

Gwambygine Pool Conservation Reserve

Fauna (macro-invertebrate and herpetofauna) Inventory Survey - 2009/10



Prepared and published for the River Conservation Society York Western Australia with financial assistance from Wheatbelt Natural Resource Management.

Cover Photograph:

Common male Gwambygine Pool Damselfies

- (above) Blue Ringtail Lestidamselfly *Austrolestes annulosus*
- (centre) Redfront Coenadamselfly *Xanthagrion erythroneurum*
- (below) Aurora Bluetail Coenadamselfly *Ischnura heterosticta*

Report David Knowles
Design Fleur Knowles
Spineless Wonders

08 9247 5772

info@spinelesswonders.com.au

www.spinelesswonders.com.au

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Forward

It gives me a great deal of pleasure to present this Invertebrate Survey of Gwambygine Pool Conservation Reserve by David Knowles.

The River Conservation Society commissioned David to carry out three surveys of the Reserve in September, October and November 2009 and in May 2010.

The survey has revealed a rich diversity and abundance of the terrestrial invertebrate population in close proximity to Gwambygine Pool – a much greater abundance than had been expected.

Importantly there have been a number of undescribed species found. This is not surprising considering the paucity of survey information throughout the wheatbelt of Western Australia.

David's survey shows quite clearly the usually unobserved fauna that survive, and in fact, proliferate in an area of the State that is often neglected when it comes to serious scientific study.

I hope that this study is the forerunner of many other studies in our neck-of-the-woods.

I would like to thank the Wheatbelt NRM for their support for this important project through their Community Small Grants Incentive Scheme.

Dr Cicely Howell
Chair
River Conservation Society Inc

September 2010

Introduction

“The purpose of this study is to make an inventory of the invertebrates found on the banks of Gwambygine Pool. This survey can then be used in conjunction with the 1996-8 Biological Survey of Gwambygine Pool to provide a base-line inventory of invertebrates for a specific habitat, namely the riparian and aquatic habitat of a large, deep, brackish, permanent pool on the middle reaches of the Avon River in Western Australia

Other base-line material has already been made for Gwambygine Pool, namely, the physico-chemical characteristics of the pool, the micro and macro biota of both the pool and the riparian area, also the Oblong Tortoise population and the bird presence, both aquatic and terrestrial. The presence of other macro vertebrates and invertebrates have been noted at intervals in the past and a search made for the once common water rat (*Hydromys chrysogaster*) that resulted in only one sighting in the pool and the very occasional sighting on other reaches in the immediate vicinity. Therefore, in the 2009 survey a search was also made for amphibian and reptile species.

Up until 2010 the riparian habitat of the Avon River outside the jarrah-wandoo forest was not differentiated from the Eastern Darling Scarp botanic region and the health and diversity of its invertebrates was judged against that of the scarp with misleading results. As from 2010 the Department of Conservation has differentiated the inland river pools and their riparian habitat from the surrounding landscape and judged many of these pool communities to be threatened. Gwambygine Pool is now officially recognised as a threatened inland pool community.

This threatened inland pool community is characterised by the aquatic community itself and by the narrow strip of riparian vegetation on either bank. For the purpose of this study the small area of bush above the flood plain on the west side of the pool at its southern end has been included. It is known as the Gwambygine Pool Conservation Reserve and is managed by the River Conservation Society

Gwambygine Pool is some 1100 meters long and measures 60 meters across at its widest point. The northern end of the pool is about 4 meters deep but at its southern end the pool is quite shallow due to the transport of sediment from the disturbed river bed

upstream. This sediment plug has been encroaching steadily into the pool until, some 300m downstream, the channel bed drops away abruptly to deep water. In 1996 and again in 1998 this sand plug was excavated and the spoil was stock-piled on the reserve close to the Great Southern Highway. Once the spoil had been sold off revegetation of this patch of the reserve was begun.

Parallel to the west bank of the pool at its southern end an anabranch known to locals as the 'billabong' lies at the toe of the steep bank of the floodplain and at the top of this bank the land flattens out to support an area of open York Gum and Jam woodland called the Gwambygine Pool Conservation Reserve. Deep, damp gullies border the south and north end of this woodland and the southern gully, having been relatively undisturbed, still supports a more diverse understory.

North of the reserve the land on both sides of the river has been cleared for agriculture to within about 4 meters of the river. To the south-east the land rises abruptly, faced by granite sheets and boulders, to Scott's Hill. The trees on this extensive hill were ring-barked several decades ago but not removed so that the hill carries a good cover of York gum, Casuarina and jam. The low, sandy hill on the opposite side of the pool carries a varied cover of Casuarinas, Banksias and a diverse understory.

These two hills, the pool and the riparian strip are all that remains of native vegetation to support the flora and fauna of the mid-slope. It is important to keep this in mind since the fauna of this small area of remnant bush has now to compete for territory with the displaced fauna of the midslope which is now under crop.

The remnant vegetation of pool and the reserve is characterised by its lack of diversity. It can be summed up by three trees and their respective understorey, and by exotic blow-ins. The three trees are *Casuarina obesa* (Swamp sheoak) closest to the water's edge, *Melaleuca raphiophylla* (Saltwater paperbark) around the billabong and on the river bank, *Eucalyptus rudis*, (Flooded gum,) beside the river and along the gullies and to the trio can be added *Eucalyptus loxophleba* (York gum) for the area above the flood plain. With the exception of the ubiquitous York gum, these trees are not found elsewhere in the local landscape.

The trio of trees grow only where there is ready access to water and they can tolerate some degree of salinity. In the riparian context they are growing on alluvial clays and sands which supply a wider range of nutrients than can be found on the surrounding exhausted and nutrient deficient soils of the Yilgarn plateau. Casuarinas share with the pea family the capacity to sequester nitrogen in their root nodules and they also carpet the soil beneath them with a dense cover of needles that block out competition and store nitrogen. The spin-off effect is to produce sap, leaves and fruits that contain more nutrients and can thus support a greater abundance and diversity of fauna than is found in most other habitats. All three trees supply vital shade, especially in summer for fish in the river and fauna on the banks.

None of these trees or their favoured understory have showy or colourful flowers, fruits, or even nectar. In this respect they are plain, diminutive and scentless but they are prolific. The layered sheets of paperbark on the Melaleucas provide a prodigious number and variety of habitat sites for reptiles, insects and bats, the flooded gums provide hollows for larger fauna. In short, the riparian trees support a very large and varied animal population. The understory species such as the jam trees and manna gums supply large seeds, the *Frankenia pauciflora* (Sea Heath) and the two characteristic reed species, *Bolboschoenus caldwellii* and *Cyperus gymnocaulos*, together with the grasses *Paspalum vaginatum* (Saltwater Couch) and *Sporobolus virginicus* (Marine Couch) supply clouds of pollen and seed. Many of the more recent blow-ins do the same, such as the saltbush species that have found their way into the river from upstream, *Rhagodia drummondii* and Beaded Samphire, *Atriplex exilifolia* and *Atriplex semibaccata*. Fat Hen and Smooth heliotrope flourish in the cool, deep shade while all about the bush is dry and inhospitable in the summer months. Shrouded in mists in winter the lichens flourish on the casuarinas and later the mistletoe, *Amyema linophyllum*, produces its sticky red fruits on the same branches providing a feast for the Mistletoe Birds.

When you add to the trio of riparian trees the abundance of micro and macro fauna produced in the waterbody of the pool itself, from phytoplankton species through to molluscs, crustaceans, flies, beetles, damselflies and colourful dragonflies not to mention the Western Minnows, Hardyheads, Night fish, Gambusia and that innocent looking killer of native species, the Swan River Goby that chews through its fellow fish beginning at the tail and munching through to the head, it is hardly surprising to find that a permanent pool and its surrounds is such a productive system. The system experiences seasonal cycles

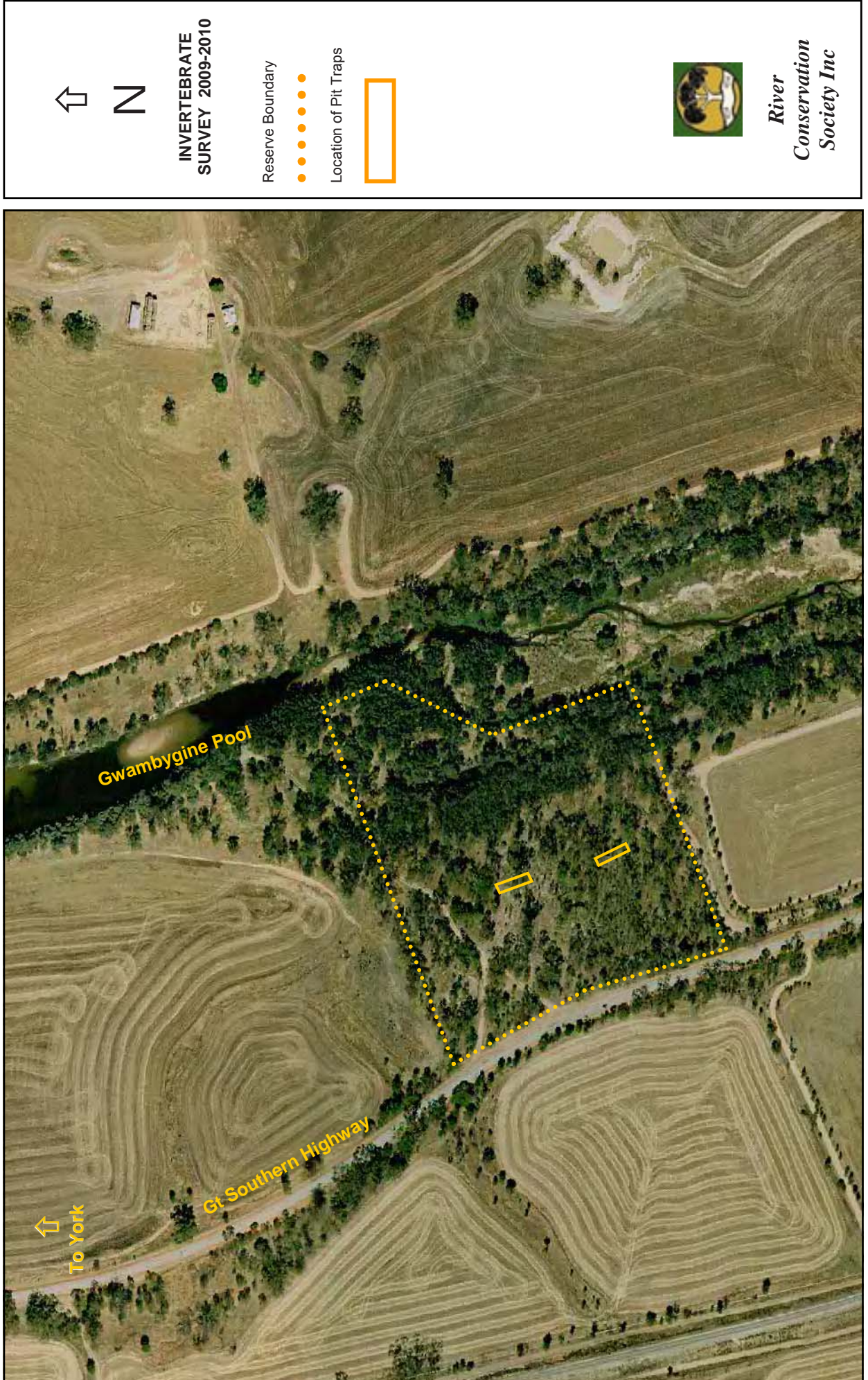
but is most productive around October, a cycle respected by the tortoise population that begins its breeding at this time and lays the first of two clutches of eggs.

Not many studies have been undertaken to compare this system with other ecosystems but work in Queensland has shown greater biodiversity in riparian habitats than in adjacent rain forest habitats.

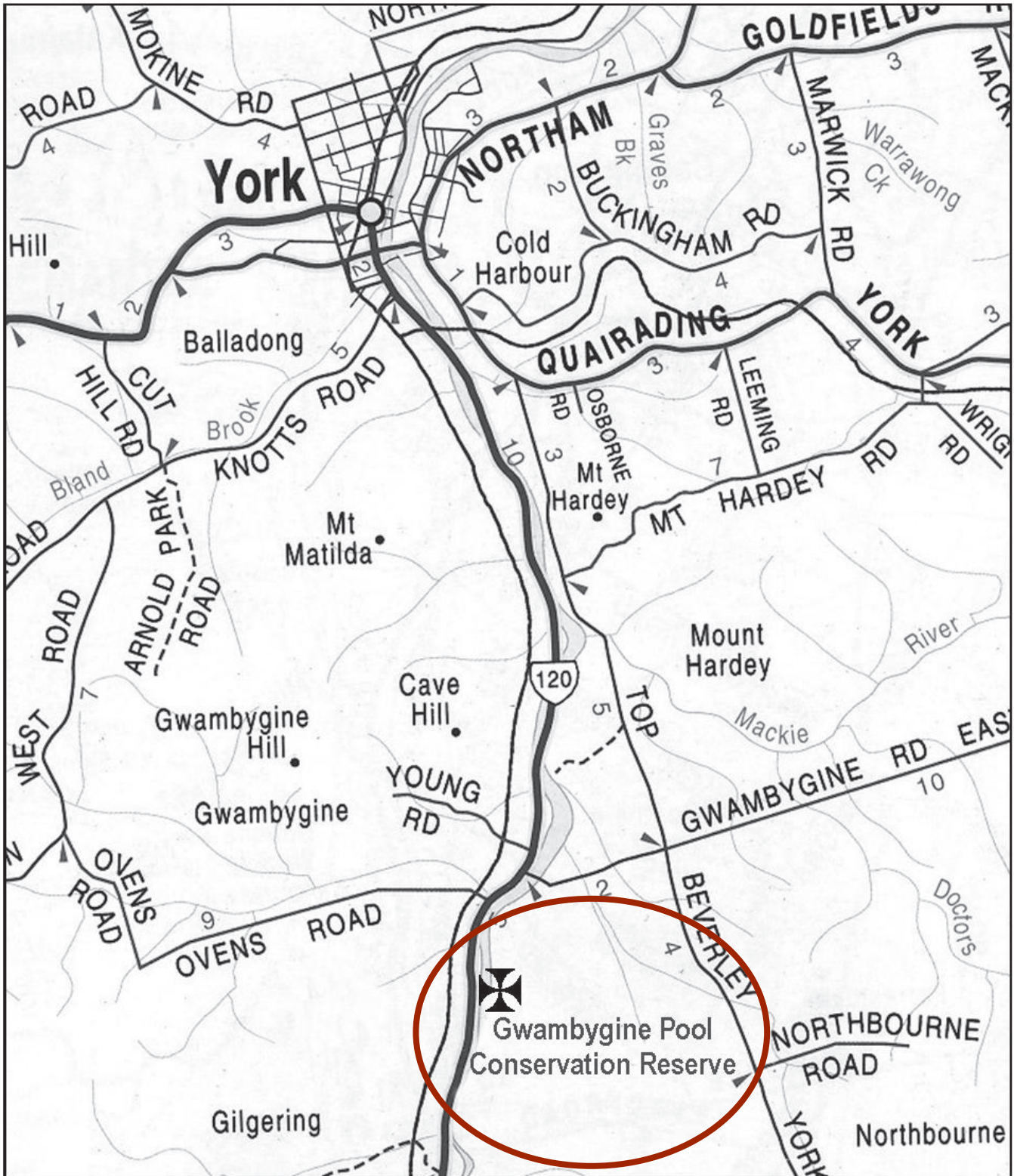
At Gwambygine 41 species of land bird were observed on the reserve compared to only 12 species in the adjacent sandy heath and 22 species of waterbird. In area the riparian ecosystem is small, in floral diversity it is specialised, in faunal biodiversity it is disproportionately great, a fact that is not immediately obvious to the human observer. Visitors frequently remark on the uninteresting vegetation, the lack of botanical diversity, the prevalence of weeds compared to what they are familiar with in the Jarrah Forest or on the coastal sand-plains. Appearances are deceptive, in an emergency they themselves would find more in by way of food and shelter to sustain them here than in more showy ecosystems. It was not until 1992 that the State Government recognised the need to manage the Avon, including its pools. Not until about 2006 that it stepped in to prevent ground water from inland drainage schemes, water with a pH of 2, from being systematically drained, year in year out into the Avon which has a pH of 8, and not until 2010 that it pronounced that the system was threatened and needed protection”.

C. Howell 2010

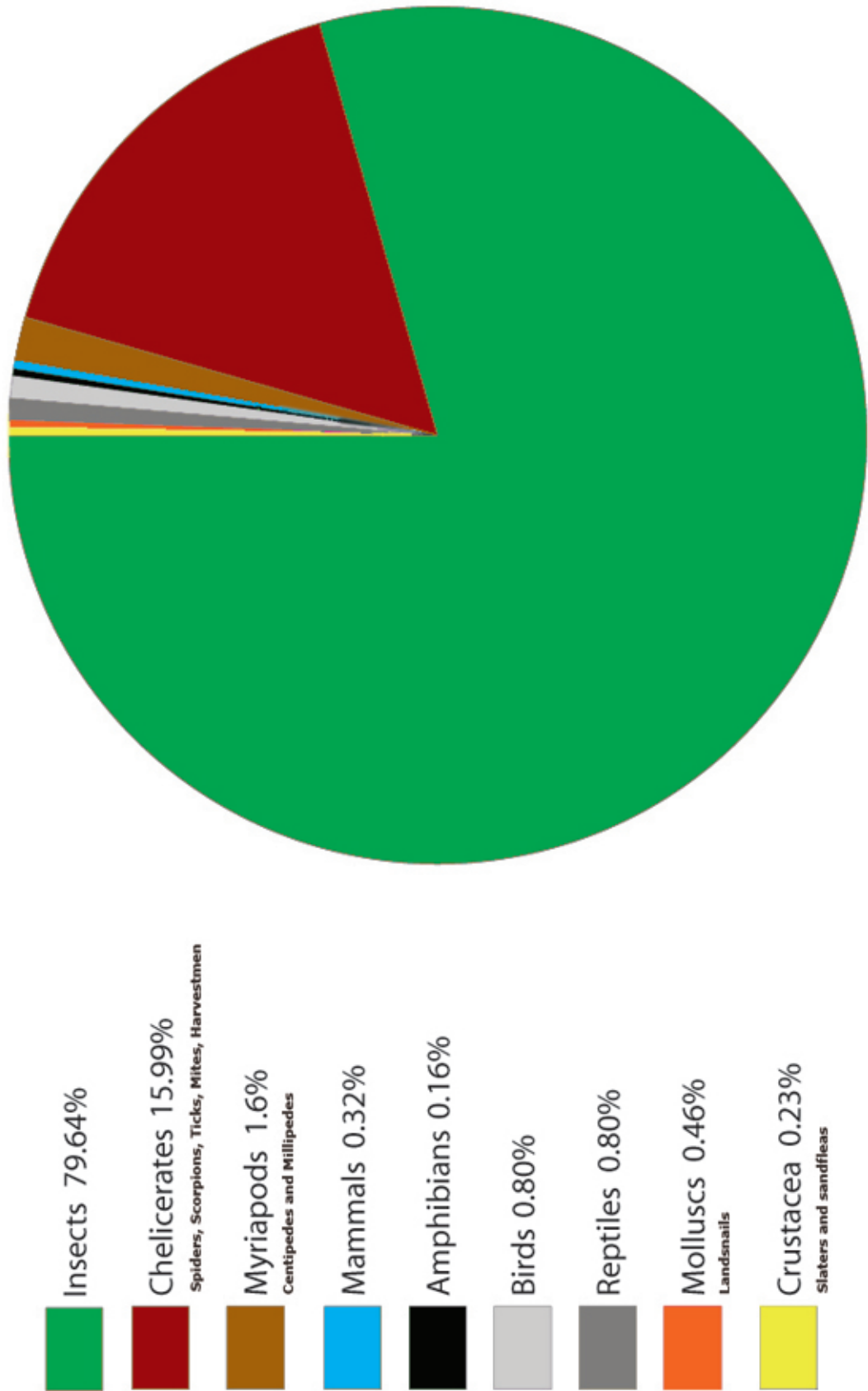
**Gwambygine Pool Conservation Reserve Boundries = 3.83 ha.
Invertebrate Survey - Aerial view (rectangles = 2 x pitfall traplines)**



Gwambygine Pool Conservation Reserve Invertebrate Survey Cadastral Map



Western Australia's Land Fauna - Species biodiversity



Adapted from a WA Museum model - copyright SPINELESS WONDERS WA 2008

Scope

- Regional overview - To generate animal biodiversity foundation data for one of the few remaining examples of wheatbelt riparian habitat associated with aquatic conditions most closely resembling those of the Avon river prior to the early 1900's.
- Target area - To make a preliminary inventory survey of the terrestrial macro-invertebrate/reptile and amphibian biodiversity of the Gwambygine Pool Conservation Reserve after (post) earthworks flooding and planting, with particular reference to the major area for animal biodiversity – the macro-invertebrate fauna of the riparian zone and adjacent habitats.

