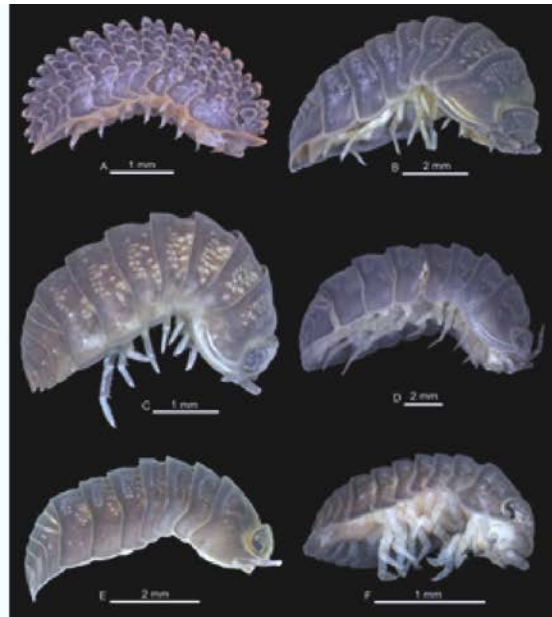


Western Hub, Turner Syncline and Turee

Fortescue Metals Group



CLIENT:

Fortescue Metals Group Limited

LOCATION:

Western Pilbara

SERVICES:

- Short-range endemic invertebrate baseline surveys (Level 2) and subsequent targeted surveys for species currently known only from single sites
- Taxonomy, including DNA barcoding
- Recommendations for further assessments

KEY ACHIEVEMENTS:

- Comprehensive data on SRE invertebrates for a poorly surveyed area of the Pilbara, including COI barcodes lodged with the WA Museum
- Pioneering taxonomic work on a number of short-range endemic target groups such as geophilomorph centipedes and harvestmen

Phoenix completed detailed Level 2 short-range endemic (SRE) terrestrial invertebrate surveys followed by targeted surveys for potentially range-restricted species over two years in some 280,000 ha. The application of morphological identifications resulted in the most comprehensive SRE assessments in the Pilbara to date in relation to the breadth of taxonomic groups collected and will streamline the future approvals process for our client's proposals.

Fortescue Metals Group is investigating options to expand its Pilbara mining operations to potentially include a number of tenements in the Western Pilbara, west and south of Tom Price, known as the Western Hub. The Western Hub is located around 80 km west-north-west of Tom Price and consists of a variety of areas of some 170,000 ha. In addition, exploration of tenements south-west of Tom Price (Turner Syncline) and south-east of Paraburdoo (Turee) are being progressed (two areas totalling approximately 110,000 ha).

Phoenix conducted SRE surveys at a total of 115 sites throughout the area. Initial baseline surveys identified a number of invertebrates currently only known from single sites. Subsequent targeted surveys provided additional records for most species.

Initial baseline surveys collected a considerable number of specimens that could not be identified to species level, either due to poor taxonomic knowledge in the group (e.g. centipedes and harvestmen) or unsuitable life stages (i.e. juveniles, females) for morphological identification. Phoenix conducted extensive molecular identifications (COI barcoding) for groups previously considered too difficult to judge.

The multi-area surveys for Fortescue's Western Hub, Turner Syncline and Turee provided a 'regional-scale' dataset for the client with more comprehensive information on species distributions to better inform environmental impact assessments for future projects in these areas.



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ENVIRONMENTAL SCIENCES