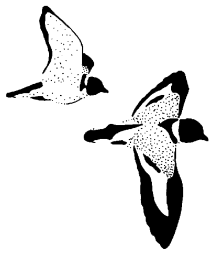
Mt Adams Rd Project
Threatened Fauna Investigations
September 2008

Ian Harris, B. Metcalf and M. Bamford

Prepared for: **TIWEST Joint Venture,**
PO Box 381,
Como, WA, 6152.

Prepared by: **M.J. & A.R. BAMFORD**
CONSULTING ECOLOGISTS
23 Plover Way
KINGSLEY WA 6026



28th October 2008

1. INTRODUCTION

1.1 *Introduction*

TiWest Joint Venture (TiWest) proposes to develop the Mt Adams Road mineral sands Project, located in Unallocated Crown Land south-east of Dongara. As part of the Environmental Impact Assessment (EIA) for the Project and as per the recommendations of previous fauna studies from the area(Metcalf and Bamford 2007), Bamford Consulting Ecologists was commissioned by TiWest to conduct further fauna investigations focusing on several threatened taxa.

1.2 *Study Objectives*

The objectives of the threatened fauna survey were to assess the presence of several threatened vertebrate and invertebrate species within the Mt Adams Rd area. Those species being investigated and their current status are listed in Table 1 below.

Table 1. Status of threatened fauna investigated from the TiWest Joint Venture's Mt Adams Rd Site (September 2008).

Common Name	Scientific Name	Status
Millipede	*Antichiropus* 'Eneabba 1'	Collected during previous fauna investigations within the study area (Metcalf and Bamford 2007), and previously known only from sites near Eneabba. The species has no formal conservation listing but is considered to be a short range endemic by the WA Museum.
Phasmid-mimic Cricket	*Phasmodes jeeba*	Listed as Priority 2 by the DEC, this species has a limited range centred around Eneabba. Six specimens were collected from the Mt Adams Rd area in 1984.
Western Ground Parrot	*Pezoporus wallicus flaviventris*	Listed as Critically Endangered under the WA Wildlife Conservation Act and Endangered under the Commonwealth's EPBC Act. There is a report from 1992 of an adult and juvenile being seen within the Mt Adams Rd area (Woods. R, pers. comm.)

2. METHODS

2.1 *Approach*

2.1.1 Survey Limitations

The major limitations experienced during the survey were the extremely dry conditions. Very few areas were identified with enough moisture content to sustain millipede activity. In addition large portions of the survey area have experienced fire and contain very little vegetative cover. Searching for the phasmid-mimic cricket and ground parrot was hampered by strong winds, reducing the distance sounds can travel.

2.2 *Personnel*

The following personnel were involved in the fieldwork:

- Mr Ian Harris *BSc(Cons. Biol./Env. Sci.), Hons (Wildlife Mgmt)*
- Mr Simon Cherriman *BSc (Env. Bio), Hons (Env. Bio.)*

2.3 *Licenses and Permits*

This field survey was conducted under DEC regulation17 licence SF006243.

2.4 *Field survey*

The field survey was conducted from the 13th – 15th September 2008.

2.5 *Sampling Techniques*

2.5.1 Millipede searching

As this particular species of millipede has only been encountered within the proposed mining area (Zeus and Dionysus), intensive searching was undertaken outside of impact zones in an effort to determine if this species is wide spread within the greater region. Searching techniques included:

- raking through leaf litter;
- searching under fallen timbers and debris;
- breaking into decomposing vegetation (such as logs);
- raking through vegetative spoil heaps associated with clearing lines;
- digging into root material and;
- searching under rocks, iron and other man made debris

Search transects were conducted in areas thought to contain suitable habitat for the target species. Habitats of all types were sampled however, wetlands and the margins thereof were particularly targeted as it was hoped that these areas would have retained some moisture content. The coordinates of search areas were recorded using a hand held GPS and are presented below.

2.5.2 Ground Parrot surveys

Aural surveys were conducted for Ground Parrots at dusk. Suitable habitat areas were selected and listening commenced prior to sunset and continued for approximately one and a half hours.

2.5.3 Phasmid-mimic Cricket surveys

Head-torching was conducted in the late evening to survey for the Phasmid-mimic Crickets. Techniques for cricket searching included walking through the understorey searching for the species and listening for cricket calls then triangulating the position. Search locations are presented below.

RESULTS AND DISCUSSION

2.6 *Results*

Twenty sites were investigated for Millipedes (see Table 3), whilst three were investigated for Western Ground Parrots and Phasmid-mimic Crickets (see Table 4). No millipede species, ground parrots or phasmid-mimic crickets were recorded during the September site investigations.

2.7 *Discussion*

The failure to record any millipede species during the site investigation is most likely directly related to the lack of moisture. August experienced less than average rainfall and it would appear that the premature end to winter and rising temperatures affected invertebrate activity. The search for evidence of the Ground Parrot will be an ongoing exercise as the species has is only known from one sighting in this area and its continuing presence is yet to be determined. The Phasmid-mimic Cricket is only known from one area near Eneabba and a single specimen was recorded from Mt Adams in the 1980s. It appears to be active on spring nights where it can be found on the tops of shrubs. It may be that the windy conditions experienced were not favourable to this species.

3. RECOMMENDATIONS

In an order to determine the extent of the distribution of the millipede in the project area, it would be beneficial to conduct a similar survey in the wetter months of 2009. June to early August would be preferential as this time of year would provide the moist conditions required for optimum activity. Searching for the Phasmid-mimic Cricket would best be carried out in late spring when the species is most likely to be calling and weather conditions may be more favourable.

4. REFERENCES

Metcalf, B.M. and Bamford, M.J. (2007). Mt Adams Rd, Dongara – Fauna Assessment Survey.
Unpublished report for the TiWest Joint Venture.

Table 2. Millipede Search Locations from the Mt Adams Rd site, Dongara.

Easting	Northing		Easting	Northing	Habitat
317627	6745486	to	317414	6745483	Banksia woodland with shrub understorey over grey sands
322636	6746324	to	322635	6746380	Low shrubs recently burnt less that two years
322291	6747226	to	321998	6747167	Low shrubs on previously disturbed gravel pit with building waste
317605	6749863	to	317407	6749897	Wetland species on clay
316611	6749821	to	316402	6749885	Wetland species on clay
316418	6750079				Wetland species on clay, eucalyptus dominated on swamp margin
322612	6744825				Low shrubs on sand plain
322584	6744567	to	322311	6744573	Low shrubs on sand plain
322683	6740617				Low shrubs on sand plain
320360	6729629				Melaleuca Swamp on clay with fringing eucalyptus
320443	6729607				Melaleuca Swamp on clay with fringing eucalyptus
320664	6729750				Melaleuca Swamp on clay with fringing eucalyptus
320809	6729565				Eucalyptus on sand around swamp margin
320961	6729817				Eucalyptus on sand around swamp margin
320749	6729850				Eucalyptus on sand around swamp margin
316719	6737193				Swamp - large areas of dead banksias around margins over open shrub under storey
316093	6735664				Acacia shrub thicket
316310	6735152				Low shrubs on sand plain recently burnt less than two years
316962	6738146				Swamp - large areas of dead banksias around margins over open shrub under storey
316003	6738916				Tyre dump, searched under tyres and in the surrounding shrub leaf litter

Table 3. Ground Parrot and Phasmid-mimic Cricket Search Locations

Easting	Northing	Comments
322612	6744825	Low shrubs with sedges
322631	6743373	Low shrubs with sedges
322683	6740617	Low shrubs with sedges