Spring - September 18th and October 16th to 18th 2009

Weather and Flowering for the September (spring) sampling period was mild with below average temperatures and minimal flowering of native species. The first evening was so cool that it was deemed unnecessary to open pitfall buckets. The remaining mid October spring sampling period co-incided with the first hot days/nights of the season with light wind conditions and high humidity and resulted in exceptional catch rates.

Summer - November 13th to 16th 2009

Weather conditions were hot and still with moderate humidity during the mid November (early summer) sample period. This was close to peak flowering time with many flowering weeds evident, as well as native species.

Swamp Paperbark (*Melaleuca raphiophylla* - Myrtaceae) which ranges from Shark Bay to northern Eyre Peninsula SA, was in prime flower. I suspect this plant has the greatest diversity of generalised pollinators in the reserve.

Autumn - March 29th to April 1st 2010

Weather conditions for the March/April (early autumn) sample were hot with gusty easterly winds and high humidity levels due to recent rainfall.

As expected there was virtually no plants in flower at this time of year. Two small herbs Smooth Heliotrope (*Heliotrope curassavicum*), and another small unidentified white flowering herb was growing beneath the shelter of the *Melaleuca* thickets. The *Heliotrope* grew among saltwater cooch on riverbed mounds, and was highly attractive to various moths, butterflies, wasps and flies. The flowering of these 2 plants was a response to breaking autumn rains (York ca 40mm). Gwambygine Pool was full and in moderate flow.

Micro-invertebrates and vertebrate ectoparasites

This specified group - were not specifically sampled due to time, infrastructure, and cost limitations. However where specimens were obtained as 'bycatch' they were retained and included in selected statistics to indicate their probable occurrence. Otherwise Mammal and bird sampling was not part of this survey brief though the presence of insect hosts was informally noted.

Specimen preservation and collection

Most collected arthropod specimens were divided into Orders according to sample period and preserved in 75% ethanol. Vertebrate animals were observed directly or released from pitfall traps after ID.

Voucher Specimen Lodgement

All specimens were supplied to the Western Australian Museum Arachnology and Entomological collections.

Interpretation aids

Due to previous client demand common names for species were adopted to assist the general reader. The specimens have been identified to Family and genus and, where possible, to species and are presented as such. However, a non specialist reader may find it useful to be offered a vernacular name in English. So vernacular names have also been presented. They offer clues that refer to the subject's colour, size or some other characteristic feature. For example *Austracantha minax*, commonly called Christmas Spider, has also been given the descriptive tag, Common Spiny Araspider. These vernacular names should not be considered official and the reader can ignore them at will.

For the **FIRST** time in a Western Australian **inventory** survey almost all species recorded are presented by colour images - these appear in their appropriate appendices.

DEC Permit

Voucher specimens retained were collected under the conditions dictated by a Regulation 17 permit No. SF007074 (2009).

Methodology employed in the 2009/10 invertebrate survey

Sampling methods.

Sample time frame - Three 3 day/3 night sampling snapshot periods were employed in mid September (one light trapping night), the second part of the spring sample occurred during mid October (2 light trapping nights and 3 days general trapping) and the second early summer period in mid November 2009. The third and final autumn sample was in late March/ April 2010 one week after breaking rains.

Reccomendations and conclusions - To supply basic reccomendations designed to stabilise and improve conservation outcomes for the target reserve - one of last repositries of previous biodiversity.

Twelve sampling methods were used. These may be loosely divided into two categories, aerial and terrestrial.

Aerial

1. Light-trapping (nocturnal only) – run between sundown for a minimum of 2 hours in an open sandy area between the carpark and trapline 1.
2. Hand-netting – ‘specimen-focused’ netting used during the daylight hours.
3. Sweep-netting – ‘blind’ sweeping of low and high vegetation during daylight hours.
4. Beating – ‘blind’ shaking canopy vegetation into a large diameter blossom net during daylight hours.
5. Head-torching – using a head-mounted light to scan vegetation.
6. Hand-collecting – included bark-peeling and removing specimens manually from vegetation during daylight hours.
7. Branch-mounted coloured bucket lures – Blue, red, and yellow buckets partially filled with water were mounted in shrubs or trees on the river side eastern of each of the two pitfall traplines.
8. Direct observation – Some well known species, particularly fast-flying insects and some reptiles, were merely identified by sight. Individuals of protected Families/ species were observed and only collected if the author deemed that the collection of such a taxon would become a strategic lodgement in a recognized (and freely available to researchers) institutional collection.

Terrestrial

9. Pitfall-trapping (see Scope for array) – operated over each 24 hour period and sampled three times daily. Two pitfall trap lines were sited on the flat clay land above the flood plain. This had been York gum and jam country before it was used as a stockpile site for the sand that was excavated from the pool in 1996 and again in 1998. Revegetation had been commenced in 2000 but progress had been slow due to the compacted nature of the soil, unusual winter frosts and summer droughts. A number of local species suitable to this type of soil had been trialed but success had been limited to *Acacia meisneri*, York Gum and Jam together with some rather unsuitable salt bush species that nevertheless thrived. Few were as much as 1 meter in height and none had flowered, so for all practical purposes the sites were sparsely vegetated but there was ample evidence of invertebrate activity, of ants and scorpions.

Each trapline contained 5 twenty two - litre buckets, placed approximately 4 meters apart from each other. Reptiles, amphibians and macro-invertebrates were sampled in person between the hours of 7.00am and 6.45 pm daily. In addition, passive traps (coloured lure buckets) operated throughout the 24 hour period.

10. Burrow and shelter entrance traps - intermittent.
11. Burrow and shelter investigation - intermittent.
12. Turning over the ground debris - intermittent.

Aquatic

No direct water-based aquatic sampling was included in the sampling brief however, many terrestrial-based adults were sampled from riparian vegetation and shoreline substrate as well as at the light trap.

Site Description:

Pitfall trapline 1: The most northern trapline was situated in an area of sparse emergent senescing *Eucalyptus loxophleba* (York Gum), with an open substorey of York Gum regrowth mixed with *Acacia saligna* (Orange Wattle), *A. acuminata* (Jam Wattle), *A. microbotrya* (Manna Wattle), and *A. meisneri* (Meisner's Wattle). The disturbed understorey was punctuated by sparse plantings of local shrubs (see list page). The substrate was dominated by weeds, interspersed with exposed areas of transplanted coarse river silt.

Pitfall trapline 2: Trapline 2 was dominated by an overstorey of mature, though small stature, Jam Wattle and sapling York Gum thicket with bark/litter dominated understorey on clay soils. There were few weeds present. Pitfall sites selected demonstrate a graded series of disturbance from original (pre-silt deposition) state to heavily disturbed (post-silt deposition) state.

Photography

Almost all species observed and voucher sampled were photographed by a Nikon D90 DSLR camera with a Nikkor 60mm Macro lens. Lighting was supplied by a Nikon ringlight (effectively a double flash mounted on a ring which attaches to the front of the macro lens). Individual species were temporarily housed in vials in a fridge until activity levels were sufficiently lowered to enable effective photography. Although a minority of species were photographed on natural substrates or light trap voile, the majority were photographed on a fine-grained 'bluescreen' in the 'studio' – a kitchen bench in my nearby York accommodation. Extra desk lamps were used to provide light for focusing. Resulting images were 'cleaned and exposure corrected' in Adobe Photoshop.

Definitions

Most of this baseline data is derived from of a Microsoft Access Database datasheet. This private resource is continually growing and being tweaked in order to make it the largest and most current dbase relevant to the high-growth development zone encompassed by the Greater Perth Metro. Region. The specimen data from this survey enlarges the existing geographical scope of the dbase from IBRA Bioregions of SWAN (SWA) and Jarrah Forest (JF) into western margins of Avon Wheatbelt (AW).

Some of the earlier data from previous reports is also reinterpreted due to new information, taxonomic revision both new to the author and recently published, detection of past errors, publication of new general comprehensive works, and the systematic trawling of public and private reference collections.

The macro-invertebrate data are presented as a converted master table with 7 sub-tables referring to each of the Classes of macro-invertebrates recorded:

ARACHNIDA, CHILOPODA, CRUSTACEA, DIPLOPODA and INSECTA. The vertebrate Classes REPTILIA and AMPHIBIA are presented in separate tables. Each vertebrate table has 6 field headings.

Each macro-invertebrate table has 8 field headings

ORDER**Family****Common Name**

* Note: most of the species sampled do not yet have common names so I have proposed a common naming system subject to later general assessment and acceptance by various specialist groups (see Common names disclaimer in Interpretation aids p. 13).

Genus**Species name****Adult eco(logical) role/Nymph/larval (role)****Sample Period**

Note: The vertebrate table lacks the Nymph/larval column heading.

Number * Note: This applies only to the vertebrate tables column heading. Number refers to the sum of species from each Order/Family represented in the sample, and generally reflect taxonomic stability of the group.

Bioregion

The Gwambygine Pool Conservation Reserve site is situated approximately on the western edge of the Avon Wheatbelt bioregion which is adjacent to the Jarrah Forest bioregion to the west. The bioregions are defined by Environment Australia's IBRA Convention (see IBRA WEBSITE). The convention uses the standardised coding of 'AW' (= Avon Wheatbelt) and 'JF' (Jarrah Forest = Darling Range).

Definition: IBRA = Interim Biogeographic Regionalisation for Australia.

Site Subregion and Description

The riparian vegetation bordering the middle section of the Avon river forms a discrete vegetation group made up of three trees, Flooded gum, Saltwater paperbark and Swamp sheoak, a tall understory of acacia and melaleuca species and an understory of reeds, grasses, some halophytes and some introduced taxa as described in more detail below. It is a healthy community comprised of mature, juvenile and seedling plants. Fallen branches provide habitat for a range of lichens and fungi, to which the parasite *Amyema miquelii* is a welcome provider for the Mistletoe birds. On the outer edge of this riparian community can be seen a normal York Gum and Jam community with its characteristic open, low understory with patches of exposed clay soil supporting lichens and small ephemerals in season. Sand was stored on part of this area for a couple of years and the pitfall traps were sited on this boundary so that the predatory invertebrates could be more easily captured. The presence of small fresh water seeps at the river's edge have promoted the growth of two native reed species and two native grass species that provide ample habitat in addition to pollen and seed. The shade provided by the trees and thickets and the dense reed and grass areas, together with the nitrogen fixing casuarinas and the annual supply of fine river sediment has also presented a welcoming habitat for a number of soft green exotic species. The latter continue to thrive until well into the summer season so, as a welcome change, they have added to the supply of green matter and seed available for both invertebrates and vertebrates

Plants of the Immediate Riparian Zone (* represents introduced species)

| The Core Trio: | Common Name | Flowering Period |
|----------------------------------------------------------------------------------------------------|----------------------|-------------------------|
| <i>Eucalyptus rudis</i> | Flooded Gum | Oct |
| <i>Melaleuca raphiophylla</i> | Saltwater Paperbark | Oct |
| <i>Casuarine obesa</i> | Swamp Sheoak | Mar |
| (Parasite on the Casuarina: Amyema miquelii. Flowers in Feb. Fruit consumed by Mistletoe Birds) | | |
| Other riparian plants: | | |
| <i>Chenopodium album</i> | Fat Hen | Nov - Jan |
| <i>Frankenia pauciflora</i> | Sea Heath | Nov – Jan |
| <i>Halosarcia sp</i> | | |
| <i>Heliotropium curassavicum</i> | Smooth Heliotrope | April - June |
| <i>Rhagodia drummondii</i> | | Oct - Nov |
| Reeds: | | |
| <i>Cyperus gymnocaulos</i> | Spiny Flat sedge | Nov - Jan |
| <i>Bolboschoenus caldwellii</i> | Marsh club rush | |
| Grasses: | | |
| <i>Paspalum distichum</i> * (<i>vaginatum</i>) | Saltwater couch | |
| <i>Sporobolus virginicus</i> | Native marine couch | Jan - Dec |
| Above the Flood Plain, so not strictly riparian | | |
| <i>Eucalyptus loxophleba</i> | York Gum | Sept - Jan |
| <i>Eucalyptus wandoo</i> | Wandoo | Oct - May |
| <i>Acacia acuminata</i> | Jam Tree | Aug |
| <i>Acacia microbotrya</i> | Manna Wattle | July |
| <i>Acacia meisneri</i> | Blue wattle | Nov - Feb |
| <i>Acacia saligna</i> | Golden Wreath Wattle | July - Aug |
| <i>Atriplex semibaccata</i> | Berry Saltbush | March - June |
| <i>Atriplex exilifolia</i> | | Sep - Nov |
| <i>Rhagodia drummondii</i> | | Oct - Nov |
| <i>Dampiera lavandulacea</i> | | Oct |
| <i>Dichopogon fimbriatus</i> | Chocolate Lily | Jan |
| <i>Aster subulatus</i> * | Bushy Starwort | Dec |
| <i>Ursinia anthemoides</i> * | Ursinia | July - Dec |
| <i>Osteospermum clandestinum</i> * | Stinking Roger | Sept |
| <i>Cotula coronopifolia</i> | Water Buttons | Jan |
| <i>Sonchus oleraceus</i> * | Common Sow Thistle | Jan |
| <i>Aristida holathera</i> | Kerosene Grass | March – May |
| <i>Austrostipa elegantissima</i> | Feather Speargrass | Aug – Jan |
| <i>Neurachne alopecuroidea</i> | Foxtail Grass | Sept -Nov |

Note: Fruiting season will be roughly 2-3 months later.

Results - Ordinal Summaries and Tables

Statistics

Interpreting The Statistics

Statistics - source

Note 1; a proportion of the following statistics are generated from David's Knowles Greater Perth Metro. Preliminary Database.

Note 2: the database includes fauna from the two bioregions represented in the greater Perth metro area. Particular cohorts of species will therefore not overlap, while others will. The species and Family totals represent the combined totals predicted for the two bioregions. When this 'bioregional' resource is applied to the AW bioregion, adjacent to JF on its eastern border, there will be a proportion of species with broad panaustral Bassian and Eyrian distributions. At a finer resolution some JF species will penetrate into AW at its more mesic western edges, whereas a number of taxa found in SWA riparian habitats will penetrate into AW via catchment drainage pathways.

- The table figures are not statistically significant and are included to demonstrate general sampling trends only. Species occurring in all, or 2, samples are counted in the tallies for each sample.
- Savage et al's 1996-98 samples are included in the spring (Sept/Oct.) tallies as many of their aquatic species, collected as larvae, were later sampled by this survey as adults.
- 'No ID' columns for genera and species show equal figures for obvious reasons and are included in complete tallies. Tallies appear in brackets.

Data Classification below Order level

Fauna were classified, in most cases, to the Family level, genus, and where possible, to species level.

Family

Normally established to this level and those unable to be identified are indicated in main table by 'Family unknown'.

Common Names

Species names were supplied where possible. If the Family, genus, or species had a locally accepted Common name, this was included dependent on the author's considered assessment of the 'real' value of the particular name.

In the case of poorly known Families, Genera, or species (the great majority), as mentioned above, I have taken the liberty (on request from previous clients) of attaching a logically systematic 'home-grown' name that describes some feature or behaviour of many (or said species) of its members e.g. wasps of the Family Braconidae – Red-headed Bracwasp. The familial prefix immediately identifies the Family of wasp with the compound introduction identifying the most prominent feature.

Genus

'Gen?' means time and resources combined to make positive ID difficult = No ID. Genera diagnosed to subgeneric level and those where high probability of positive ID is indicated by 'nr. (near to, or '?' if less certain)' are counted as a 'level' of generic diagnosis in the tallies. 'No ID' is indicated in the body text tables by brackets and inclusive in the tallies.

Species

'sp?' means time and resources combined to make positive ID difficult = No ID. Species where there is high probability of positive ID is indicated by 'nr. (near to)', and counted in the tallies as a 'level' of specific diagnosis. 'No ID' is indicated in the body text tables by brackets and inclusive in the tallies.

ECOLOGICAL ROLES

Ecologists often use the convention of 'guilds' to delineate major ecological functions/ services exhibited by large groups of organisms e.g. predators (includes parasites and parasitoids), herbivores (includes leaf pruners, pollinators and sapsuckers), and recycler/ scavengers.

Adult eco(logical) role

Refers to the ecological Guild membership of the sexually mature adult of a given species e.g. butterfly. Butterflies are metamorphic insects. As adults they would belong to the pollination guild, and the leaf pruning guild as a larva (caterpillar). This is in contrast to species with nymphal immature stages where, in most cases, the ecological role of all stages is the same e.g. all stages of a spider species would belong to the predator guild. I have also used this category to indicate obvious vagrant species, as well as introduced species.

Nymph/larva eco(logical) role

Refers to the guild membership of juvenile stages of macro-invertebrate species sampled in the area. Note: the larval or nymphal stages of social insects {ants, bees, wasps, and (arguably) termites} are not active members of a particular guild in this definition as their food is supplied by a parent or worker caste. Also metamorphic insects may appear in the tallies of 2 guilds/subguilds as the larva may be an endoparasite whilst the adult is a pollinator e.g. Beeflies (Bombyliidae).

Rules - These are applied at a resolution appropriate for a preliminary level inventory survey of this type;

- Herbivore tallies include the following sub-guilds; pollinators, leaf and root pruners, sap suckers, borers, grazers etc.
- Recycler tallies include the following sub-guilds; detritivores, scavengers of dead vegetable and/or animal matter, plant and animal exudates (e.g. dung) etc.
- Predator tallies include the following sub-guilds; Parasites - for the purposes of this survey ectoparasites, endoparasites and parasitoids are included under this heading.
- All major sub-guilds are included in brackets and are inclusive in the total guild tally.

Sample Period

Savage et al's records are included in the spring sample period (June/Sept/Oct).

It should also be remembered that some species are counted, twice or 3 times in the tallies as they were sampled in more than one period.

Predictive

This column is omitted from this report on advice from the client pending recurrent funding for additional survey work. An acception is applied by the author to bring notice to the likely presence and ecological roles of athropod ectoparasites associated with birds, reptiles and mammals recorded from the reserve.

PHYLUM Chelicerata - Class Arachnida

Class Arachnida (Mites, Ticks, Spiders, Harvestmen, Pseudoscorpions, And Scorpions)

General trends

Five Orders, 28 Families, 61 genera and 71 species of arachnids were recorded for the site.

Total species for site = 71.

Order Acarina ('Mega' Mites)

NOTE: insufficient data to justify separate table

Order Araneae (Spiders)

Twenty one Families (1 ID uncertain), 53 genera (11 no ID) and 64 (43 no ID) species were recorded for the site.

Total species for site = 64.

| Date | Families | No ID | Genera | No ID | Species | No ID |
|------------|----------|-------|--------|-------|---------|-------|
| Sept/Oct | 10 | 0 | 13 | 3 | 13 | 6 |
| Nov | 16 | 1 | 33 | 8 | 39 | 27 |
| Mar/April | 12 | 0 | 20 | 7 | 21 | 17 |
| Site Total | 21 | 1 | 53 | 11 | 64 | 43 |

Comments: Approximately 50% of spiders were active or ambush hunters while the other half used snares to obtain prey.

Order Opilionida (Harvestman or Opispiders)

NOTE: insufficient data to justify separate table

Order Pseudoscorpionida (Pseudoscorpions or Doscorpions)

NOTE: insufficient data to justify separate table)

Order Scorpionida (Scorpions)

NOTE: insufficient data to justify separate table

PHYLUM Chelicerata

Arachnida – Order Acarina (Mites)

Three Families (1 no ID), 4 genera (3 no ID), and 4 species (1 no ID) of large terrestrial/ arboreal/ectoparasitic mites were recorded for the site; 3 Families were collected in the Sept/Oct. sample and another 2 in the Nov. sample.

Total species for site = 4.

Comments: These species of mites are listed because of their large size (body length > 3.mm).

