Complete your HONOURS PROJECT with the CMSR in the Great Victoria Desert!

The ARC Centre for Mine Site Restoration has two fantastic opportunities to work in the Great Victoria Desert with the Tropicana Gold Mine, located 330 km northeast of Kalgoorlie, Western Australia.

These projects are ideal for students looking to undertake studies directly applicable to mine site restoration, and who are looking to gain hands-on experience in practical and applied restoration ecology!

PROJECT 1 - WHAT CONSTITUTES A GOOD REFERENCE RESTORATION SITE? LINKING VEGETATATION COMMUNITES TO POST-MINING SOILS

Best-practice restoration requires appropriate reference sites to be identified, to guide the composition of species in restored communities. However, as the soils of post-mining landscapes differ dramatically from pre-mined landscapes, the suitability of species from different local communities need to be explored to examine which may be better suited to the conditions.

An exciting opportunity exists to work with AngloGold Ashanti Australia (AGAA) at the Tropicana Gold Mine (TGM), to examine species assemblagy in post-mining substrates in the Great Victoria Desert. The objectives of this project are to gather site data to better understand:

- The suitability and performance of species from different vegetation communities on various substrates;
- The quantity and quality of the soil seed bank in stockpiled topsoil; and
- The role of pioneer species as early colonisers and their functional roles in restoration.

PROJECT 2 - ASSESSING THE IMPACT OF BRACKISH WATER USED AS DUST CONTROL ON MINE SITES

The management of dust on mine sites in Western Australia is a critical requirement of site-based environmental management. However, in some water-limited areas only brackish-saline water is available for this management practice.

An opportunity exists to work with AngloGold Ashanti Australia (AGAA) at the Tropicana Gold Mine (TGM). The Site Access Road is lightly watered with brackish water for dust suppression, resulting in the potential for long-term salt accumulation in the road catchment area. In addition to complementary studies examining capillary break designs to prevent hypersaline rise through soils over time, there is a need to identify the potential impacts of salt accumulation on the seed germination, establishment, growth and development of species from local communities.

The objectives of this project are:

- To identify the impact of saline water application for dust suppression on roads across TGM; and
- To identify species from local vegetation assemblages which could potentially be used for rehabilitation on the TSF and salinity affected areas such as roads.

Contact Renee Young renee.young@curtin.edu.au for more information today!