11. POSTER FOR COMPETITION

How do animals respond to mine site restoration?

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Globally increasing rates of mine site discontinuations are resulting in the need for immediate implementation of effective biodiversity and conservation management strategies. Over 60 000 mines across Australia have been identified as discontinued, yet despite restoration being a legislative requirement, the number of these sites confirmed as restored and officially closed is extremely low. Monitoring vegetation structure and condition is a common method of assessing restoration success, however monitoring animal responses is relatively uncommon. Animals are generally assumed to return to pre-disturbance abundances following the return of vegetation (Field of Dreams hypothesis; 'build it and they will come'). In practice, recovering animal biodiversity and community structure can be some of the most difficult components to achieve and asses following the restoration of degraded sites.

We assessed fauna recolonisation and responses to mine site restoration at a Mid-West Western Australian mine. Numbers of animal detections significantly increased with increasing distance from the active mine pit, regardless of whether the site was a restoration or reference site. Restored sites were of the same age, however both species diversity and abundances were significantly higher in the site farthest from active mining activities. Feral species (cats, wild dogs, and rabbits) were detected across all sites, but large, native predatory animals such as *Varanus* species were detected almost exclusively at the reference and restoration sites farthest from the active mine pit.

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