Family unknown 1 (Mites)

One species was observed crawling on a scarab beetle in the summer sample.

Total species for site = 1.

Comments: The body size of the mite was sufficiently large to encumber the host scarab (*Aphodius lividus*) in flight suggesting 2 possibilities; the presence of the mite was an artifact of the blossom beating sampling technique (they just happened to be on the same clump of *Melaleuca* blossom) where the mite crawled onto the back of beetle whilst in the bottom of the net; or the mite was a female attempting laying eggs on a host beetle.

Leptolaelapidae (Leptolaelapid Mites or Leptomites)

One species was present in the spring sample on the 'host' Geotrupid Beetle *Bolborhachium relictum*.

Total species for site = 1.

Comments: The Family status of the (putatively 'ectoparasitic') large Geotrupid beetle mites is currently under review. These mites are currently placed in the genus *Paradoxiphis* (T. Houston pers. comm.).

Trombididae (Red Velvet Mites and allies or Trombimites)

One species of this large terrestrial mite was present in both pitfall traplines in the spring sample. Another 'typical' red velvet mite was recorded in the summer (Nov.) sample.

Total species for site = 2.

Comments: The terrestrial species is the largest megamite I have personally encountered in Australia. The red velvet mite was encountered in tangled riverside vegetation and was unable to be captured. An image of a similar looking species is supplied in the colour supplement.

ECOLOGICAL ROLES - Order Acarina (Mites and Ticks)

The mites are the most diverse group of Arachnids containing members with predatory, parasitic, and herbivorous life histories. Unlike the majority of predatory arachnid Orders herbivory is well-developed in some lineages of mites, even extending into aquatic environments. Undoubtedly many species will occur within the bounds of GPCR, though the majority will fall into the 'micro'mite category which falls outside the sampling brief of this survey.

Arachnida – Order Araneae (Spiders)

General trends

Twenty one Families (1 no ID), 52 genera (16 no ID) and 63 species (39 no ID) were recorded for the site. Eleven Families and 17 (4 no ID) genera, represented by 17 (8 no ID) species were sampled at the site in spring; 17 Families (1 ? ID) and 36 (4 no ID) genera represented by 37 (20 no ID) species were sampled at the site in summer; 12 Families and 26 (3 no ID) genera represented by 26 (20 no ID) species were sampled at the site in autumn.

Total species for site = 63.

| Date | Families | No ID | Genera | No ID | Species | No ID |
|------------|----------|-------|--------|-------|---------|-------|
| Sept/Oct | 11 | 0 | 17 | 4 | 17 | 8 |
| Nov | 17 | (1?) | 36 | 4 | 37 | 20 |
| Mar/April | 12 | 0 | 26 | 3 | 26 | 20 |
| Site Total | 21 | (1?) | 52 | 11 | 63 | 39 |

Comments: The summer sample, not surprisingly provided the most diverse sample at all ordinal levels with Araneidae, Lycosidae, Salticidae and Thomisidae dominating as they do in most habitats.

Ground - Dwelling Spiders

Barychelidae (Hairy Trapdoor Spiders or Baryspiders)

A juvenile member of this family was collected in the southern 'Jam Wattle' pitfall line during the autumn sample. It possibly belongs to the genus *Synothele*.

Total species for site = 1.

Comments: Poor quality of the understorey due to weed invasion may compromise the habitat for permanent burrow mygalomorph spiders. The trapline in question is however the least disturbed of the two lines.

Corinnidae (Spotted Racing Corispider)

Supunna picta, a common fast-moving litter-dwelling spider, was recorded in low numbers at the 'jam' pitfall trapline in the Sept/Oct sample.

Total species for site = 1.

Comments: Four other *Supunna* species are reported from W.A. (*S. funerea*, *S. albopunctata*, *S. michaelsoni*, *S. smaragdina*). They have a different abdomen pattern. The female specimen collected at GPCR does not have the characteristic orange front legs of *S. picta* as reported for males and females from eastern Australia (pers. comm. V. Framenau). Corinnidae are currently under taxonomic revision by R.J. Raven (Queensland Museum).

Gnaphosidae (Wandering Sac Spiders or Gnaphospiders)

One genus was recorded from southern 'jam' pitfall trapline in the Sept/Oct sample. Another (Genus?) species was recorded from the same trapline in the Nov. sample.

Total species for site = 2.

Comments: The Ground Spiders (Gnaphosidae) are an extremely diverse family of spiders in Australia and the taxonomy is poorly known. It is difficult to identify most of the material to genus level. A number of specimens belong to the genus *Eilica*, but do not agree with the description of the single known species from W.A. (*E. serrata*). The Australian Gnaphosidae are currently under taxonomic revision by Vladimir Ovtsharenko - New York (V.W. Framenau, pers. comm.)

Lamponidae (White-tailed Spiders and allies or Lamspiders)

One 'terrestrial' species was recorded from southern 'jam' pitfall trapline in the Nov. sample.

Total species for site = 1.

Comments: This Family of vagrant spiderhunters has both terrestrial and arboreal members, even within the same genus e.g. *Lampona*.

Lycosidae (Wolf Spiders or Lycospiders)

One immature 'Lycosa' was sampled from the northern pitfall trapline in Sept/Oct. Three genera and 4 species were recorded in the Nov. sample. Three Genera and 3 species were recorded in the Mar/April sample.

Total species for site = 7.

Comments: As expected most specimens in the spring and summer samples were difficult to identify juveniles and more species might be present in the reserve. The first adults appeared in the November sample, with further species having reached maturity by autumn. The taxonomy of wolf spiders remains unresolved for many of the larger species in the subfamily Lycosinae (under revision by V.W. Framenau, Western Australian Museum). Only one species collected is currently placed in the correct genus, *Venatrix arenaris*. This species is widespread throughout Australia along watercourses and at the margin of lakes and ponds, even in the arid zone. The current placement of *Lycosa* for all other species is incorrect, two species represent the genus *Tasmanicosa* in currently invalid combinations (*L. godeffroyi*, *L. leuckartii*). Both species are extremely common in the southern half of Australia. *Hogna immansueta* is widespread in southwestern W.A. and one of the most commonly collected spiders in suburban gardens and parks. Spiders are mature mainly in autumn (V.W. Framenau pers. comm.).

Miturgidae (Prowling, Large Sac Spiders, or Miturspiders)

One male of one species of these wolf spider-like predators was collected from the riverbank in the Sept/Oct sample. Identification is currently not possible.

Total species for site = 1.

Comments: The Australian Miturgidae are currently under revision by R.J. Raven (Queensland Museum)

Prodidomidae (Long-spinneret Ground Spiders or Prodispiders)

One species was collected during the Sept/Oct sample.

Total species for site = 1.

Comments: *Molycrion vokes* is a fairly common Prodidomid in W.A. and also extends into S.A. (V.W. Framenau, pers. comm.).

Ground-dwelling Salticidae (Jumping Spiders or Saltspiders)

Two genera and 2 species were collected from the northern and southern pitfall traplines in Sept/Oct sample. Three genera and 3 species were recorded in the Nov. sample from both traplines. No terrestrial species were recorded in the Mar/April sample. Five species in three genera can be classed as predominately ground-dwelling, although all climb occasionally.

Total species for site = 9.

Comments: Species and genera were spread more or less in equal numbers across the 3 samples. The Common Peacock Jumping Spider (*Maratus pavonis*) is common throughout the southern half of the country including the eastern states. The genus is currently under revision by J. Waldock (Western Australian Museum). *Myrmarachne* is common throughout Australia and beyond, but the taxonomy of this genus is very difficult and remains unresolved; there is currently no species described from W.A., and a total of 10 from Australia. Thirty species of *Opisthoncus* are known from Australia, 5 of which are from W.A.; however the taxonomy of the genus is poorly resolved and species identification was not possible.

Zodariidae (Knobble Spiders or Zodaspiders)

Three species of at least two genera occurred at the site. *Masasteron complector* was mature in the Sept/Oct sample, whereas the other two species, possibly members of the genus *Habronestes*, were present as mature and immature individuals in the Mar/April sample.

Total species for site = 2

Comments: *Masasteron complector* was common in the pitfall traps at both sites, although more so at the disturbed northern line. One individual was observed feeding on the common local meat ant (*Iridomyrmex greensladei*) thus further confirming the obligate ant-feeding behaviour recorded for this spider Family. Whether the later maturing species were also using the meat ant as a major food resource remains to be confirmed.

Zoridae (False Wolf Spiders or Zorispiders)

One unidentified genus was collected in the Sept/Oct sample. Another member of this Family belonging to the genus *Argoctenus* was collected at night by eye-shine in March/April.

Total species for site = 2?.

Comments: It is possible that the spring species may be an immature of the following *Argoctenus* species. A further specimen of the same 'Mar/April' species was collected from the bathroom of my B&B in York during the same period. *Argoctenus* is common throughout Australia and the taxonomy is poorly resolved. Four species are known from W.A., but it was difficult to identify the species from this survey to species level. The Family Zoridae is currently under revision by R.J. Raven (Queensland Museum).

Above Ground Spiders

?Agelenidae (Lattice-web Spiders or Agelspiders)

One species was collected in the Nov. sample.

Total species for site = 1.

Comments: The familial status of this species is uncertain. The lone male example was taken whilst sweeping low weedy vegetation with a blossom net

Araneidae (Orb-web Spiders or Araspiders)

Two genera and 2 species were sampled from the northern pitfall trapline in Sept/Oct. Five genera and 6 species were recorded in the Nov. sample. Three genera and 3 species were recorded in the Mar/April sample.

Total species for site = 9.

Comments: Most genera were sufficiently mature by the summer sampling period. Most species of Araneidae are widespread throughout the country. The Spider (*Austracantha minax*) was unique among the orb-weaving spiders as mature adults were present in all 3 samples. Only 2 adults were observed in the autumn sample. This species is the only representative of the genus *Austracantha* and common throughout the country. Similarly, *Argiope protensa* and *Argiope trifasciata* belong to the most common representatives of the genus in Australia. Three species of *Backobourkia* (*B. heroine*, *B. brounii*, *B. collina*) are known from throughout Australia and it was difficult to identify the juvenile species to species level. *Eriophora biapicata*, the Garden Orb-weaver belongs to one of the most common and most frequently encountered orb-weaving spiders in Australia.

Clubionidae (Big-jawed Sac Spiders and other Two-clawed Hunting Spiders or Clubispiders)

Two immature *Clubiona* species were recorded in the Nov. sample.

Total species for site = 2.

Comments: The Sac Spiders generally live under bark or crevices where females fix their eggsac to the substrate. *Clubiona* is the most common genus with 17 species described from Australia, three from W.A.. Species identification was difficult as all specimens collected were immature.

Deinopidae (Net-casting Spiders or Deinospiders)

One species was recorded in the Nov. sample, though it was a subadult. Another immature species (genus uncertain) was collected in the Mar/April sample.

Total species for site = 2.

Comments: Only two genera of Deinopidae are known from Australia, *Deinopis* and *Avella/Menneus*. Both were recorded from the reserve. These spiders are unique in that they construct a small web between their legs with which they catch prey. Species identification of the spiders was difficult as they were immature. The Family is currently under revision by J. Coddington and M. Kuntner (Smithsonian Institution, Washington) One would imagine these specialised web-building spiders would be more or less sedentary, however, I have collected another species twice before from pitfall buckets, indicating potential frequent mobility. On the other hand, my continual perambulations in the vicinity of the pitfall lines may have skewed this impression.

Desidae (Laceweb Spiders or Desispiders)

One genus and 1 species were recorded in the Nov. sample. Two genera and 2 species were recorded in the Mar/April sample.

Total species for site = 3.

Comments: The Common Black House Spider (*Badumna insignis*) was observed occupying a bolthole in a guard post at the parking area. Another member of the same genus was recorded from the southern 'Jam' pitfall line. Desidae generally build their webs in vegetation, although spiders in the genus *Desis* are specialist predators in the littoral zone of the beach. Members of the genus *Phryganoporus* are often found in communal nests. These spiders are generally widespread in Australia.

Nephilidae (Golden Orbweavers or Nephspiders)

Nephila edulis was observed in all samples, though only mature in the Mar/April sample.

Total species for site = 1.

Comments: Three species of Golden Orb-weaving Spiders are known from mainland Australia. The Common Golden Orb-weaver (*Nephila edulis*), is widespread occurring throughout the country. Females at GPCR almost always built their webs within the riparian vegetation zone but curiously, this species is also known from arid central Australia. Spiders of other Families (Theridiidae and Tetragnathidae) used the female Golden Orb-weaver's web as a support structure for their own webs. The 2 other *Nephila* species (*N. plumipes*, *N. pilipes*) are limited to the tropical and subtropical zones and not known from southwest W.A. These spiders were recently revised by M. Harvey and co-authors (Western Australian Museum).

Oxyopidae (Lynx Spiders or Oxyspiders)

One common species was collected most frequently from *Melaleuca* flowers during the Nov. sample.

Total species for site = 1.

Comments: This species was clearly taking advantage of the diversity of prey insects visiting the flowers. There are 8 described species of *Oxyopes* currently known from W.A., and many undescribed species (V.W. Framenau, pers. com.).

Arboreal Salticidae (Jumping Spiders or Saltispiders)

Four arboreal species were collected from the site, the majority in the autumn sample. Two species was predicted to occur on site.

Total species for site = 9.

Comments: Two species in 2 genera were bark specialists (*Holoplatys* and Gen?), whilst the others were beaten from foliage.

Sparassidae (Huntsmans, Badge Huntsmans, or Sparaspiders)

Two species in two genera were recorded from the site in Nov. sample; both are arboreal sheltering under bark.

Total species for site = 3.

Comments: Juveniles of *Eodelena* sp. were present with adult females in the early summer sample. A green juvenile was represented in the Nov. sample and may either represent the young of the 2 genera already recorded, or a third species. I would not be surprised if a badge huntsman species (*Neosparassus* sp.) was recorded from the York Gum habitat.

Tetragnathidae (Large-jawed Orb Weavers or Tetraspiders)

One common uniform grey *Tetragnatha* species of this water margin-loving web-building spider was recorded at the site in good numbers in all samples. Adults were present in the Mar/April sample. Another species in the genus *Leucauge* was recorded in the Nov. sample.

Total species for site = 2.

Comments: Interestingly, the bulk of adult *Tetragnatha* spiders made their webs adjacent to, or directly attached, to the extensive webs of the giant females of the common Golden Orb-weaver Spider (*Nephila edulis*).

Theridiidae (Redback and other Comb-footed Spiders or Therispiders)

Two genera and 2 species were collected in the Sept/Oct sample. Three genera and 3 species were recorded in the Nov. sample. Three genera and 3 species were recorded in the Mar/April sample

Total species for site = 8.

Comments: Theridiid spiders are an extremely diverse Family in Australia and taxonomically poorly known. They include the omnipresent Redback Spider (*Latrodectus hasseltii*), of which a single immature female was sampled from a pitfall bucket on the northern trapline. The genus *Euryopis* (and the whole subfamily Hadrotarsinae) is currently under review by Helen Smith (Australian Museum). The species reported from this genus appears to be a member of the genus *Emertonella* (V.W. Framenau, pers. comm.). Species of *Achaearanea* are common throughout Australia, many appear to be introduced. *Argyrodes* are often found as kleptoparasites or commensals in the webs of orb-weaving spiders, in particular *Nephila*. *Steatoda* are generally uniformly dark and shiny spiders, often with light spots on the abdomen. The taxonomy of the Theridiid Spiders is very poorly known and species can often not be identified with accuracy.

Thomisidae (Crab Spiders or Thomispiders)

One genus and 1 species was collected in Sept/Oct sample. Five genera and 6 species were recorded in the Nov. sample. One genus and 1 species was recorded in the Mar/April sample. The summer (Nov.) sample was clearly the richest collecting period for this Family with 6 species recorded.

Total species for site = 8.

Comments: The Thomisidae were clearly one of the most speciose Families represented in the combined samples. The taxonomy of the Thomisidae is, as with many other Families, is poorly known and confident species identifications are rarely possible. *Diaea* is the most diverse genus in Australia with 31 described species, but only three are described from Australia. These are sometimes very small spiders and often greenish in colour representing the 'typical' flower spiders. *Stephanopis* are very cryptic spiders which often attach substrate to their body for camouflage. The genus currently includes 28 species in Australia, with only two described from W.A. It was interesting to note that 2 of the 3 flower-inhabiting species were found whilst beating low vegetation in the absence of flowers.

ECOLOGICAL ROLES - Order Araneae (Spiders)

All spiders in Australia fall within the predatory guild. They are the major non-insect population controllers of insects, employing snares (web builders), ambush and active hunting techniques in order to secure prey. Note; partial herbivory has been found to occur in a small number of central American jumping spiders.

Order Opiliona (Harvestmen or Opispiders)

Triaenonychidae (Harvestmen or Triopispiders)

One unidentified species was collected in numbers beneath debris and embedded logs (occasionally in both pitfall lines) in the Sept/Oct samples, dropping off to 2 individuals in the northern pitfall line in Nov.

Total species for site = 1.

Comments: This species is probably most common in late winter and early spring as it appears to require high humidity levels.

ECOLOGICAL ROLES - Order Opilionida

All harvestmen in Australia fall within the predatory guild. They are minor non-insect population controllers of small insects and other small macro-invertebrates - using ambush and active hunting techniques in order to secure prey.

Arachnida - Order Pseudoscorpionida (Pseudoscorpions or Doscorpions)

Family yet to be confirmed. One species in one Family was recorded in the Sept/Oct sample.

Total species for site = 1.

Comments: The author was unaware of the capture until later whilst sorting through the beetle jar for the spring sample. The specimen was found in the bottom of that jar and presumably was dislodged from the leg of one of the larger scarab or Geotrupid beetles whilst in transit. These arachnids are well known for their phoretic (hitch-hiking) behavior on flying beetles.

ECOLOGICAL ROLES - Order Pseudoscorpionida

All pseudoscorpions in Australia fall within the predatory guild. They are minor non-insect population controllers of small insect and other small macro-invertebrates - using ambush and active hunting techniques in order to secure prey.

Arachnida - Order Scorpionida (Scorpions) Buthidae (Marbled Scorpions or Buscorpions)

One species *Lychas 'splendens'* was recorded in good numbers in both pitfall lines in all samples.

Total species for site = 1.

Comments: This species previously belonged in the '*marmoreus* complex' which has now been resolved by Erich Vollschenk.

Urodacidae (Australian Urodacid Scorpions or Uroscorpions)

One species was present in good numbers (evidenced by active burrows) in all 3 samples.

Total species for site = 1.

Comments: The *Urodacus* species represented in the sample may be undescribed, belonging to the '*armatus*' complex of species (V.W. Framenau, pers. com.). There appeared to be a concentrated population, dominated by immature scorpions, between the 2 pitfall traplines. This area was open and showed clear evidence of dumped river sand mounds. The sand would have made burrow establishment, particularly by juveniles, relatively easy given the option of burrowing in the heavier underlying clays.

ECOLOGICAL ROLES - Order Scorpionida

All scorpions in Australia fall within the predatory guild. They are minor non-insect population controllers of small insects, and other small terrestrial macro-invertebrates - using ambush and active hunting techniques in order to secure prey. A small group of specialised burrowing spider hunters in the Family Buthidae may have a representative within the bounds of GPCR.

PHYLUM Uniramia 1

Class Chilopoda (Centipedes or Chilopedes)

Two Families, 2 genera, and 2 species were recorded for the site.

Total species for site = 2.

Comments: The Scolopendrid day centipede (*Scolopendra laeta*) was present in all 3 samples. The second Chilopod species record involved the Henicopid centipede (*Dichelobius nr. flavus*) which was observed once in the Sept/Oct. sample.

Henicopidae (Henicopid Centipedes or Henipedes)

Total species for site = 1.

Comments: The Henicopid centipede was seen escaping into a deep fissure in an embedded log and was unable to be collected. This Family is rarely encountered in W.A. and is known from one species *Dichelobius flavus*.

Scolopendridae (Scolopendrid Centipedes or Scolopedes)

One species was recorded in all samples.

Total species for site = 1.

Comments: *S. laeta* was commonly encountered active on the ground, and in both pitfall lines. Juveniles were present in the Mar/April sample. Unlike most centipedes *S. laeta* is diurnal.

ECOLOGICAL ROLES - CLASS CHILOPODA

All centipedes in Australia fall within the predatory guild. They are minor non-insect population controllers of insects and other terrestrial macro-invertebrate populations - using ambush and active hunting techniques in order to secure prey.

