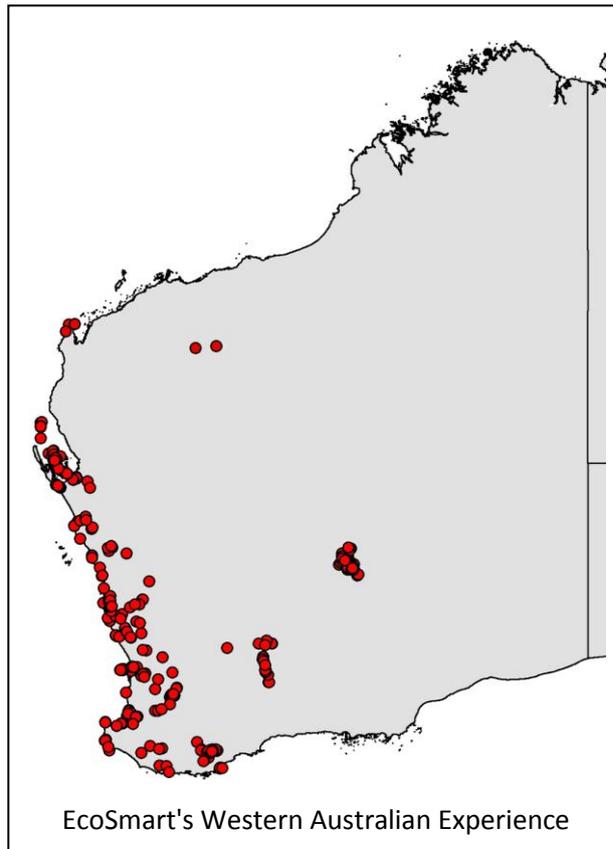


## PROJECT EXPERIENCE: WESTERN AUSTRALIA

EcoSmart Ecology is well versed and experienced in Western Australian's natural history values. The team has undertaken many surveys and travelled extensively throughout the state gaining an excellent working knowledge and firsthand experience of its unique flora and fauna. Teams members have worked in a vast array of habitat types ranging from the Jarrah Forests in the south, various heathland communities along the south and west coast, to arid inland vegetation. This practical field knowledge is backed by a strong grasp of the states ecological statues and regulations.



Selected projects that attest to our Western Australian experience are detailed below.

### *Fauna Monitoring, Central Western Australia*

A large metalliferous mining operation in central Western Australia near Laverton required the development of a monitoring program to measure the success of rehabilitation efforts in facilitating fauna colonisation. The program was developed based around comparing both trap capture rate and fauna diversity between rehabilitated lands and a variety of nearby habitats. The ultimate goal of rehabilitation works was not to re-establish a community mirroring its pre-disturbed condition, which is often problematic following mining. Rather, the program aimed to document a sustainable ecosystem trending towards background communities.

To ensure ownership and involvement in the program, staff within the environmental department and other selected invitees were shown examples of the animals captured. This also increased the environmental awareness of staff on site.

At the end of each sampling period, data was entered into a database and analysed using a variety of statistical methods to determine trends and patterns. These results were then documented in a manner that was easily understood by non-ecologically trained staff.

The program contributed to the Mine in winning the Golden Gecko Award in 2008. The award recognises excellence in rehabilitation.



### *Seasonal Baseline Fauna Assessment, Lake Carey*

In order to increase mining life, an existing mining operation based near Laverton in Western Australia was seeking approvals to access new resources located near Lake Carey in Western Australia. These approvals required seasonal baseline assessment of flora and fauna values.

Vertebrate communities inhabiting arid environments fluctuate in response to rainfall. Accordingly, fauna surveys were conducted during both dry and wet seasons. This allowed natural variation within the community to be documented and highlighted the presence of many species that might have otherwise been overlooked (e.g. waterbirds).

During the survey the team recorded a number of Mallee Fowl sightings. This species is protected under federal legislation. The team was able to estimate the species range within the local area based on habitat types and the species habitat preferences. It was found that Mallee Fowls were most likely to occur in areas that would not be affected by mining and the implementation of several mitigation measures should reduce impacts to acceptable levels.

With assistance, the mine documented their activities, potential impacts and planned mitigation measures in an EPBC referral. The baseline fauna report was included within the assessment to support their case. The project was reviewed and deemed as 'not a controlled action', allowing mine plans to proceed.

### *Threatened Species Monitoring, Bernier Island and Dryandra Woodland*

Bernier Island, located in Shark Bay, is a class A world heritage reserve and home to five threatened mammal species that have been largely lost from mainland Australia. Access to the Island is controlled by the Department of Environment and Conservation. Mammal populations on the Island are regularly monitored by the department using grid trapping for small to medium mammals and timed spotlight transects. EcoSmart Ecology assisted DEC staff during one of their monitoring programs, undertaking all facets of the field investigations.

In addition to undertaking this scientific monitoring study, EcoSmart Ecology also spent a number of days on the nearby mainland collecting vertebrate data for DEC. All data collected during the period will be used to assist DEC in managing the faunal values on Bernier Island and around Shark Bay.

The EcoSmart Ecology team has also assisted DEC researching Numbats within Dryandra Woodland. The work involved capturing and fitting radio collars to a family of numbats. The group was then followed and observed to record their behaviour and movement patterns.

These activities, in addition to supplementing the teams Western Australian vertebrate knowledge, resulted in the establishment of affable bonds with DEC staff.

### *Various Natural History Expeditions, throughout WA*

The EcoSmart team has enthusiastically travelled throughout Western Australian with the purpose to observe, document, photograph and gain experience with vertebrate species in new areas. These travels have taken the team into many different locations and habitat types. Some notable locations include heathlands around Albany, Jarrah Forests in the south-west, semi-arid woodland and mallee around Kalgoorlie, heathland along the coast north of Perth, Shark Bay, Geraldton as well as Exmouth and Tom Price.

