

Lake Disappointment Potash Project

Reward Minerals Limited



CLIENT:

Reward Minerals Limited

LOCATION:

Lake Disappointment, Little Sandy Desert

SERVICES:

- Level 2 short-range endemic invertebrate survey
- Subterranean fauna desktop review
- Recommendations for impact management and mitigation for sensitive species

KEY ACHIEVEMENTS:

- Collection of baseline data for terrestrial invertebrates on and around the lake
- Four previously unrecorded species of invertebrate discovered

Phoenix undertook an invertebrate fauna assessment for the Lake Disappointment Potash Project. This involved desktop reviews for terrestrial and subterranean invertebrates and a Level 2 baseline terrestrial invertebrate survey particularly targeting short-range endemics (SREs). In a pioneering survey in a remote location, several new SRE species were discovered in the habitats surrounding the lake.

Salt lakes represent a characteristic element of the Western Australian arid landscape and harbour a specialised invertebrate fauna. A number of salt lake specialist invertebrates such as *Tetrallycosa* wolf spiders and *Megacephala* tiger beetles are known from the playa of salt lakes and some of these only occur on single lakes or lake systems. Lake Disappointment forms part of a remote, poorly studied landscape in the Little Sandy Desert and is being targeted for potash extraction.

A subterranean fauna desktop review revealed a paucity of information on subterranean life from the area, and from similar ecosystems. However, due to the impacts being mostly restricted to the saline flats, a subterranean fauna survey was deemed not necessary, providing considerable cost savings for the client.

Five potential SREs were collected in the survey, of which four are new to science. These included representatives of scorpions, trapdoor spiders and slaters. All SREs were collected in widespread sand dune habitat suggesting low impact by the project.

The invertebrate survey at Lake Disappointment was pioneering, as invertebrates have never been systematically surveyed at this location before. The remoteness of the salt lake and logistical difficulties to access the playa of the lake are contributing factors to the lack of biodiversity knowledge in this part of the state. This survey greatly contributed to our invertebrate knowledge in Western Australia and provided baseline data to facilitate the approvals process for the client.



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