PHYLUM Crustacea

Class Malacostraca (Terrestrial Crustacea)

Order Isopoda (Slaters, Woodlice, Sowbugs)

Two Families, 3 genera and 3 species were collected from the site in the spring sample.

Total species for site = 3.

Comments: Two native slater species in 2 Families were recorded together, concentrated beneath well-embedded logs at the upper flood zone, along with other arthropods and worms sensitive to desiccation. The third species appeared to be more able to tolerate drier conditions being recorded from the southern 'Jam' pitfall trapline. Many of these creatures are able to aestivate as adults over (at least) the first summer of their lives. Further longevity research may indicate that many invertebrates live longer lives than previously expected.

Armadillidiidae (Rolling Slaters or Armaslaters)

Total species for site = 1.

Comments: *Buddelundia* sp. 1 was moulting in the spring sample and preferred embedded logs immediately above the flood zone.

Philosciidae (Running Slaters or Philoslaters)

Two genera and 2 species were recorded in the spring (Sept/Oct) sample.

Total species for site = 2.

Comments: *Laevophiloscia* sp? was found beside the Armadillidiid *Buddelundia* sp? in the situation described for the latter above. The other unidentified species appeared more able to deal with lower humidity levels and was recorded in the southern pitfall traps.

ECOLOGICAL ROLES - CLASS CRUSTACEA

Terrestrial slaters fall into the recycling/scavenger guild. Whether members of the W.A. slater fauna habitually scavenge animal products remains to be seen. The majority appear to be herbivorous detritivores. The slow-moving Rolling Slaters (*Armadillidiidae*) appear to live more gregarious and sedentary lives whereas the more active Running Slaters (*Philosciidae*) appear to forage over greater home ranges.

PHYLUM Uniramia 2

Class Diplopoda (Millipedes or Diplopedes)

Two Families and 2 species were recorded from the site in the spring sample.

Total species for site = 2.

Comments: Both specimens recorded were represented by 'remains only', making generic and species level identifications difficult.

Iulomorphidae (Iulomorphid Millipedes or Iulodiplopedes)

One species, represented by the remains of a few bleached connected segments was discovered at the edge of an embedded log in the spring sample, was suspected to belong in this Family.

Total species for site = 1.

Comments: Unfortunately no live examples were collected. Perhaps an early spring winter sample would be more likely to reveal living individuals. The structures present on the segments indicate that the species may belong in the Genus *Atelomastix* (V.W Framenau, pers. comm.).

Paradoxosommatidae (Paradoxosommatid Millipedes or Parapedes)

One species, represented by a decaying though complete carcasse, was discovered beneath an embedded log in the spring sample, belonged in this Family.

Total species for site = 1.

Comments: The species sampled agreed with the genus *Antichiropus* which contains many undescribed species (V.W Framenau, pers. comm.).

ECOLOGICAL ROLES - CLASS DIPLOPODA

Millipedes fall into the recycling/scavenger guild. Whether members of the W.A. slater fauna habitually scavenge animal products remains to be seen. The majority appear to be herbivorous detritivores.

PHYLUM Uniramia 3

Class INSECTA

General trends

18 Orders, 161 Families (35 no ID), 407 genera (281 no ID) were represented by 464 species.

| Date | Orders | Families | Genera | Species |
|------------|--------|----------|--------|---------|
| Sept/Oct | 14 | 101 | 198 | 206 |
| Nov | 15 | 97 | 190 | 199 |
| Mar/April | 14 | 85 | 137 | 149 |
| Site Total | 16 | 161 | 407 | 464 |

Order Blattodea (Cockroaches)

Three Families and 6 genera were represented by 6 species are recorded for the site; 4 species, represented by 3 Families, were sampled from the site in Sept/Oct; 3 species represented by 3 Families were sampled from the site in Mar/April.

Total species for site = 6.

Comments: *Calolampira* was present in all samples.

The 2 Blattellids were winged with only *Ellypsidion* not represented in the pitfall traps.

Order Coleoptera (Beetles)

Thirty seven (4 no ID) Families and 116 genera (34 no I.D.), represented by 121 (76 no ID) species were recorded at the site. Twenty one Families and 65 (12 no ID) genera, represented by 66 (28 no ID) species were sampled at the site in spring; 20 Families and 39 (11 no ID) genera represented by 40 (23 no ID) species were sampled at the site in summer; 21 (4 no ID) Families and 34 (14 no ID) genera represented by 34 (25 no ID) species were sampled at the site in autumn.

Total species for site = 121.

| Date | Families | No ID | Genera | No ID | Species | No ID |
|------------|----------|-------|--------|-------|---------|-------|
| Sept/Oct | 21 | 0 | 65 | 12 | 66 | 28 |
| Nov | 20 | 0 | 39 | 11 | 40 | 23 |
| Mar/April | 21 | 4 | 34 | 14 | 34 | 25 |
| Site Total | 37 | 4 | 116 | 34 | 121 | 76 |

Comments: Savage et al's (1996-8) 15 beetle records were incorporated into the spring sample as many of their species were recorded as adults in that sample and in later samples. Surprisingly, the spring sample provided the richest collection of species rather than summer. It is possible that a Dec/Jan sample may have revealed a high level of beetle biodiversity. As expected this Order was the most biodiverse at all levels.

Order Dermaptera (Earwigs)

Two Families and 3 genera represented by 3 species were recorded for the site. Two species, (1 no ID) in 2 Families and 2 genera were sampled from the site in Nov. Two species (1 shared with Nov. sample) in 2 Families and 2 genera were sampled from the site in March/April. No species were collected during the spring sampling.

Total species for site = 3.

Comments: No flying species were recorded at the light trap.

Order Diptera (Flies)

Twenty seven Families (5 no ID) and 55 (45 no ID) genera, represented by 55 species for the site. Nineteen Families (2 no ID) and 34 (23 no ID) genera, represented by 35 species were sampled at the site in spring; 12 Families (1 no ID) and 15 (7 no ID) genera represented by 15 (10 no ID) species were sampled at the site in summer; 10 Families (2 no ID) and 9 (5 no ID) genera represented by 10 (8 no ID) species were sampled at the site in autumn.

Total species for site = 55.

| Date | Families | No ID | Genera | No ID | Species | No ID |
|------------|----------|-------|--------|-------|---------|-------|
| Sept/Oct | 19 | 2 | 34 | 23 | 35 | 27 |
| Nov | 12 | 1 | 15 | 7 | 15 | 10 |
| Mar/April | 10 | 2 | 9 | 5 | 10 | 8 |
| Site Total | 27 | 5 | 52 | 33 | 55 | 45 |

Comments: Spring was clearly the richest period for Dipteran biodiversity.

Order Hemiptera (True Bugs)

Twenty six Families (4 no ID), representing 50 (30 no ID) genera and 65 (43 no ID) species were represented in the combined samples. Thirteen Families and 25 (2 no ID) genera, represented by 26 (17 no ID) species were sampled at the site in spring; 15 (2 no ID) Families and 25 (14 no ID) genera represented by 28 (21 no ID) species were sampled at the site in summer; 10 Families (1 no ID) and 13 (4 no ID) genera represented by 17 (6 no ID) species were sampled at the site in autumn.

Total species for site = 66.

| Date | Families | No ID | Genera | No ID | Species | No ID |
|------------|----------|-------|--------|-------|---------|-------|
| Sept/Oct | 13 | 2 | 25 | 12 | 26 | 17 |
| Nov | 15 | 2 | 25 | 14 | 28 | 21 |
| Mar/April | 10 | 1 | 13 | 4 | 17 | 6 |
| Site Total | 26 | 4 | 50 | 30 | 65 | 43 |

Comments: Overall the summer collection represented the richest seasonal sample. Corixids, Notonectids and Cydnids often represented the dominant biomass at the light trap.

Order Hymenoptera (Ants, Bees and Wasps)

Twenty one Families (1 no ID), 58 genera (16 no ID) and 76 species (48 no ID) were recorded for the site. Twelve Families and 26 (5 no ID) genera, represented by 31 (18 no ID) species were sampled at the site in spring; 17 Families (1 no ID) and 47 (9 no ID) genera represented by 48 (21 no ID) species were sampled at the site in summer; 9 Families and 22 (4 no ID) genera represented by 31 (6 no ID) species were sampled at the site in autumn.

Total species for site = 76.

| Date | Families | No ID | Genera | No ID | Species | No ID |
|------------|----------|-------|--------|-------|---------|-------|
| Sept/Oct | 12 | 0 | 26 | 5 | 31 | 18 |
| Nov | 17 | 1 | 47 | 9 | 48 | 21 |
| Mar/April | 9 | 0 | 22 | 6 | 31 | 9 |
| Site Total | 21 | 1 | 58 | 16 | 76 | 48 |

Comments: All three suborders (ants, bees and wasps) were represented in all 3 samplings, though the honeybee was the only bee in the March/April sample. As expected, due to poor understorey biodiversity, native bee diversity was reflected in the low number of native species sampled (T = 3). Ants were represented by 23 native species, with no feral species present on site. Most ants were present in all samples with only few added in the autumn sample. Wasps showed the greatest species diversity of Hymenoptera with 52 of the 76 species. There was only small overlap in wasp species between samples. The summer period provided the richest sample.

Order Isoptera (Termites)

Two Families (2 no ID) and 4 (3 no ID) genera, represented by 4 (4 no ID) species were recorded for the site. Two species were recorded in the spring sample, including 1 alate; 2 species were recorded in the summer sample, and 2 in the autumn sample; 1 of these was shared with the summer sample.

Total species for site = 4.

Comments: Alates (kings and/or queens) were represented in the spring and autumn samples.

Order Lepidoptera (Butterflies and Moths)

Twenty five Families and 80 (22 no ID) genera, represented by 94 species (42 no ID) were recorded for the site; 14 Families (4 no ID), 23 genera (8 no ID), and 23 (11 no ID) species were recorded in the Sept/Oct sample; 13 Families (4 no ID), 39 genera (8 no ID) and 40 species (18 no ID) were recorded in the Nov sample; 19 Families (2 no ID), 40 genera (15 no ID) and 40 species (20 no ID) were recorded in the March/April sample.

Total species for site = 94.

| Date | Families | No ID | Genera | No ID | Species | No ID |
|------------|----------|-------|--------|-------|---------|-------|
| Sept/Oct | 14 | 4 | 23 | 8 | 23 | 11 |
| Nov | 13 | 4 | 39 | 8 | 40 | 18 |
| Mar/April | 19 | 2 | 40 | 15 | 40 | 20 |
| Site Total | 25 | 10 | 80 | 22 | 94 | 42 |

Comments: The 2 major reference collections of W.A. moths held at the W.A. Museum and Agriculture and Food W.A. have not been catalogued by an authority for many years. This made positive IDs for many taxa difficult at best. The combined total was quite high considering the low native plant diversity for the site suggesting the senescing emergent vegetation was still driving considerable diversity. Almost all species were moths taken at the light trap. Four butterfly Families were represented in the combined samples. Three of the 17 butterfly species can be classed as tropical vagrants occasionally penetrating

south in late summer and autumn. These species and others, like the Wanderer (*Danaus plexippus*), will not have host plants present on the reserve.

Only 2 flowering plants offered nectar to insects in autumn with *Heliotrope* by far the most attractive to diurnal insects.

Order Mantodea (Praying Mantids)

One Family and 1 genus, represented by 1 species, was sampled in Nov.

Total species for site = 1.

Comments: The Mar/April record is represented by a reasonably fresh ootheca. At 30mm it will belong to a large mantid; probably *Archimantis* though it is uncertain whether *Sphodropoda* extends into this habitat.

Order Mecoptera (Scorpionflies)

One Family, 1 genus and 1 species was represented only in the Sept/Oct. sample.

Total species for site = 1.

Comments: The *Harpobittacus* species sampled appears to be a more arid-adapted congener than the well known 'Perth' species *H. similis* occurring to the west.

Order Neuroptera (Lacewings)

Six Families, and 9 genera represented by 11 species were recorded for the site. One Family comprising 2 genera, represented by 2 species was recorded from the site in Sept/Oct sample; 4 Families and 6 genera, represented by 8 species, were sampled from the site in Nov.; 2 Families (1 new) and 2 genera, represented by 2 species were sampled from the site in March/April.

Total species for site = 11.

Comments: GPCR is relatively rich for this predatory Order considering the level of understorey disturbance.

Order Odonata (Dragonflies and Damselflies)

Five Families and 8 genera, represented by 8 species were recorded for the site. Three Families comprising 5 genera, represented by 5 species was sampled from the site in Sept/Oct sample; 2 Families and 2 genera, represented by 2 species, were sampled from the site in Nov.; 5 Families and 6 genera, represented by 6 species were sampled from the site in March/April. Dragonflies were represented by 3 Families, 5 genera and 5 species. Damselflies were represented by 2 Families, 3 genera and 3 species.

Total species for site = 8.

Comments: Savage et al's 1996-98 report recorded 5 taxa of both suborders, presumably both as larvae and winter active adults. Only one dragonfly species (*Orthetrum*) was recorded during the Nov. sample when the river level was at its lowest during the combined sample period. All species recorded are widespread. Breaking autumn rains presaged the most diverse Odonata sample.

Order Orthoptera (Grasshoppers, Katydid and Crickets)

Three Families and 16 (3 no ID) genera, represented by 17 (8 no ID) species were recorded for the site. Two Families comprising 6 (1 no ID) genera, represented by 6 (2 no ID) species was sampled from the site in Sept/Oct sample; 3 Families and 6 (1 no ID) genera, represented by 6 (4 no ID) species, were sampled from the site in Nov.; 1 Family and 6 (1 no ID) genera, represented by 8 (2 no ID) species were sampled from the site in March/April.

Total species for site = 17.

| Date | Families | No ID | Genera | No ID | Species | No ID |
|-----------|----------|-------|--------|-------|---------|-------|
| Sept/Oct | 2 | 0 | 6 | 1 | 6 | 2 |
| Nov | 3 | 0 | 6 | 1 | 6 | 4 |
| April | 1 | 0 | 6 | 1 | 8 | 2 |
| SiteTotal | 3 | 0 | 16 | 3 | 17 | 8 |

Comments: Spring and summer samples were the most biodiverse. More Families, genera and species are likely to be sampled during the mid summer period.

Order Psocoptera (Psocids)

Two (possibly 3) Families and 2 (possibly 3) genera represented by 3 species were collected on site. One Family comprising 1 genus, represented by 1 species was recorded from the site in Sept/Oct sample; 1 Family and 1 genus, represented by 1 species was sampled from the site in Nov.; 1 Family and 1 genus, represented by 1 species were sampled from the site in March/April.

Total species for site = 3 .

Comments: This Order is poorly studied in Australia and is much in need of revision. Many new species await description and/or discovery

Order Thysanura (Silverfish)

Two Families (i no ID) were represented at the site by 2 (possibly 3, 1 no ID) genera and 3 species (1 no (ID). *Acrotelsella* was present in the spring and summer samples. *Atopatelura* was present in the summer sample. The unidentified species was recorded in the autumn sample.

Total species for site = 3.

Comments: An unidentified species was observed briefly whilst entering a deep crack in a dying Casuarina. W.A. species are not typically arboreal.

Order Trichoptera (Caddisflies)

Two Families and 4(1 no ID) genera were represented by 5 species for the site; 2 Families and 4 genera represented by 4 species were sampled from the site (1996-98) by Savage et al's survey. Two Families, 3 genera and 3 species were represented in the Sept/Oct sample; 1 Family and 1 genus containing 1 species were represented in the Nov. sample; 2 Families and 3 genera (1 no ID) containing 3 species were represented in the Mar/April sample.

Total species for site = 5.

Comments: Presumably Savage et al's survey collected their samples as larvae whereas my samples were all harvested from the light trap. The diversity of the pool Caddisfly fauna probably reflects the important salt-diluting impact of freshwater influx from feeder springs.

ECOLOGICAL ROLES - CLASS INSECTA (INSECTS)

Clearly this is the most diverse and numerous group of macro-invertebrates represented at the site. They may be metaphorically described as the 'nuts and bolts' of the system. Due to the sheer size and complexity of the fauna a general summary, in terms of ecological services (guilds), is provided.

Comments: This system is complicated due to the high number of metamorphic insects, especially Hymenoptera and Diptera, the larval roles sometimes belonging to quite different guilds to the adults. It should be noted that dead standing trees are important breeding sites for many Hymenoptera. There will be an inherent bias in the actual (verses predictive) sample due to the specialised collecting techniques involved in sampling micro-hymenoptera. This cryptic group, many of which are minute insect and spider egg parasites, may well add many species to the total biodiversity list for the site. The 'blind net-sweeping' technique, on reflection, revealed a surprising level of species, mainly in the spring and summer samples, with little overlap thus expressing the breadth of seasonal differences in fauna profiles separated by sample intervals. The high ID/no ID ratio of both samples is indicative of the unexpectedly high number of micro-hymenoptera collected by blind sweeping in combination with their identification challenges.

Herbivore guild

This is often the largest guild with many sub-guilds, and includes the caterpillars of almost all moths and butterflies, the larvae of many beetles, and almost all Orthopterans, and Lepidopteran and Hemipteran leaf-miners. Leaf pruners (including skeletonisers) are included, as well as pollinators/flower visitors. Essentially this group may be divided into two subgroups; external (exo)phytophages (feeding on plants from the external surfaces) and internal feeders of living leaf, stem, or trunk tissue ;(endo)phytophages. Herbivores were divided into 4 basic subguilds; sap suckers, leaf and root pruners, borers, and pollinators.

Sap suckers - 36 (approx. 8%) of 464 species of insect species were members of this subguild. One Order, represented by 21 Families containing 36 genera and 36 species were represented at the site by this herbivore subgroup of the guild.

Total species for site = 36.

Comments: This group is represented by the Order Hemiptera with (True Bugs) their sucking mouthparts, the minority of which appear in the predator guild.

Leaf and root pruners - 121 (approx. 25%) of 464 insect species are represented here.

Total species for site = 121.

Comments: This is typically the largest herbivore subgroup given the abundance of leaf and root food supplies in most habitats. The Orders Lepidoptera and Coleoptera are the clearly dominant herbivore groups, both in the larval and/or adult phases of their lifecycles. As expected the dry autumn period resulted in the lowest leaf and root pruner sample. Although the moth count was high for autumn their leaf and root pruning larvae would have exerted their ecological pressures earlier in the season, or in the larger species, well in advance of the sample periods as they are long-lived.

Borers - Only 13 (approx. 3%) of 464 species of insect species were members of this subguild.

Total species for site = 13.

Comments: Almost all members of this cohort would be beetle larvae, with a few moth larvae as well. The cohort blends into recycling when the plant tissue in which the boring is occurring is dying or dead. To a certain extent most borers are immune to general attack because of their 'hidden' situation, though sometimes ants, and other specialist borer predators/parasites will find their way into galleries and claim the occupants. Many of the mature emergent trees certainly had evidence of many types of borers but most of

the exit holes were well weathered indicating pre-infestation emergence. This very low figure is partly due to sampling period and other factors, such as borers having a choice of only 3 emergent hosts and little native sub- or understorey diversity.

Pollinators

Only 115 (approx. 25%) of 464 species of insect species were members of this subgroup. Four Orders, 37 Families and 114 genera represented by 131 species drive this fundamental rejuvenation process in AW habitats. Note: not all flower-visiting insects are fully effective pollinators though these are included in the tallies Note 2: Some autumn sample moth species may turn out to feed on lerp exudates – see below.

Total species for site = 117.

| Totals | Orders | Families | Genera | Species |
|--------|---------------------|----------|--------|---------|
| | Beetles | 5 | 10 | 11 |
| | Flies | 6 | 10 | 13 |
| | Bees & Wasps | 7 | 20 | 21 |
| | Butterflies & Moths | 19 | 74 | 86 |
| Total | 4 | 37 | 114 | 131 |

Comments: The majority of spring flowering plants were understorey weeds. These are only of interest to the feral honeybee (their major pollinator) and a few generalised native insect pollinators. The other native species were presumably pollinating flowering Jam Wattle (*Acacia acuminata*), Orange Wattle (*Acacia saligna*), and the small number of native flowering herbs. In summer Swamp Paperbark (*Melaleuca raphiophylla*) attracted many generalised ‘brush flower’ pollinators. Only 2 small herbs were in flower in the autumn sample one week after breaking autumn rains. Given the biodiversity of moths at the light trap, it begged the question of ‘what are all these moths feeding on?’ I could think of only one possible explanation - that some Families of local moths take advantage of the sugary exudates of lerps (Psyllidae) – sedentary sap-sucking bugs. This possibility may indicate a number of interesting ecological phenomena (including the high nocturnal ‘pollinator count’); given the moderately healthy number of nocturnal moth ‘pollinators’ seen in both samples. Note: a small proportion of moth Families do not have functional mouthparts as adults.

