. Such remnants are often high in biodiversity, but are generally poorly surveyed. A family in the Wheatbelt was approached to discuss the potential protection of their extensive native bushland areas. Noting an apparent abundance and diversity of fauna, we deployed camera traps, which we termed 'sensor cameras', to engage critical stakeholders, on gnammas (rock waterholes) and on nest mounds of malleefowls (*Leipoa ocellata*) in the hope of highlighting uncommon species and interesting malleefowl activity to further engage with the family. The cameras detected more fauna species than had previously been known by the family and triggered immediate interest. We showed one family member how to use the cameras to monitor the malleefowl mounds and as his confidence grew the family purchased their own cameras. He recorded daily mound activity, courtship displays, predators, seasonal activity trends and two freshly hatched chicks. He set cameras in other

locations and recorded many other wildlife species. We discuss some of these findings, the family's increasing understanding of malleefowls and their threats, and their commitment to protecting malleefowls and the bushland. We emphasise the role of camera traps in landholder engagement and citizen science.

## **Introduction**

Camera traps, sometimes known as motion-triggered cameras or motion-sensitive cameras, are now a well-recognised tool for fauna monitoring and studying animal behaviour in the fields of zoology and ecology (Rovero *et al.* 2005; Mattick 2012). In addition, many workers have found them to have great value in community engagement due to their ability to record captivating photos and video of wildlife, ease of deployment, minimal impact on fauna (Bolen 2012; Irvine Ranch Conservancy 2013), and, in more recent years, relative affordability. Video clips or photos of wildlife, particularly of uncommon or rarely seen animal species, often elicit a stronger response from community members and