

# Wonmunna Iron Ore Project: Subterranean Fauna Survey

Wonmunna Iron Ore Ltd (Ascot Resources Ltd)



## CLIENT:

Wonmunna Iron Ore Ltd (100% subsidiary of Ascot Resources Ltd)

## LOCATION:

Wonmunna, central Pilbara

## SERVICES:

- Level 2 subterranean fauna survey
- Environmental Impact Assessment

## KEY ACHIEVEMENTS:

- A comprehensive sampling regime over four seasons, collecting over 500 samples.
- A complex sample regime was able to demonstrate that most subterranean fauna occurred outside the impact area.
- Detailed habitat mapping showed that species only found in the impact area are likely to occur outside.
- In-house molecular analyses discovered many species new to science and provided regional context for already known species.

Phoenix was commissioned to undertake a subterranean fauna survey for the Wonmunna Iron Ore Project to determine potential impacts to stygo- and troglifauna and to help develop management measures to mitigate potential impacts.

Preliminary investigations suggested a highly restricted, endemic suite of subterranean fauna. As a consequence, the survey was undertaken over four seasons, with more than 500 samples obtained from three separate deposits. This included a number of reference sites outside the impact area and tenement boundary. Sampling comprised of stygofauna net hauls, troglifauna scrapes and troglifauna traps at each bore hole. Karaman-Chappuis samples at creek lines and river pools provided regional context.

Due to the lack of morphology-based taxonomic resolution for many taxa and life stages, molecular analyses provided species-level identifications for the majority of specimens. Phoenix conducted the majority of these analyses in-house.

Thirty-five subterranean species were recovered. Thanks to the survey design and molecular identification, we were able to demonstrate that most of these occurred outside the development footprint and therefore were not threatened by the project. Detailed habitat mapping showed that those that were only collected within the development footprint are likely to occur beyond the impact area.

The discovery of new species has greatly contributed to the biological and ecological knowledge of subterranean fauna in the eastern Pilbara and further regional context was developed for previously known species. The survey exceeded regulatory requirements, despite being conducted under challenging conditions.



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