Recycler Guild: Includes scavengers of dead and dying vegetation, detritus (terrestrial detritivores - can be mixed animal/plant content) and carrion, and the faeces (dung) and exudates of other larger animals. Fifty two (approx. 12%) of 464 insect species were members of this subguild. Eight Orders, 32 Families and 66 genera, represented by 52 species were recorded.

Total species for site = 52.

| Totals | Orders | Families | Genera | Species |
|--------|-------------|----------|--------|---------|
| | Beetles | 6 | 16 | 24 |
| | Flies | 12 | 31 | 39 |
| | Cockroaches | 3 | 5 | 6 |
| | Earwigs | 2 | 3 | 3 |
| | Termites | 3 | 3 | 3 |
| | Crickets | 3 | 3 | 3 |
| | Psocids | 2 | 2 | 3 |
| | Silverfish | 2 | 3 | 3 |
| Total | 8 | 32 | 66 | 52 |

Comments: This is a loosely defined 'generalist' guild for the following reasons; It may only apply to one stage of a metamorphic insect and it may only occupy part of the ecological activities of a given species (e.g. many ants are also seasonal predators). This category also contains macro- and micro-invertebrates, the latter not being included (unless published data available) in the sampling for reasons previously elucidated. Isoptera, some Orthoptera, all Blattodea, all Dermaptera, all Psocoptera, all Thysanura, and some larval and adult Coleoptera, Diptera, and also terrestrial Crustacea, can be classed in this role. Termites, in terms of biomass, will be the major animal (vs. fungal) dead and dying terrestrial vegetation recyclers in this habitat, as they are in most other habitats across the country. No distinct seasonal trends were indicated in the samples.

Fungivore Guild This small specialist guild was represented at the site by 6 species.
Total species for site = 6.

Comments: Maximum biodiversity for this guild will be dominated by beetles and flies. Given the time of year of the 3 sampling snapshots the fruiting of fungus species is low or completely absent. The major fruiting event normally occurs after the first soaking late autumn/early winter rains and extends into early spring.

Predators at all life stages 86 (approx. 18%) of 464 species may be classed as full time predators. 9 Orders, represented by 29 Families containing 77 genera and 86 species were recorded for the site.

Total species for site = 86.

| Totals | Orders | Families | Genera | Species |
|--------|-----------------------------|----------|--------|---------|
| | Beetles | 5 | 35 | 40 |
| | Flies | 3 | 7 | 7 |
| | Bugs | 6 | 11 | 14 |
| | Mantids | 2 | 4 | 4 |
| | Scorpionfly | 1 | 1 | 1 |
| | Lacewings | 6 | 10 | 11 |
| | Dragonflies and Damselflies | 5 | 8 | 8 |
| | Katydid | 1 | 1 | 1 |
| Total | 9 | 29 | 77 | 86 |

Comments: Beetles, especially those in the Family Carabidae, clearly show the greatest insect predator biodiversity. Most of these species are terrestrial suggesting that the low plant diversity in the understorey may not be a major issue for them. However if the understorey was pristine then it is implied that there would be a greater diversity of herbivore prey available to all predators. To a certain extent the disturbance created by the dumping of river silt has created 'open areas' and therefore successional opportunities for other non-insect predators like spiders and scorpions.

Predator/parasite sub-guild (ecto- and endoparasites/parasitoids)

Sixty eight (approx. 14%) of 464 species may be classed as ecto- or endoparasites/ parasitoids at some stage of their live cycles. 6 Orders, represented by 24(14) Families containing 50(56) genera and 68(86) species were represented by this predator subguild.

Total species for site = 68.

| Totals | Order | Family | Genus | Species | Predictive |
|--------|----------|--------|--------|---------|------------|
| | Beetles | 1 | 1 | 1 | (0) |
| | !Flies | 7(3) | 12(3) | 16(3) | (3) |
| | Wasps | 15 | 36 | 47 | (0) |
| | Lacewing | 1 | 1 | 1 | (0) |
| | !Lice | (6) | (42) | (69) | (69) |
| | !Fleas | (5) | (9) | (11) | (11) |
| Total | 6 | 24(14) | 50(54) | 68(83) | (83) |

Note 1:!Rows indicated by exclamation marks are included based on the presence in GPCR of the host vertebrates. **Note 2:** Lice, Fleas, and 3 Families of flies are not tallied in the master table as they were not sampled and remain 'predictive', and appear in brackets.

Comments: All endoparasites/parasitoids belong in the metamorphic Orders Diptera and Hymenoptera, which is very much skewed towards wasp species.

Predator/scavenger sub-guild This subcategory contains perhaps one of the 2 (predation = fauna population control/scavenging = recycling dead vegetation and fauna) most important indicators of ecological stability and maintenance in any local system, and is dominated by the ants (13 genera containing 23 species) in healthy habitats.

Total species for site = 23.

Comments: The ant fauna sampled at GPCR is typical for the eastern slopes of the Darling Range. A small proportion of species are more typically associated with sandplain habitats to the east and may have penetrated from nearby sandy habitats into the areas where riversand has been deposited (pers. comm. B. Heterick). The Meat Ant (*Iridomyrmex greensladei*) probably constitutes the greatest 'above ground' animal biomass during diurnal hours on the reserve.

Aquatic Macro-invertebrates – Class Insecta

Six Orders, 18 Families and 43 genera, represented by 51 species were collected from the site over 3 seasonal samples.

Total species for site = 51.

Note: Adults of some Orders will occur in terrestrial guilds (e.g. Odonata) whereas most beetles are predominately aquatic (e.g. Dytiscidae) though they have a 'terrestrial' dispersal phase and may be captured at light traps.

| Totals | Orders | Families | Genera | Species |
|------------|---------------------------|----------|--------|---------|
| | Beetles | 4 | 15 | 18 |
| | Moth | 1 | 1 | 1 |
| | Flies/Midges | 4 | 11 | 13 |
| | Bugs | 2 | 3 | 6 |
| | Dragonflies & Damselflies | 5 | 8 | 8 |
| | Caddisflies | 2 | 5 | 5 |
| Site Total | 6 | 18 | 43 | 51 |

Comments: Although most of the above guilds of organisms are represented here in this distinctive trophic category, it should be mentioned, in terms of the sampling of adult metamorphic and non-metamorphic insects, that most winged adults were collected by day and night. These species were mostly represented at the light trap (ca 75m from Gwambygine Pool). I estimate that approximately 50% of the light trap biomass was attributable to this guild in the spring and summer samples and this represented approximately one fifth of the biodiversity. Similar results were gleaned from the autumn sample though some Mar/April species were absent in the earlier season sample. Orders represented in all samples included Coleoptera, Trichoptera, Odonata, Diptera, and Hemiptera. The combined samples exceeded Savage et al's 1996-98 aquatic count of 38 insect species. Savage et al's Orders, genera, and species are included in the tallies. The importance to the biodiversity of the diluting effects of feeder springs into the pool cannot be understated.

PHYLUM Vertebrata

Class Amphibia

Order Anura (Frogs and Toads)

Two Families of frogs represented by 5 species were recorded at the site.

Myobatrachidae (Ground frogs) – Four species of ground frog were recorded at the site by Savage et al.

Total species for site = 4.

Comments: The Sept/Oct. and Nov. samples recorded no ground frogs, including evidence of calls. The autumn sample occurred 1 week after breaking winter rains. One unidentified species of ground frog was heard in the distance outside the reserve boundary. This indicated the calling peaks had already passed. Further evidence was observed in the pool itself with young tadpoles of at least 2 species present. It is unknown whether these tadpoles were the young of ground frogs or tree frogs. Savage et al (1996/98) recorded the calls of 5 species. No ground frog was collected in the pitfall buckets during any of the samples.

Hylidae (Tree frogs) – One species, the Motorbike Frog (*Litoria moorei*), was recorded on site during the summer sample. Savage et al (1996/98) recorded this species.

Total species for site = 1.

Comments: A lone male Motorbike Frog was calling during the Nov. sample close to the pool. No tree frog was collected in the pitfall buckets during any of the samples. This was not surprising, as these frogs prefer to be closer to the waterbody than ground frogs.

Class Reptilia

Order Sauria (Lizards)

Four Families of lizards were recorded on site. 3 Families were observed during the sample periods with a fourth recorded by an RCS member just after completion of the autumn survey.

Gekkonidae (Geckoes)

Two species in 2 genera were sampled for the site.

Total species for site = 2.

Comments: The Common Dtella (*Gehyra variegata*) was found under Flooded Gum and Melaleuca bark, as well beneath a fallen log in all samples. Both adult and juvenile Southwestern Clawless Geckoes (*Crenadactylus o. ocellatus*) were found in the autumn sample in or beside the southern 'Jam' pitfall line. This species has not been recorded before in this area.

Pygopodidae (Legless lizards)

Three species in 3 genera were sampled for the site. One species was observed in the March/April sample.

Total species for site = 1.

Comments: Fraser's Delma (*Delma fraseri*) was observed in weed grasses close to the 'Jam' pitfall line.

Scincidae (Skink lizards)

Seven species of skink were sampled for the site of which 2 species were observed during the spring survey and the same 2 species during the Nov. sample, were all in good numbers in both pitfall traps in the spring sample, though *Menetia greyii* was only observed on 2 occasions outside the pitfall traps in the early summer and autumn sample.

Total species for site = 3.

Comments: *Cryptoblepharus buchmanani* was until recently (Horner 2007) included within *C. plagiocephalus*. *Menetia greyii* males displayed a yellow flush to the tails in the October spring survey indicating breeding activity. The *Ctenotus* was briefly sighted in heavy grass in the autumn sample. By size and locality it was deemed to be most likely to have been *C. schomburgkii*. The lack of positive IDs for some predictive skinks was made difficult by the density of the weed understorey dominated by the Bearded Oat *Avena barbata*.

Varandiae (Monitor Lizards or Goannas) One species was recorded at the site.

Total species for site = *1.

Comments: The Black-tailed Tree Monitor (*Varanus tristis*) has much desirable habitat in the form of dead and dying hollow-containing timber at the site. *A juvenile was found beneath rubbish about 2 weeks after the autumn survey was completed (pers. comm. Tony Clack).

Order Serpentes (Snakes)

Two Families of snakes were recorded on, or immediately adjacent, to the site.

Total species for site = 3.

Front-fanged snakes (Elapidae)

Two species represented by 2 genera were recorded for the site. The Western Gwardar (*Pseudonaja mengdeni*) was observed as road kill either side of the furthest extremities of GPCR on the York /Beverley road during the Nov. survey. On the same road a recently killed King Brown Snake (*Pseudechis australis*) just fell within the northern border of the reserve.

Total species for site = 2.

Comments: Again a dense groundcover of weeds made searching for snakes difficult. No snakes were collected in the pitfall buckets during any of the samples.

Blindsnakes (Typhlopidae)

A single example of these rarely observed snakes was encountered active on the surface around the light trap in October on an exceptionally warm night.

Total species for site = 1.

Comments: The Prong-snouted Blindsnake (*Ramphotyphlops bituberculatus*) most likely emerged from the large nearby nest of its potential prey the Meat Ant (*Iridomyrmex greensladei*). Like the Southwestern Clawless Gecko this species has not been recorded before in this area.

Order Testudines – Suborder Pleurodira (Austro-South American Side-neck Turtles)

Chelidae (Long or Side-necked Turtles)

One species of freshwater turtle was present at the site.

Total species for site = 1.

Comments: The Long-necked Turtle (*Chelodina oblonga*) was observed in the river in the Fauna Survey of 1996-97 prepared by Savage et al, and observed again in the early summer (Nov.) sample. Long necked tortoises were surveyed by Gerald Kuchling with the River Conservation Society in 1998. Eighty three animals were trapped, tagged, measured, weighed, stomach pumped, and ultra-sounded and released. They were judged to be in good health, and breeding conditions and ranged in age from juvenile to forty. They were larger than their Swan River cousins and differed from them in that they were active in the hotter months and were semi dormant in the winter months. Their ability to breed in brackish water presented a puzzle. Dr Kuchling, who has not yet published the results, believes they could be a separate species. Their diet consisted of small fish and crustaceans, other aquatic invertebrates and occasionally a juvenile gilgie. In the course of the 2009/10 survey one animal was sighted.

Summary

Thirty four species of reptile and amphibian are predicted to occur in quality riparian and adjacent ecotonal habitats on the eastern slopes of the Darling Range in the Avon Wheatbelt (AW) bioregion. 12 species were recorded in the combined 9 day/9 night snapshot at GPCR with most species recorded in the summer sample.

The gecko *Crenadactylus o. ocellatus* and blindsnake *Ramphotyphlops bituberculatus* appear to be the first published records for the area.

Conclusions

- The most outstanding findings of this survey concern terrestrial, and to a lesser extent aquatic, arthropod biodiversity, predator/prey ratio, and the carrying capacity of senescing emergent vegetation.
- In this 9 day/night, 3 season snapshot of arthropod diversity over 500 species of insects, arachnids, centipedes, millipedes and crustaceans were recorded suggesting unforeseen levels of remnant biodiversity.
- Twelve species of reptiles and amphibians were recorded for the site. This represents approximately one third of the predicted herpetofauna. An increasingly busy traffic flow on the main road will further erode this fauna. A proportion of these species will have no nearby populations with which to generate gen-flow.
- The predator/prey ratio was just under 1:2 which is surprisingly healthy and implies that further survey work would reveal more prey species, though these are more likely to be arboreal than terrestrial due to low understorey quality.

- The disturbance created by river silt deposition onto the higher slopes of the reserve has also benefited some successional species.
- The continued relatively high quality (low salinity) of pool water is absolutely crucial to the survival of the original freshwater-dependent fauna and flora. Feeder springs and the continued protection and improvement of their catchments is a linchpin for this precious remnant.

Recommendations

The baseline data generated from this survey suggests that there is much more biodiversity dependent on this small reserve for their continued survival. Ideally it would be beneficial that at least 2 more inventory surveys be commissioned in order to gain a more comprehensive 'stocktake' of the biodiversity held within this reserve cared for by the dedicated members of the River Conservation Society of York. The most productive times will be late August (early spring) and January/February (mid summer).

The rehabilitation process should take account of major, real and potential, threats.

- The protection of freshwater springs entering the pool is crucial in order to maintain a 'rear view' about the level of biodiversity that once populated the Avon in its freshwater heyday. Whilst doing the autumn survey the author became concerned for the health of the reserve as the farmer owning the land on the east side of the reserve was stubble burning. The fire spread right up to the narrow margin of riparian vegetation and began to burn the canopy and threatened to cross into the reserve canopy. The owner/s need to be approached and asked to create a firebreak on this border, as continual burning of the riparian belt is highly erosive on many levels. The spring catchment cover needs to be increased.
- Major threats are from one introduced Hymenopteran insect – the Honeybee, which competes for limited nectar, pollen and hollow resources. I believe the first wave of displacement has well and truly occurred, the process beginning not long after early settlement of the region. What we have today are more robust 'bee resistant' faunas and those species not directly affected by them.
- Honeybee hives and swarms should be monitored and controlled on a regular basis, both for human safety and environmental reasons. Native biodiversity erosion as a result of this species is insidious and sustained, particularly if dispersal options into non-honeybee habitats (lacking permanent water and seasonal beekeeping exploitation) is unavailable to local native fauna.

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Web Resources

A large amount of public domain database material dealing with the subject matter can be sourced on the web, whilst other subscriber-based material was not accessed to cost factors. Access to this material can be gained through employing a search engine like Google. Due to the size of this resource, the ephemeral nature of some sites, and scope of this report it was deemed inappropriate to list all sources.

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Interpreting The Tables – Definitions Symbols

| | |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| * | Species collected by Savage et al aquatic survey between January to June 1996-98 |
| # | Refers to Savage et al species collected again in this survey. |
| ~ | Species collected by the author just outside the official sampling time, or nearby in identical habitat, though not within the boundaries of the reserve. |
| ^ | Species, either of foreign or native origin, that are of concern (negative or positive) to Agriculture or other human activities. |

Text And Abbreviations

JDM – Refers to certain un-named species codes for ants (Formicidae) held in the entomological collection of Curtin University Perth, W.A. and named for its creator Prof. Johnathon D. Majer.

nr. – near to; reference to most similar genus or species

?Genus - probable genus

(pen.) - penultimate

SF - State Forest

(imm.) - immature

Prof. – Professor

(juv.) – juvenile

Mar – March

Nov - November

Sept – September

| PHYLUM CHELICERATA | | | | | | |
|------------------------------------------|------------------|---------------------------------|---------------------|-----------------------------|---------------------------------|----------------------|
| APPENDIX 1(a) CLASS ARACHNIDA | | | | | | |
| ORDER ACARINA - (Ticks and Mites) | | | | | | |
| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
| ACARINA p - 30 | Family unknown | Brown Flower Mite | Gen? | sp? | unknown | Nov |
| ACARINA p - 1 | Trombidiidae | Shorthair Red-brown Trombimite | Gen? | sp? | unknown | Sept/Oct |
| ACARINA p - 1 | ?Leptolaelapidae | Pallid Geobeetle Leptomite | Paradoxiphis | sp? | Geotrupid Beetle 'ectoparasite' | Sept/Oct |
| ACARINA p - 30 | Trombidiidae | Red Velvet Trombimite | Gen? | sp? | unknown | Nov |
| APPENDIX 1(b) CLASS ARACHNIDA | | | | | | |
| ORDER ARANEAE - (Spiders) | | | | | | |
| ARANEAE (no photo) | ?Agelenidae | ?Agel spider | <i>Gen?</i> | <i>sp?</i> | predator | Nov |
| ARANEAE (no photo) | Araneide | Araspider | <i>Acroaspis</i> | <i>sp? (imm.)</i> | predator | Nov |
| ARANEAE p - 58 | Araneide | Pygmy Flatwaist Araspider | <i>Araneus</i> | <i>?amblycyphus (imm.)</i> | predator | Mar/April |
| ARANEAE (no photo) | Araneide | Araspider | <i>Araneus</i> | <i>?semicaudatus (imm.)</i> | predator | Nov |
| ARANEAE p - 1 | Araneidae | Xmas, or Common Spiny Araspider | <i>Austracantha</i> | <i>minax</i> | predator | Sept/Oct/Nov/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-----------------------|--------------|-------------------------------------------|-------------------------|--------------------|-------------------------|--------------------|
| ARANEAE p - 30 | Araneidae | Silvered Longbody Araspider | <i>Argiope</i> | <i>protensa</i> | predator | Nov |
| ARANEAE p 30&58 | Araneidae | St. Andrew's Cross Araspider | <i>Argiope</i> | <i>trifasciata</i> | predator | Nov/Mar/April |
| ARANEAE p - 1 | Araneidae | Lesser Tuberculated Orb Araspider | <i>Backobourkia</i> | <i>sp?</i> | predator | Sept/Oct/Nov |
| ARANEAE p - 58 | Araneidae | Variable Tuberculated Orb Araspider | <i>Eriophora</i> | <i>biapicata</i> | predator | Sept/Oct/Nov/April |
| ARANEAE p - 58 | Barychelidae | Brownback Blackhead Baryspider | ? <i>Synothele</i> | <i>sp? (juv.)</i> | predator | Mar/April |
| ARANEAE p - 30 | Clubionidae | Whitestripe Olive Clubispider | <i>Clubiona</i> | <i>sp? (imm.)</i> | predator | Nov |
| ARANEAE (no photo) | Clubionidae | Rib-edged Clubispider | <i>Clubiona</i> | <i>sp? (imm.)</i> | predator | Nov |
| ARANEAE p - 1 | Corinnidae | Spotted Racing Corispider | <i>Supunna</i> | <i>picta</i> | predator | Oct |
| ARANEAE p - 30 | Deinopidae | Rusty Deinospider | <i>Deinopis</i> | <i>sp? (imm.)</i> | predator | Nov |
| ARANEAE (no photo) | Deinopidae | Deinospider | ? <i>Avella/Menneus</i> | <i>sp? (imm.)</i> | predator | Mar/April |
| ARANEAE p - 30 | Desidae | Black Laceweb Desispider | <i>Badumna</i> | <i>insignis</i> | predator | Sept/Oct/Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-------------------|-------------|-------------------------------------------|----------------------|------------------------------|-------------------------|---------------|
| ARANEAE p - 58 | Desidae | Brown-marbled Desispider | <i>Badumna</i> | <i>sp?</i> | predator | Mar/April |
| ARANEAE p - 58 | Desidae | Marbled Whiteback Desispider | <i>Phryganoporus</i> | <i>sp? (imm.)</i> | predator | Mar/April |
| ARANEAE p - 31 | Gnaphosidae | 6-spot Gnaphospider | ? <i>Eilica</i> | <i>sp?</i> | predator | Nov |
| ARANEAE p - 1 | Gnaphosidae | Glossed and Matt Black Gnaphospider | <i>Gen?</i> | <i>sp?</i> | predator | Oct |
| ARANEAE p - 30 | Lamponidae | Sooty Groundracer Lams spider | ? <i>Lampona</i> | <i>sp? (imm.)</i> | predator | Nov |
| ARANEAE | Lycosidae | Grey-chevroned Lycospider | <i>Hogna</i> | <i>immansueta (imm.)</i> | predator | Oct/Mar/April |
| ARANEAE p - 31 | Lycosidae | Black-chevroned Lycospider | ' <i>Lycosa</i> ' | <i>australicola</i> | predator | Nov/Mar/April |
| ARANEAE p - 31 | Lycosidae | Greater Southern Grey Lycospider | <i>Tasmanicosa</i> | <i>leuckartii (imm.)</i> | predator | Nov |
| ARANEAE p - 31 | Lycosidae | Mottled Grey Day Lycospider | <i>Gen?</i> | <i>sp? (imm.)</i> | predator | Nov |
| ARANEAE p - 59 | Lycosidae | Spot-backed Longbody Lycospider | <i>Gen?</i> | <i>sp? (imm.)</i> | predator | Mar/April |
| ARANEAE p - 31 | Lycosidae | Wavy Brown Chevron Lycospider | ' <i>Lycosa</i> ' | <i>sp?</i> | predator | Nov/Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|------------------------|--------------|-----------------------------------------|--------------------|------------------------|-------------------------|----------------------------|
| ARANEAE p - 58 | Lycosidae | Dot-backed Darkface Lycospider | <i>Venatrix</i> | <i>arinaris</i> | predator | Mar/April |
| ARANEAE p - 1 | Miturgidae | Pied Head-stripe Miturspider | <i>Gen?</i> | <i>sp?</i> | predator | Oct |
| ARANEAE p - 59 | Nephilidae | Southern Golden Orb Nephspider | <i>Nephila</i> | <i>edulis</i> | predator | Sept/Oct/Nov/Mar/ April |
| ARANEAE p - 31 | Oxypidae | Dark-blazed Grey Oxyspider | <i>Oxyopes</i> | <i>sp?</i> | predator | Nov |
| ARANEAE p - 2 | Prodidomidae | Finegrain Brown Prodispider | <i>Molycria</i> | <i>vokes</i> | predator | Nov |
| ARANEAE p - 59 | Salticidae | Blackglove Flat Bark Saltispider | <i>Holoplatys</i> | <i>nr.delongi</i> | predator | Mar/April |
| ARANEAE p - 32 | Salticidae | Common Orange Peacock Saltispider | <i>Maratus</i> | <i>pavonis</i> | predator | Sept/Oct |
| ARANEAE (no photo) | Salticidae | Saltispider | <i>Lycidas</i> | <i>chlorophthalmus</i> | predator | Sept/Oct |
| ARANEAE p - 31 - 32 | Salticidae | 2-blotch Sapphire Saltispider | <i>Lycidas</i> | <i>chrysomelas</i> | predator | Nov |
| ARANEAE p - 59 | Salticidae | Pygmy Palestripe Bark Saltispider | <i>Gen?</i> | <i>sp?</i> | predator | Mar/April |
| ARANEAE p - 2 | Salticidae | Black and Silver Ant Saltispider | <i>Myrmarachne</i> | <i>sp?</i> | predator | Oct |
| ARANEAE p - 32&59 | Salticidae | Damask-backed Saltispider | <i>Opisthoncus</i> | <i>sp?</i> | predator | Nov/Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-------------------|----------------|-------------------------------------------|---------------------|-------------------|-------------------------|----------------------------|
| ARANEAE p - 32 | Salticidae | Red-streaked Blackthigh Saltispider | <i>Opisthoncus</i> | <i>sp?</i> | predator | Nov |
| ARANEAE p - 32 | Sparassidae | Hills Grey-mottled Sparaspider | <i>Gen?</i> | <i>sp?</i> | predator | Nov |
| ARANEAE p - 32 | Sparassidae | Southern Black-fronted Sparaspider | <i>Eodelena</i> | <i>lapidicola</i> | predator | Nov |
| ARANEAE p - 32 | Sparassidae | Sparaspider | <i>Gen?</i> | <i>sp? (juv.)</i> | predator | Nov |
| ARANEAE p - 59 | Tetragnathidae | Western Large- jawed Tetraspider | <i>Tetragnatha</i> | <i>sp?</i> | predator | Sept/Oct/Nov/Mar/ April |
| ARANEAE p -33 | Theridiidae | Blackface Brownhead Therispider | <i>Achaeearanea</i> | <i>sp?</i> | predator | Nov |
| ARANEAE p - 60 | Theridiidae | Quicksilver Therispider | <i>Argyrodes</i> | <i>sp?</i> | predator | Mar/April |
| ARANEAE p - 9 | Theridiidae | Brownstain Globe Therispider | <i>Euryopsis</i> | <i>sp?</i> | predator | Mar/April |
| ARANEAE p - 33 | Theridiidae | Silvered Globe Therispider | <i>Euryopsis</i> | <i>?elegans</i> | predator | Nov |
| ARANEAE p - 2 | Theridiidae | Redback Therispider | <i>Latrodectus</i> | <i>hasseltii</i> | predator | Sept/Oct |
| ARANEAE p - 32 | Theridiidae | 5-blotch Black Therispider | <i>Steatoda</i> | <i>sp? (imm)</i> | predator | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|----------------------|-------------|-------------------------------------------|----------------------|--------------------|-------------------------|---------------|
| ARANEAE p - 2 | Theridiidae | Enamelled Yellow-backed Therispider | <i>Gen?</i> | <i>sp? (imm.)</i> | predator | Sept/Oct |
| ARANEAE p - 60 | Theridiidae | Reticulated Angleback Therispider | <i>Gen?</i> | <i>sp?</i> | predator | Mar/April |
| ARANEAE p - 33 | Thomisidae | Pygmy Dotted Flower Thomispider | <i>Diaea</i> | <i>sp?</i> | predator | Nov |
| ARANEAE p - 33&60 | Thomisidae | Greenhead Flower Thomispider | <i>Diaea</i> | <i>sp?</i> | predator | Nov/Mar/April |
| ARANEAE p - 33 | Thomisidae | Brown Bark Thomispider | <i>Stephanopis</i> | <i>cambridgei</i> | predator | Nov |
| ARANEAE p - 2 | Thomisidae | Fine-tufted Bark Thomispider | <i>Stephanopis</i> | <i>sp?</i> | predator | Sept/Oct |
| ARANEAE p - 33 | Thomisidae | Dots and Dash Bark Thomispider | <i>Tharpyna</i> | <i>campestrata</i> | predator | Nov/Mar/April |
| ARANEAE p - 33 | Thomisidae | Mini Eye-spotted Thomispider | <i>Tmarus</i> | <i>sp?</i> | predator | Nov |
| ARANEAE p - 33 | Thomisidae | Wavy-bellied Long Thomispider | <i>Synalus</i> | <i>sp?</i> | predator | Nov |
| ARANEAE p - 60 | Zodariidae | Brown-marbled Zodaspider | ? <i>Habronestes</i> | <i>sp? (imm.)</i> | predator | Mar/April |
| ARANEAE p - 34 | Zodariidae | 3-spot Yellow-tip Zodaspider | <i>Masasteron</i> | <i>complector</i> | predator | Nov |
| ARANEAE p - 60 | Zoridae | Woody Tuftback Zorispider | <i>Argoctenus</i> | <i>sp?</i> | predator | Mar/April |

| | | | | | | |
|-----------------------|---------|------------|-------------|-------------------|----------|----------|
| ARANEAE (no photo) | Zoridae | Zorispider | <i>Gen?</i> | <i>sp? (imm.)</i> | predator | Sept/Oct |
|-----------------------|---------|------------|-------------|-------------------|----------|----------|

APPENDIX 1(c) CLASS ARACHNIDA

ORDER OPILIONIDA (Harvestmen or Opispiders)

| Order | Family | Common name | <i>Genus</i> | <i>Species</i> | Adult/Juvenile eco role | Sample Period |
|---------------------|-----------------|----------------------------------------|--------------|----------------|-------------------------|---------------|
| OPILIONIDA p - 3 | Triaenonychidae | Rustyface Broadback Triopispider | <i>Gen?</i> | <i>sp?</i> | predator | Sept/Oct/Nov |

APPENDIX 1(d) CLASS ARACHNIDA

ORDER PSEUDOSCORPIONIDA (Pseudoscorpions or Doscorpions)

| | | | | | | |
|--------------------------------|----------------|----------------------|-------------|------------|-------------------|----------|
| PSEUDO SCORPIONIDA p - 3 | Family unknown | Beetle Doscorpion | <i>Gen?</i> | <i>sp?</i> | phoretic predator | Sept/Oct |
|--------------------------------|----------------|----------------------|-------------|------------|-------------------|----------|

APPENDIX 1(e) CLASS ARACHNIDA

ORDER SCORPIONIDA (Scorpions)

| | | | | | | |
|----------------------|------------|------------------------|-----------------|----------------------------------|----------|--------------------|
| SCORPIONIDA p - 3 | Buthidae | Marbled Buscorpion | <i>Lychas</i> | ' <i>splendens</i> ' | predator | Sept/Oct/Nov/April |
| p - 3 | Urodacidae | Western Uroscorpion | <i>Urodacus</i> | <i>sp. 'armatus complex'</i> | predator | Sept/Oct/Nov/April |

APPENDIX 2 PHYLUM UNIRAMIA 1

CLASS CHILOPODA (Centipedes or Chilopedes)

| | | | | | | |
|-------------------------|-------------|----------------------------|--------------------|--------------------|----------|----------|
| LITHOBIOMORPHA p - 3 | Henicopidae | Western Pallid Henipede | <i>Dichelobius</i> | <i>nr. flavens</i> | predator | Sept/Oct |
|-------------------------|-------------|----------------------------|--------------------|--------------------|----------|----------|

| | | | | | | |
|------------------------|----------------|----------------------------------|--------------------|--------------|----------|--------------------|
| SCOLOPENDRIDA p - 3 | Scolopendridae | Racing Tailband Day Scolopede | <i>Scolopendra</i> | <i>laeta</i> | predator | Sept/Oct/Nov/April |
|------------------------|----------------|----------------------------------|--------------------|--------------|----------|--------------------|

APPENDIX 3 PHYLUM CRUSTACEA
CLASS MALACOSTRATA (Isopoda – Slaters)

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|------------------|-----------------|----------------------------------------|-----------------------|------------|---------------------------|---------------|
| ISOPODA p - 4 | Philosciidae | Grey-marbled Running Philoslater | <i>Laevophiloscia</i> | <i>sp?</i> | scavenger/ detritivore | Sept/Oct |
| ISOPODA p - 4 | Philosciidae | Shagreened Running Philoslater | <i>Gen?</i> | <i>sp?</i> | scavenger/ detritivore | Sept/Oct |
| ISOPODA p - 4 | Armadillidiidae | White-dashed Rolling Armaslater | <i>Buddelundia</i> | <i>sp?</i> | scavenger/ detritivore | Sept/Oct |

APPENDIX 4 PHYLUM UNIRAMIA 2
CLASS DIPLOPODA (Millipedes or Diplopedes)

| | | | | | | |
|-----------------------------------|--------------------------|--------------------------|-------------------------------------------------------------------------|------------|---------------------------|----------|
| POLYDESMIDA p - 4 | Paradoxo- sommataidae | Western Paradiplopede | <i>Antichiropus</i> | <i>sp?</i> | scavenger/ detritivore | Sept/Oct |
| SPIRO- STREPTIDA (no photo) | Iulomorphidae | Iulodiplopede | <i>Atelomastix?</i> (represented by parts of exoskeleton only) | <i>sp?</i> | scavenger/ detritivore | Sept/Oct |

APPENDIX 5 PHYLUM UNIRAMIA 3
CLASS INSECTA (Insects)

| | | | | | | |
|--------------------|------------|-----------------------------------|-------------------|-----------------------|------------------|-------------------|
| BLATTODEA p - 5 | Blaberidae | Wingless Matt Ground Blabroach | <i>Calolampra</i> | <i>nr. marginalis</i> | scavenger/grazer | Oct/Nov/Mar/April |
|--------------------|------------|-----------------------------------|-------------------|-----------------------|------------------|-------------------|

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|----------------------|-------------|-------------------------------------|---------------------------------------|----------------------|-------------------------------|---------------|
| BLATTODEA p - 5 | Blatellidae | Western Day-flitting Blatelroach | <i>Ellipsidion</i> | <i>sp?</i> | scavenger/ predator/grazer | Oct |
| BLATTODEA p - 61 | Blatellidae | Blackhead Long Cerci Blatelroach | <i>Neotemnopteryx</i> | <i>nr. fulva</i> | scavenger/grazer | Mar/April |
| BLATTODEA p - 61 | Blattidae | Wingless Banded Erect Blatroach | <i>Platyzosteria (Melanozosteria)</i> | <i>sp?</i> | scavenger/grazer | Mar/April |
| BLATTODEA p - 5 | Blattidae | 2-striped Blatroach | <i>Gen?</i> | <i>sp?</i> | scavenger/grazer | Oct |
| BLATTODEA p - 5 | Blattidae | Yellowleg Resiny Blatroach | <i>Platyzosteria (Melanozosteria)</i> | <i>nr. sublobata</i> | scavenger/grazer | Oct |
| | | | | | | |
| COLEOPTERA p - 61 | Anobiidae | Flathair Helmet Anobeetle | <i>Deltocryptus</i> | <i>sp?</i> | unknown/borer | Mar/April |
| COLEOPTERA p - 5 | Anthicidae | Ashyhair Mud Anthibeetle | <i>Formicomus</i> | <i>sp?</i> | scavenger | Oct |
| COLEOPTERA p - 35 | Anthicidae | Pygmy 2-spot Anthibeetle | <i>Gen?</i> | <i>sp?</i> | scavenger | Nov |
| COLEOPTERA p - 61 | Anthicidae | Hairy False Carab Anthibeetle | <i>Gen?</i> | <i>sp?</i> | scavenger | Mar/April |
| COLEOPTERA p - 61 | Anthicidae | Yellowthigh Bristleback Anthibeetle | <i>nr. Lagrioida</i> | <i>sp?</i> | scavenger | Mar/April |
| COLEOPTERA p - 35 | Belidae | Brown-speckled Broad Beliweevil | <i>Isacanthodes</i> | <i>sp?</i> | leaf pruner | Nov |
| COLEOPTERA p - 35 | Belidae | Little Ashyback Beliweevil | <i>Rhinotia</i> | <i>acaciae</i> | leaf pruner | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|----------------------|--------------|-------------------------------------------|---------------------------------------------|-------------------|-------------------------|--------------------------|
| COLEOPTERA p - 5 | Bostrichidae | Hairy-eyebrow Pygmy Bostribeetle | <i>Gen?</i> | <i>sp?</i> | wood borer | Oct |
| COLEOPTERA p - 35 | Bostrichidae | Roughneck Brownish Bostribeetle | <i>Gen?</i> | <i>sp?</i> | wood borer | Nov |
| COLEOPTERA p - 35 | Buprestidae | Rededge 3-band Bubeetle | <i>Castiarina</i> | <i>simulata</i> | pollinator/borer | Nov |
| COLEOPTERA p - 35 | Buprestidae | Greenface Black Pygmy | <i>Neocuris</i> | <i>sp?</i> | pollinator/borer | Nov |
| COLEOPTERA p - 35 | Buprestidae | Great Ridgeback Jam Bubeetle | <i>Pseudotaenia</i> | <i>gigas</i> | leaf pruner/borer | March/April (remains) |
| COLEOPTERA p - 5 | Byrridae | Byrbeetle | <i>Microchaetes</i> | <i>sphaericus</i> | microplant grazer | Oct |
| COLEOPTERA p- 61 | Cantharidae | Western Orangeneck Canthbeetle | <i>Chauliognathus</i> | <i>sp?</i> | omnivore/predator | Mar/April |
| COLEOPTERA p - 6 | Carabidae | Larval Carabeetle | <i>Gen?</i> | <i>sp?</i> | predator | Oct |
| COLEOPTERA p - 6 | Carabidae | Green-ridged Smallhead Carabeetle | <i>Chlaenius</i> (<i>Pelasmomimus</i>) | <i>greyanus</i> | predator | Oct |
| COLEOPTERA p - 6 | Carabidae | Blackhead Patterned Dark Carabeetle | <i>Anomotarus</i> | <i>crudelis</i> | predator | Nov |
| COLEOPTERA p - 36 | Carabidae | Plate-horned Flatleg Carabeetle | <i>Arthropterus</i> | <i>sp?</i> | predator | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|--------------------------|---------------|---------------------------------------|----------------------|----------------------|-------------------------|---------------|
| COLEOPTERA p - 36 | Carabidae | Little Line-backed Paeltip Carabeetle | <i>Gen?</i> | <i>sp?</i> | predator | Nov |
| COLEOPTERA p - 6 | Carabidae | Common Stinking Green Carabeetle | <i>Calosoma</i> | <i>schayeri</i> | predator | Oct |
| COLEOPTERA p - 7 | Carabidae | Yellow-thighed Pygmy Carabeetle | <i>Cenogmus</i> | <i>castelnaui</i> | predator | Oct |
| COLEOPTERA p - 7 | Carabidae | Pygmy Slender Carabeetle | <i>Clivina</i> | <i>sp?</i> | predator | Oct |
| COLEOPTERA p - 7 | Carabidae | Yellow-shinned Broadneck Carabeetle | <i>Gnathaphanus</i> | <i>adelaidae</i> | predator | Oct |
| COLEOPTERA p - 6 | Carabidae | Glossy Rounded Pygmy Carabeetle | <i>Hypharpax</i> | <i>ranula</i> | predator | Oct |
| COLEOPTERA (no photo) | Carabidae | Brown Heartneck Pygmy Carabeetle | <i>Mecyclothorax</i> | <i>ambiguus</i> | predator | Oct |
| COLEOPTERA p - 6 | Carabidae | Brown-edged Smallneck Carabeetle | <i>Notagonum</i> | <i>submetallicum</i> | predator | Oct/Mar/April |
| COLEOPTERA p - 6 | Carabidae | Bombardier Carabeetle | <i>Pheropsophus</i> | <i>verticalis</i> | predator | Oct |
| COLEOPTERA p - 7 | Cerambycidae | Wart-necked Gum Cerambeetle | <i>Coleococtus</i> | <i>senio</i> | leaf pruner/borer | Oct |
| COLEOPTERA p - 7 | Chrysomelidae | Ashy Helmet Chrysobeetle | <i>nr. Paropsis</i> | <i>sp?</i> | leaf pruner | Oct |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|----------------------|---------------|-------------------------------------------------|--------------------------------|----------------------|-------------------------|---------------|
| COLEOPTERA p - 36 | Chrysomelidae | Hunchback Helmet Chrysobeetle | <i>Cryptocephalus</i> | <i>sp?</i> | leaf pruner | Nov |
| COLEOPTERA p - 36 | Chrysomelidae | Little Creamstreak Chrysobeetle | <i>Gen?</i> | <i>sp?</i> | leaf pruner | Nov |
| COLEOPTERA p - 7 | Chrysomelidae | Amber-blotched Longhorn Chrysobeetle | <i>Cadmus</i> | <i>sp?</i> | leaf pruner | Oct |
| COLEOPTERA p - 7 | Chrysomelidae | Pallidleg Gunmetal Pygmy Chrysobeetle | <i>Gen?</i> | <i>sp?</i> | leaf pruner | Oct |
| COLEOPTERA p - 7 | Cleridae | Sombre Flower Cleribeetle | <i>Elaele</i> | <i>sp?</i> | pollinator/predator | Oct |
| COLEOPTERA p - 36 | Cleridae | Dull Gold-green Cleribeetle | <i>Phlogistus</i> | <i>sp?</i> | pollinator/predator | Nov |
| COLEOPTERA p - 36 | Cleridae | Pygmy Blood-marked Cleribeetle | <i>Gen?</i> | <i>sp?</i> | pollinator/predator | Nov |
| COLEOPTERA p - 36 | Cleridae | Pygmy Creamstripe Bristled Cleribeetle | <i>Gen?</i> | <i>sp?</i> | pollinator/predator | Nov |
| COLEOPTERA p - 61 | Coccinelidae | Common Wavyband Coccibeetle | [^] <i>Coccinella</i> | <i>transversalis</i> | predator | Mar/April |
| COLEOPTERA p - 8 | Coccinelidae | Little Blackbrow Coccibeetle | [^] <i>Coelophora</i> | <i>inaequalis</i> | predator | Oct/Nov |
| COLEOPTERA p - 37 | Coccinelidae | Piedneck Coccibeetle | <i>Hippodamia</i> | <i>variegata</i> | predator | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|----------------------|---------------|-----------------------------------------------|-----------------------|----------------------|-------------------------|---------------|
| COLEOPTERA p - 8 | Coccinellidae | Larval Coccibeetle | <i>Gen?</i> | <i>sp?</i> | predator | Oct |
| COLEOPTERA p - 8 | Curculionidae | Bristled Pygmy Ground Curcweevil | <i>Essolithna</i> | <i>maculata</i> | leaf pruner | Oct/Mar/April |
| COLEOPTERA p - 8 | Curculionidae | Rusty Pygmy Shynose Curcweevil | <i>Cryptoplus</i> | <i>tibialis</i> | unknown | Oct |
| COLEOPTERA p - 8 | Curculionidae | Tan-spined Pygmy Curcweevil | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| COLEOPTERA p - 37 | Curculionidae | Pygmy Blacksnout Curcweevil | <i>Xeda</i> | <i>amplipennis</i> | unknown | Nov |
| COLEOPTERA p - 62 | Curculionidae | Small bristle Paleside Curcweevil | <i>Gen?</i> | <i>sp?</i> | unknown | Mar/April |
| COLEOPTERA p - 61 | Curculionidae | Headstripe Embroidered Curcweevil | <i>Gen?</i> | <i>sp?</i> | unknown | Mar/April |
| COLEOPTERA p - 8 | Curculionidae | Clubbed Barebottom Pygmy Curcweevil | <i>Laemosacellus</i> | <i>magdalodes</i> | unknown | Oct |
| COLEOPTERA p - 37 | Curculionidae | Little Blackscap Greyspeckle Curcweevil | <i>Myllocerus</i> | <i>nr. abstarsus</i> | leaf pruner | Nov |
| COLEOPTERA p - 37 | Curculionidae | White-toed Magdelinine Curcweevil | <i>Neolaemosaccus</i> | <i>brevis</i> | unknown | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|----------------------|---------------|------------------------------------------|--------------------------------------------------|----------------------|-------------------------|----------------|
| COLEOPTERA p - 37 | Curculionidae | Chequered Whitescute Curcweevil | <i>Titinia</i> | <i>brevicollis</i> | leaf pruner | Nov |
| COLEOPTERA p - 8 | Curculionidae | Coarsewool Knob-brow Curcweevil | <i>Zephyryne</i> | <i>sordida</i> | unknown | Oct |
| COLEOPTERA p - 9 | Dermestidae | Squat Whitehair Dermbeetle | <i>Anthrenocerus</i> | <i>australis</i> | pollinator/scavenger | Oct |
| COLEOPTERA p - 8 | Dermestidae | Fringeneck Long Dermbeetle | <i>Dermestes</i> | <i>sp?</i> | scavenger | Oct/Mar/April |
| COLEOPTERA p - 37 | Dytiscidae | Tan Stripe- blotched Dytibeetle | *# <i>Antiporus</i> | <i>gilbertii</i> | predator | June/Nov |
| COLEOPTERA p - 9 | Dytiscidae | Striped Pallid Dytibeetle | *# <i>Lancetes</i> | <i>lanceolatus</i> | predator | June/Oct |
| COLEOPTERA p - 37 | Dytiscidae | Angle-blotched Dytibeetle | *# <i>Megaporus</i> | <i>howitti</i> | predator | June/Nov |
| COLEOPTERA p - 9 | Dytiscidae | Lesser Stripe- blotched Dytibeetle | <i>Necterosoma</i> | <i>darwini</i> | predator | Oct/Mar/April |
| COLEOPTERA p - 9 | Dytiscidae | Pencilled Oliveneck Dytibeetle | *# <i>Necterosoma</i> | <i>penicillatum</i> | predator | June/Mar/April |
| COLEOPTERA p - 9 | Dytiscidae | Dytibeetle | * <i>Paroster</i> | <i>sp?</i> | predator | June |
| COLEOPTERA p - 9 | Dytiscidae | Brownline 2-dot Dytibeetle | *#? <i>Platynectes</i> (<i>Platynectes</i>) | <i>nr. aenescens</i> | predator | June/Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|----------------------|----------------|-------------------------------------|-----------------------------------|--------------------|-------------------------|---------------|
| COLEOPTERA p - 37 | Dytiscidae | Masked Reticulated Dytibeetle | <i>Rhantus</i> | <i>suturalis</i> | predator | Nov |
| COLEOPTERA p - 38 | Elateridae | Slender Black-punctured Elatbeetle | <i>Gen?</i> | <i>sp?</i> | unknown | Nov |
| COLEOPTERA p - 38 | Elateridae | Smooth-shoulder Linehair Elatbeetle | <i>Gen?</i> | <i>sp?</i> | unknown | Nov/Mar/April |
| COLEOPTERA p - 62 | Elateridae | Brownspine Dark Elatbeetle | <i>Gen?</i> | <i>sp?</i> | unknown | Mar/April |
| COLEOPTERA p - 62 | Family unknown | Tiny Blackhead Dullblotch Beetle | <i>Gen?</i> | <i>sp?</i> | unknown | Mar/April |
| COLEOPTERA p - 62 | Family unknown | Glossy Black Helmet Beetle | <i>Gen?</i> | <i>sp?</i> | unknown | Mar/April |
| COLEOPTERA p - 9 | Geotrupidae | Lesser Unicorn Geobeetle | <i>Bolborhachium</i> | <i>recticorne</i> | fungivore | Oct |
| COLEOPTERA p - 10 | Gyrinidae | Little Pale-edge Gyrbeetle | <i>*Aulonogyrus</i> | <i>strigosus</i> | scavenger/ predator | June |
| COLEOPTERA p - 9 | Gyrinidae | Great Fine-ridged Gyrbeetle | <i>*Macrogyrus (Tribologyrus)</i> | <i>nr. reichei</i> | scavenger/ predator | June |
| COLEOPTERA p - 38 | Heteroceridae | Muted Pygmy Hetbeetle | <i>Heterocerus</i> | <i>sp?</i> | stream bank detritivore | Nov/Mar/April |
| COLEOPTERA p - 10 | Hydraenidae | Hydrabeetle | <i>*Ochthebiinae</i> | <i>sp?</i> | algal grazer | June |
| COLEOPTERA p - 10 | Hydrophilidae | Hydrobeetle | <i>*#?Berosus</i> | <i>amoenus</i> | predator/ herbivore | June |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|--------------------------|---------------|----------------------------------------|-----------------------------------------------|-------------------------|----------------------------------------|----------------|
| COLEOPTERA p - 62 | Hydrophilidae | Rimneck Hydrobeetle | <i>Helochaeres</i> (<i>Hydrobaticus</i>) | <i>tenuistriatus</i> | predator/ herbivore | June/Mar/April |
| COLEOPTERA (no photo) | Hydrophilidae | Hydrobeetle | *Gen? | <i>sp? Savage et al</i> | predator/ herbivore | June |
| COLEOPTERA (no photo) | Hydrophilidae | Hydrobeetle | *Gen? | <i>sp? Savage et al</i> | predator/ herbivore | June |
| COLEOPTERA p - 10 | Hydrophilidae | Common Glossy Helmet Hydrobeetle | <i>Limnoxenus</i> | <i>zealandicus</i> | predator/ herbivore | Nov/Mar/April |
| COLEOPTERA (no photo) | Hydrophilidae | Hydrobeetle | * <i>Hybograhius</i> | <i>hartmeyer</i> | predator/ herbivore | June |
| COLEOPTERA p - 62 | Leiodidae | Thickleg Brown Helmet Leiobeetle | <i>nr. Zeadolopus</i> | <i>sp?</i> | unknown | Mar/April |
| COLEOPTERA p - 38 | Meloidae | Uniform Blackleg Melobeetle | <i>nr. Zonitis</i> | <i>sp?</i> | pollinator/bee ectoparasite | Nov |
| COLEOPTERA p - 38 | Melyridae | Redhead Shortwing Melbeetle | <i>Carphurus</i> | <i>sp?</i> | unknown | Nov |
| COLEOPTERA p - 10 | Melyridae | Red and Yellow Melbeetle | <i>Dicranolaius</i> | <i>sp?</i> | unknown | Oct |
| COLEOPTERA p - 38 | Mordellidae | Little Charcoal Morbeetle | <i>Mordellistena</i> | <i>concolor</i> | pollinator- nectivore/stem borer | Nov |
| COLEOPTERA p - 38 | Mordellidae | Long Coal Morbeetle | <i>Gen?</i> | <i>sp?</i> | pollinator- nectivore/stem borer | Nov |
| COLEOPTERA p - 10 | Nitidulidae | Clubbed Brown Seed Nitibeetle | <i>Idaethina</i> | <i>sp?</i> | unknown | Oct |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|----------------------|--------------|--------------------------------------------|------------------------|-------------------|-----------------------------------------|---------------|
| COLEOPTERA p - 38 | Phalacridae | Pygmy False Ladybird Phalbeetle | <i>Parasemus</i> | <i>sp?</i> | unknown | Nov |
| COLEOPTERA p - 62 | Phalacridae | Black Largescute Helmet Phalbeetle | <i>nr. Phalacrinus</i> | <i>sp?</i> | unknown | Mar/April |
| COLEOPTERA p - 10 | Rhynchitidae | Dull Blotched Rhinweevil | <i>Auletobius</i> | <i>eucalypti</i> | leaf pruner | Oct |
| COLEOPTERA p - 11 | Scarabaeidae | Dull-line Day Scarabeetle | <i>Aphodius</i> | <i>sp?</i> | unknown | Oct |
| COLEOPTERA p - 39 | Scarabaeidae | Little Darkstripe Scarabeetle | <i>Aphodius</i> | <i>lividus</i> | leaf pruner/ external root feeder | Nov |
| COLEOPTERA p - 10 | Scarabaeidae | Big-horned Giant Rolling Scarabeetle | <i>Colpochila</i> | <i>antennalis</i> | leaf pruner/ external root feeder | Oct |
| COLEOPTERA p - 11 | Scarabaeidae | South African Lawn Scarabeetle | <i>^Heteronychus</i> | <i>arator</i> | introduced grass root feeder | Oct/Nov |
| COLEOPTERA p - 39 | Scarabaeidae | Waxy Chestnut Rolling Scarabeetle | <i>Gen?</i> | <i>sp?</i> | leaf pruner/ external root feeder | Nov |
| COLEOPTERA p - 11 | Scarabaeidae | Large-spined Rolling Scarabeetle | <i>Gen?</i> | <i>sp?</i> | leaf pruner/ external root feeder | Oct/Mar/April |
| COLEOPTERA p - 11 | Scarabaeidae | Dark-ochred Rolling Scarabeetle | <i>Gen?</i> | <i>sp?</i> | unknown | Oct/Mar/April |
| COLEOPTERA p - 11 | Scarabaeidae | Line-haired Scarabeetle | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|----------------------|---------------|--------------------------------------|------------------------|---------------------|---------------------------------------------|---------------|
| COLEOPTERA p - 11 | Scarabaeidae | Chestnut Pygmy Day Scarabeetle | <i>Liparetrus</i> | <i>sp?</i> | flower/leaf pruner/ external root feeder | Oct/Mar/April |
| COLEOPTERA p - 11 | Scarabaeidae | Pygmy Smallhorn Scarabeetle | <i>Neodon</i> | <i>pecuarius</i> | leaf pruner/ external root feeder | Oct |
| COLEOPTERA p - 39 | Scarabaeidae | African Bronzed Dung Scarabeetle | <i>^Onitis</i> | <i>alexis</i> | Bovine dung feeder | Nov |
| COLEOPTERA p - 11 | Scarabaeidae | Tri-horned Dung Scarabeetle | <i>Onthophagus</i> | <i>sp?</i> | Macropod dung feeder | Oct |
| COLEOPTERA p - 63 | Staphylinidae | Redwing 3-prong Staphbeetle | <i>nr. Correa</i> | <i>sp?</i> | predator | Mar/April |
| COLEOPTERA p - 62 | Staphylinidae | Redneck 3-prong Staphbeetle | <i>Gen?</i> | <i>sp?</i> | predator | Mar/April |
| COLEOPTERA p - 63 | Staphylinidae | Pygmy Squareneck Staphbeetle | <i>Gen?</i> | <i>sp?</i> | predator | Mar/April |
| COLEOPTERA p - 12 | Staphylinidae | Pygmy Pale-legged Staphbeetle | <i>Oxtelus</i> | <i>sculptus</i> | predator | Oct |
| COLEOPTERA p - 39 | Staphylinidae | Longneck Sharptail Black Staphbeetle | <i>Lathrobium</i> | <i>sp?</i> | predator | Nov |
| COLEOPTERA p - 39 | Tenebrionidae | Shining Trunk Tenebeetle | <i>Chalcopteroides</i> | <i>yorkensis</i> | unknown | Nov |
| COLEOPTERA p - 12 | Tenebrionidae | Mediterranean Tenebeetle | <i>^Cheiroides</i> | <i>caulobioides</i> | Bovine dung feeder | Oct |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|----------------------|---------------|----------------------------------------|-----------------------|-------------------|------------------------------|---------------|
| COLEOPTERA p - 39 | Tenebrionidae | Tricoloured Aleculine Tenebeetle | <i>Dimorphochilus</i> | <i>apicalis</i> | pollinivore/larva unknown | Nov |
| COLEOPTERA p - 12 | Tenebrionidae | Little Long- bristled Tenebeetle | <i>Ectyche</i> | <i>sp?</i> | scavenger/ detritivore | Oct/Mar/April |
| COLEOPTERA p - 13 | Tenebrionidae | Larval Tenebeetle | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| COLEOPTERA p - 12 | Tenebrionidae | Pallid Riverbank Tenebeetle | <i>Gonocephalum</i> | <i>misellum</i> | scavenger/ detritivore | Oct/Mar/April |
| COLEOPTERA p - 12 | Tenebrionidae | Hairy Piedish Tenebeetle | <i>Helea</i> | <i>perforatus</i> | scavenger/ detritivore | Oct |
| COLEOPTERA p - 63 | Tenebrionidae | Ridged Broad Piedish Tenebeetle | <i>Helea</i> | <i>sp?</i> | scavenger/ detritivore | Mar/April |
| COLEOPTERA p - 12 | Tenebrionidae | Pimpled Pygmy Tenebeetle | <i>Isopteron</i> | <i>breve</i> | scavenger/ detritivore | Oct |
| COLEOPTERA p - 12 | Tenebrionidae | Giant Pterohelaeine Tenebeetle | <i>Pterohelaeus</i> | <i>sp?</i> | root grazer/ detritivore | Oct |
| COLEOPTERA p - 12 | Tenebrionidae | Shiny Unpeaked Tenebeetle | <i>Pterohelaeus</i> | <i>sp?</i> | root grazer/ detritivore | Oct |
| COLEOPTERA p - 13 | Trogidae | Finegrain Ashy Trogbeetle | <i>Omorgus</i> | <i>stellatus</i> | carcasse scavenger | Oct/Nov |
| DERMAPTERA p - 39 | Anisolabidae | Band-legged Black Anisowig | <i>Gonolabis</i> | <i>sp?</i> | scavenger/ predator | Nov/Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|----------------------|---------------|-----------------------------------|--------------------|----------------------|-------------------------------------------|---------------|
| DERMAPTERA p - 39 | Labiduridae | Palenotch Coal Labiwig | <i>Gen?</i> | <i>sp?</i> | scavenger/ predator | Nov |
| DERMAPTERA p - 63 | Labiduridae | Common Handsome Labiwig | <i>Labidura</i> | <i>truncata</i> | scavenger/ predator | Mar/April |
| | | | | | | |
| DIPTERA p - 13 | Anisopodidae | Patchneck Patternwing Anisomidge | <i>Gen?</i> | <i>sp?</i> | scavenger/ detritivore | Oct |
| DIPTERA p - 13 | Asilidae | Ashy Long-tailed Asilfly | <i>Cerdistus</i> | <i>sp?</i> | predator | Oct |
| DIPTERA p - 40 | Asilidae | Black-lapped Wasp Asilfly | <i>Chrysopogon</i> | <i>albopunctatus</i> | predator | Nov |
| DIPTERA p - 13 | Bombylliidae | Dark-edge Jet Bomfly | <i>Gen?</i> | <i>sp?</i> | pollinator/ endoparasite | Oct |
| DIPTERA p - 40 | Bombylliidae | White-tip Inkstain Bomfly | <i>Ligyra</i> | <i>sinuatifascia</i> | pollinator/ endoparasite | Nov |
| DIPTERA p - 63 | Bombylliidae | Powderbottom Inkstain Bomfly | <i>Ligyra</i> | <i>cingulata</i> | pollinator/ endoparasite | Mar/April |
| DIPTERA p - 13 | Calliphoridae | Western Australian Brown Callifly | <i>^Calliphora</i> | <i>albifrontalis</i> | pollinator/ scavenger/ endoparasite | Oct |
| DIPTERA p - 13 | Calliphoridae | Lesser Brown Callifly | <i>^Calliphora</i> | <i>dubia</i> | pollinator/ scavenger/ endoparasite | Oct |
| DIPTERA p - 40 | Calliphoridae | Dull Green Charcoal Callifly | <i>Calliphora</i> | <i>augur</i> | pollinator/ scavenger/ endoparasite | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-----------------------|-----------------|---------------------------------------|----------------------------------------------------------|--------------------|------------------------------------------------|---------------|
| DIPTERA p - 13 | Calliphoridae | Wavy-eyed Jaguar Callifly | <i>Stomorhina</i> | <i>sp?</i> | pollinator/ scavenger/ endoparasite | Oct/Mar/April |
| DIPTERA p - 14 | Ceratopogonidae | Sand Ceramidge | * <i>Nilobezzia</i> | <i>curticornis</i> | female ectoparasite/ aquatic detritivore | June |
| DIPTERA (no photo) | Ceratopogonidae | Ceramidge | * <i>Gen? (as Monohelia sp. in Savage et al)</i> | <i>sp?</i> | female ectoparasite/ aquatic detritivore | June |
| DIPTERA p - 14 | Chironomidae | Green-tinged Chiromidge | <i>Gen?</i> | <i>sp?</i> | scavenger/aquatic detritivore | Oct |
| DIPTERA p - 14 | Chironomidae | Green Neck- marked Chiromidge | <i>Gen?</i> | <i>sp?</i> | scavenger/aquatic detritivore | Oct |
| DIPTERA p - 14 | Chironomidae | Little Robust Chiromidge | <i>Gen?</i> | <i>sp?</i> | scavenger/aquatic detritivore | Oct |
| DIPTERA p - 40 | Chironomidae | Pygmy Bronzeback Chiromidge | <i>Gen?</i> | <i>sp?</i> | scavenger/aquatic detritivore | Nov |
| DIPTERA p - 40 | Chironomidae | Crested Greenback Chiromidge | <i>Gen?</i> | <i>sp?</i> | scavenger/aquatic detritivore | Nov |
| DIPTERA (no photo) | Chironomidae | Chiromidge | * <i>#?Procladius</i> | <i>paludicola</i> | scavenger/aquatic detritivore | June |
| DIPTERA p - 63 | Chironomidae | Ridgehump Smudgewing Chiromidge | <i>Gen?</i> | <i>sp?</i> | scavenger/aquatic detritivore | Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-----------------------|----------------|-----------------------------------|--------------------------|------------|------------------------------------------------------------|---------------|
| DIPTERA p - 14 | Chloropidae | Pygmy 5-windowed Chlorofly | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| DIPTERA p - 14 | Culicidae | Largenose Culimidge | <i>*Gen?</i> | <i>sp?</i> | female ectoparasite/ pollinator/ aquatic predator | Oct |
| DIPTERA p - 14 | Culicidae | Yellow-knee Culimidge | <i>*Gen?</i> | <i>sp?</i> | female ectoparasite/ pollinator/ aquatic predator | Oct |
| DIPTERA p - 15 | Dolichopodidae | Bronzed Green Dolifly | <i>Gen?</i> | <i>sp?</i> | predator | Oct |
| DIPTERA p - 63 | Dolichopodidae | Copper Patternwing Dolifly | <i>nr. Austrosciapus</i> | <i>sp?</i> | predator | Mar/April |
| DIPTERA p - 40 | Empididae | Orange Spearnose Empifly | <i>Gen?</i> | <i>sp?</i> | pollinator/ unknown | Nov |
| DIPTERA (no photo) | Ephydriidae | Ephyfly | <i>*Gen?</i> | <i>sp?</i> | unknown/aquatic herbivore | June |
| DIPTERA p - 15 | Ephydriidae | Pallid Pygmy Riverbank Ephyfly | <i>*#Gen?</i> | <i>sp?</i> | unknown | Oct |
| DIPTERA p - 15 | Family unknown | Largeclaw False Housefly | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| DIPTERA p - 15 | Family unknown | White-haltered Hunchback Midge | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| DIPTERA p - 63 | Family unknown | Largehump 2-dash Midge | <i>Gen?</i> | <i>sp?</i> | unknown | Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|----------------------|----------------|-----------------------------------|-----------------------------------|-----------------------|---------------------------------------------|-------------------|
| DIPTERA p - 64 | Family unknown | Wedge-shouldered 2-dot Midge | <i>Gen?</i> | <i>sp?</i> | unknown | Mar/April |
| DIPTERA p - 40 | Family unknown | 4-spot Pygmy Midge | <i>Gen?</i> | <i>sp?</i> | scavenger/ detritivore | Nov |
| DIPTERA p - 15 | Lauxaniidae | Dull Stripe-necked Pygmy Lauxafly | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| DIPTERA p - 40 | Lauxaniidae | Yellowleg Grey Lauxafly | <i>Gen?</i> | <i>sp?</i> | unknown | Nov |
| DIPTERA p - 15 | Lauxaniidae | Weak-striped Rusty Lauxafly | <i>Lyciella</i> | <i>sp?</i> | unknown | Oct/Mar/April |
| DIPTERA p - 15 | Lonchaeidae | Pygmy Dark Green Lonchafly | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| DIPTERA p - 15 | Muscidae | Centre-legged Shore Muscify | <i>Lispe</i> | <i>sp?</i> | predator/aquatic predator | Oct |
| DIPTERA p - 41&64 | Muscidae | Bush Muscify | <i>^Musca</i> | <i>vetustisissima</i> | scavenger/ carcasse decomposer | Oct/Nov/Mar/April |
| DIPTERA p - 16 | Muscidae | Stable Muscify | <i>^Stomoxys</i> | <i>calcitrans</i> | scavenger/ stable compost detritivore | Oct/Nov |
| DIPTERA p - 40 | Mydidae | Little Redbody Mydifly | <i>Gen?</i> | <i>sp?</i> | pollinator- predator/predator | Nov |
| DIPTERA p - 16 | Sarcophagidae | Red eyed Sarcofly | <i>Liosarcophaga (Sarcophaga)</i> | <i>aurifrons</i> | scavenger/carrion consumer | Oct |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-----------------------|---------------|-------------------------------------|-----------------------------------|---------------------|----------------------------------------------------------------------|---------------|
| DIPTERA p - 41 | Sarcophagidae | Little Banded Satellite Sarcofly | <i>nr. Protomilt- ogramma</i> | <i>sp?</i> | plant exudate scavenger/ Hymenoptera food kleptoparasite | Nov |
| DIPTERA p - 16 | Stratiomyidae | Stratfly | <i>*nr. Odontomyia</i> | <i>sp?</i> | unknown/aquatic detritivore | June |
| DIPTERA p - 16 | Syrphidae | Common Spotted Syrfly | <i>Austrosyrphus</i> | <i>viridiceps</i> | pollinator/ unknown | Oct |
| DIPTERA p - 41 | Syrphidae | Common Yellow Syrfly | <i>Simosyrphus</i> | <i>grandicornis</i> | pollinator/ unknown | Nov |
| DIPTERA p - 16 | Tabanidae | Muted-eye Tabfly | <i>Gen?</i> | <i>sp?</i> | female vertebrate ectoparasite | Oct |
| DIPTERA p - 64 | Tabanidae | Large Browneye Tabfly | <i>Gen?</i> | <i>sp?</i> | female vertebrate ectoparasite | Mar/April |
| DIPTERA (no photo) | Tabanidae | Tabfly | <i>*Gen?</i> | <i>sp?</i> | female vertebrate ectoparasite/ aquatic omnivore | June |
| DIPTERA p - 16 | Tachinidae | Redeye 2-dot Tachfly | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| DIPTERA p - 16 | Tachinidae | Golden Green Metallic Tachfly | <i>Rutilia</i> | <i>sp?</i> | arthropod endoparasite | Oct |
| DIPTERA p - 41 | Tachinidae | Humped Blackleg Tachfly | <i>Gen?</i> | <i>sp?</i> | arthropod endoparasite | Nov |
| DIPTERA p - 41 | Tephritidae | Little Antwing Tepfly | <i>nr. Trupanea</i> | <i>sp?</i> | unknown | Nov |
| DIPTERA p - 17 | Tipulidae | Dark-veined Tipufly | <i>Gen?</i> | <i>sp?</i> | scavenger/aquatic detritivore | Oct |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|---------------------|---------------|------------------------------------------|-----------------------|------------------------|----------------------------------------|---------------|
| DIPTERA p - 17 | Tipulidae | Dove Grey Tipuflly | <i>Gen?</i> | <i>sp?</i> | scavenger/aquatic detritivore | Oct |
| DIPTERA p - 64 | Tipulidae | Brown Longsnout Tipuflly | <i>Gen?</i> | <i>sp?</i> | scavenger/aquatic detritivore | Mar/April |
| | | | | | | |
| HEMIPTERA p - 41 | Alydidae | Common Wattlepod Alydibug | <i>Melanacanthus</i> | <i>margineguttatus</i> | wattle seed sucker | Nov |
| HEMIPTERA p - 17 | Aphididae | Pale Wingbase Black Aphid | <i>^Gen?</i> | <i>sp?</i> | sap sucker/ sedentary sap sucker | Oct |
| HEMIPTERA p - 17 | Aphrophoridae | 2-banded Beetle Aphrobug | <i>Bathyllus</i> | <i>albicinctus</i> | sap sucker/ sedentary sap sucker | Oct |
| HEMIPTERA p - 64 | Aradidae | Cheekhorn Arabug | <i>Brachyrhynchus</i> | <i>nr. wilsoni</i> | sucking fungivore | Mar/April |
| HEMIPTERA p - 17 | Cicadellidae | Humpneck Bark Cicahopper | <i>Kyphocotis</i> | <i>sp?</i> | sap sucker | Oct |
| HEMIPTERA p - 41 | Cicadellidae | Beige-fronted Smokewing Cicahopper | <i>Brunotartessus</i> | <i>fulvus</i> | sap sucker | Nov/Mar/April |
| HEMIPTERA p - 17 | Cicadellidae | Longhorn Cicahopper | <i>Gen?</i> | <i>sp?</i> | sap sucker | Oct |
| HEMIPTERA p - 17 | Cicadellidae | Palevein Green- neck Cicahopper | <i>Gen?</i> | <i>sp?</i> | sap sucker | Oct |
| HEMIPTERA p - 17 | Cicadellidae | Spade-headed Bark Cicahopper | <i>Gen?</i> | <i>sp?</i> | sap sucker | Oct |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|---------------------|--------------|-----------------------------------------------|--------------------|---------------------|-------------------------------|---------------|
| HEMIPTERA p - 18 | Cicadellidae | Teary Longhorn Cicahopper | <i>Gen?</i> | <i>sp?</i> | sap sucker | Oct |
| HEMIPTERA p - 18 | Cicadellidae | Windowed Humpy Grey Cicahopper | <i>Macropsinae</i> | <i>sp?</i> | sap sucker | Oct |
| HEMIPTERA p - 42 | Cicadellidae | Speckled Grey Windowed Cicahopper | <i>Ipoides</i> | <i>sp?</i> | sap sucker | Nov |
| HEMIPTERA p - 42 | Cicadellidae | Black-tail Green Pygmy Cicahopper | <i>Gen?</i> | <i>sp?</i> | sap sucker | Nov |
| HEMIPTERA p - 42 | Cicadellidae | Pygmy Green-striped Cicahopper | <i>Gen?</i> | <i>sp?</i> | sap sucker | Nov |
| HEMIPTERA p - 42 | Cicadellidae | Speckled Spadehead Cicahopper | <i>Gen?</i> | <i>sp?</i> | sap sucker | Nov |
| HEMIPTERA p - 64 | Cicadellidae | Sulphur Cicahopper (nymph) | <i>Gen?</i> | <i>sp?</i> | sap sucker | Mar/April |
| HEMIPTERA p - 64 | Cicadellidae | Green Redeye Clearwing Cicahopper | <i>Rosopaella</i> | <i>citrinella</i> | sap sucker | Mar/April |
| HEMIPTERA p - 64 | Cicadidae | South-west Orange Cicada (nymphal case) | <i>Cicadetta</i> | <i>convergens</i> | sap sucker/root sap sucker | Mar/April |
| HEMIPTERA p - 18 | Cicadidae | Western Tick-tock Cicada | <i>Cicadetta</i> | <i>quadricincta</i> | sap sucker/root sap sucker | Oct |
| HEMIPTERA p - 42 | Cixiidae | Spoke-tipped Ashy Cixihopper | <i>Candicarina</i> | <i>geroldi</i> | sap sucker | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|------------------------|----------------|------------------------------------|-------------------------|------------------------------------------|----------------------------------|----------------|
| HEMIPTERA p - 18 | Corixidae | Dark-fronted Corixibug | *# <i>Agraptocorixa</i> | <i>parvipunctata</i> | aquatic predator- detritivore | June/Nov |
| HEMIPTERA p - 65 | Corixidae | Largeneck Pale- edge Corixibug | <i>Agraptocorixa</i> | <i>sp. 1</i> | aquatic predator- detritivore | Mar/April |
| HEMIPTERA p - 18&42 | Corixidae | Shortwing Pale- edge Corixibug | <i>Agraptocorixa</i> | <i>sp. 2</i> | aquatic predator- detritivore | Oct/Nov |
| HEMIPTERA p - 65 | Corixidae | Little Smudgeline Corixibug | *# <i>Micronecta</i> | <i>robusta (as sp. Savage et al)</i> | aquatic predator- detritivore | June/Mar/April |
| HEMIPTERA p - 18 | Cydnidae | Common Black Cydribug | <i>Adrisa</i> | <i>atra</i> | scavenger | Oct |
| HEMIPTERA p - 42 | Cydnidae | Lesser Bristle- edge Cydnibug | <i>Blaena</i> | <i>cirra</i> | scavenger | Nov |
| HEMIPTERA p - 18 | Eurybrachyidae | Straightnose Eurybrahopper | <i>Platybrachys</i> | <i>sp?</i> | sap sucker | Oct |
| HEMIPTERA p - 42 | Flatidae | Red - edge Flatihopper | <i>Siphanta</i> | <i>sp?</i> | sap sucker | Nov |
| HEMIPTERA p - 43 | Flatidae | Summer Flatihopper (nymph) | <i>Siphanta</i> | <i>sp?</i> | sap sucker | Nov |
| HEMIPTERA p - 43 | Geocoridae | Tilt-backed Broadhead Geobug | <i>Geocoris</i> | <i>sp?</i> | unknown | Nov |
| HEMIPTERA p - 18 | Lygaeidae | Burnt-edged Lygabug | <i>Gen?</i> | <i>sp?</i> | sap sucker | Oct |
| HEMIPTERA p - 65 | Lygaeidae | Whitewaist Darkedge Lygabug | <i>Gen?</i> | <i>sp?</i> | sap sucker | Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|---------------------|--------------|------------------------------|-----------------------------|------------------|-------------------------|---------------|
| HEMIPTERA p - 65 | Membracidae | Southwest Memhopper (nymph) | <i>Gen?</i> | <i>sp?</i> | sap sucker | Mar/April |
| HEMIPTERA p - 43 | Miridae | Black-V-ed Miribug | <i>Gen?</i> | <i>sp?</i> | unknown | Nov |
| HEMIPTERA p - 43 | Miridae | Greater Green Miribug | <i>Gen?</i> | <i>sp?</i> | unknown | Nov |
| HEMIPTERA p - 43 | Miridae | Green-tinged Pallid Miribug | <i>Gen?</i> | <i>sp?</i> | unknown | Nov |
| HEMIPTERA p - 43 | Miridae | Pygmy Green Miribug | <i>Gen?</i> | <i>sp?</i> | unknown | Nov |
| HEMIPTERA p - 43 | Miridae | Redbrow Glossy Black Miribug | <i>Gen?</i> | <i>sp?</i> | unknown | Nov |
| HEMIPTERA p - 43 | Miridae | Redhorn Yellow-scute Miribug | <i>Gen?</i> | <i>sp?</i> | unknown | Nov |
| HEMIPTERA p - 19 | Miridae | Bronzed Beetle Miribug | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| HEMIPTERA p - 19 | Miridae | Burnt Scuted Miribug | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| HEMIPTERA p - 19 | Miridae | Green Miribug | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| HEMIPTERA p - 19 | Nabidae | Ornate-necked Nabibug | <i>Nabis (Tropiconabis)</i> | <i>kinbergii</i> | predator | Oct |
| HEMIPTERA p - 44 | Nogodonidae | Tiara-ed Nogohopper | <i>Bilbicallia</i> | <i>sp?</i> | sap sucker | Nov |
| HEMIPTERA p - 19 | Notonectidae | Fullkeel Notobug | <i>Anisops</i> | <i>sp? 1.</i> | aquatic predator | Oct |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|---------------------|-----------------|---------------------------------------|---------------------|--------------------|-------------------------|-------------------|
| HEMIPTERA p - 65 | Notonectidae | Orangeneck Fullkeel Notobug | *# <i>Anisops</i> | <i>thienemanni</i> | aquatic predator | June/Mar/April |
| HEMIPTERA p - 44 | Pachygronthidae | Pallid Forktail Pachybug | <i>Stenophyella</i> | <i>macreta</i> | seed sucker | Nov |
| HEMIPTERA p - 65 | Pentatomidae | Bright-mottled Bark Pentabug | <i>Alcaeus</i> | <i>varicornis</i> | predator | Mar/April |
| HEMIPTERA p - 19 | Pentatomidae | Common Brown Ground Pentabug | <i>Dictyotus</i> | <i>caenosus</i> | sap sucker | Oct/Mar/April |
| HEMIPTERA p - 65 | Pentatomidae | Western Spineless Bark Pentabug | <i>Oncocoris</i> | <i>apicalis</i> | sap sucker | Mar/April |
| HEMIPTERA p - 19 | Pentatomidae | One-spot Trunk Pentabug | <i>Poecilometis</i> | <i>apicalis</i> | sap sucker | Oct/Nov/Mar/April |
| HEMIPTERA p - 44 | Pentatomidae | Speckled One- spot Pentabug | <i>Gen?</i> | <i>sp?</i> | sap sucker | Nov |
| HEMIPTERA p - 65 | Psyllidae – 3 | Slender Spotted Psyllbug | <i>Gen? 3</i> | <i>sp?</i> | sap sucker | ~April |
| HEMIPTERA p - 20 | Psyllidae – 1 | Orange-tinged Blackleg Psyllbug | <i>Gen? 1</i> | <i>sp?</i> | sap sucker | Oct |
| HEMIPTERA p - 20 | Psyllidae – 2 | Signalwing Psyllbug | <i>Gen? 2</i> | <i>sp?</i> | sap sucker | Oct |
| HEMIPTERA p - 20 | Psyllidae – 2 | Smokytip Brown Psyllbug | <i>Gen? 2</i> | <i>sp?</i> | sap sucker | Oct |
| HEMIPTERA p - 44 | Psyllidae – 2 | Pink and Ochre Psyllbug | <i>Gen? 2</i> | <i>sp?</i> | sap sucker | Nov |
| HEMIPTERA p - 44 | Psyllidae – 1 | Pinkish Pygmy Psyllbug | <i>Gen? 1</i> | <i>sp?</i> | sap sucker | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-------------------------|------------------|-----------------------------------|-----------------------|-------------------|---------------------------|-------------------|
| HEMIPTERA p - 66 | Psyllidae – 4 | Red and Green Psyllbug | <i>Gen? 4</i> | <i>sp?</i> | sap sucker | Mar/April |
| HEMIPTERA p - 66 | Reduviidae | Southern Harlequin Redubug | <i>Havinthus</i> | <i>rufovarius</i> | predator | Mar/April |
| HEMIPTERA p - 20 | Reduviidae | Orange Shield Ground Redubug | <i>Peirates</i> | <i>sp?</i> | predator | Oct |
| HEMIPTERA p - 44 | Reduviidae | Scutdash Woody Redubug | <i>Gen?</i> | <i>sp?</i> | predator | Nov |
| HEMIPTERA (no photo) | Reduviidae | Wingless Mantis Redubug | <i>Pseudobargylia</i> | 'giraffa' | predator | Nov (observed) |
| HEMIPTERA p - 44 | Rhyparochromidae | White-edge Black Ground Rhybug | <i>Gen?</i> | <i>sp?</i> | seed sucker | Nov |
| HEMIPTERA p - 66 | Rhyparochromidae | Trilobe-necked Rhybug | <i>Gen?</i> | <i>sp?</i> | seed sucker | Mar/April |
| HEMIPTERA p - 20 | Scutelleridae | Grey Roughbark Scutelbug | <i>Austrotichus</i> | <i>rugosus</i> | sap sucker | Oct |
| | | | | | | |
| HYMENOPTERA p - 20 | Apidae | Honeybee | <i>^Apis</i> | <i>mellifera</i> | pollinator/fed by adults | Oct/Nov/Mar/April |
| HYMENOPTERA p - 20 | Apidae | Blue-banded Apibee | <i>Amegilla</i> | <i>sp?</i> | pollinator/fed by adults | Oct |
| HYMENOPTERA p - 20 | Bethylidae | Brownhead Longbody Pygmy Bethwasp | <i>Gen?</i> | <i>sp?</i> | predator/ endoparasite | Oct |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|--------------------------|-------------|--------------------------------------|--------------------|---------------------|-----------------------------------------|--------------------------------------------------|
| HYMENOPTERA p - 44/45 | Bethylidae | Longbody Pristocerine Bethwasp | <i>Rhabdepyris</i> | <i>sp?</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 66 | Braconidae | Honeyshin 2-dot Bracwasp | <i>Apanteles</i> | <i>ippeus</i> | introduced predator/ endoparasite | Mar/April |
| HYMENOPTERA p - 21 | Braconidae | Whitehead White-waist Bracwasp | <i>Callibracon</i> | <i>sp?</i> | predator/ endoparasite | Oct (observed – similar Qld example shown) |
| HYMENOPTERA p - 66 | Braconidae | Redhead Whitewaist Bracwasp | <i>Callibracon</i> | <i>sp?</i> | predator/ endoparasite | Mar/April (observed only) |
| HYMENOPTERA p - 21 | Braconidae | 2-spot Brownleg Pygmy Bracwasp | <i>Gen?</i> | <i>sp?</i> | predator/ endoparasite | Oct |
| HYMENOPTERA p - 45 | Chalcididae | White-kneed Chalwasp | <i>Gen?</i> | <i>sp?</i> | predator/ endoparasite | Oct |
| HYMENOPTERA p - 66 | Chalcididae | Honeyleg 2-dash Chalwasp | <i>Gen?</i> | <i>sp?</i> | predator/ endoparasite | Mar/April |
| HYMENOPTERA p - 66 | Chalcididae | Whitesock Green Chalwasp | <i>Gen?</i> | <i>sp?</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 21 | Chrysididae | Blue-bottomed Chryswasp | <i>Chrysis</i> | <i>sp?</i> | predator/ endoparasite | Oct (observed) |
| HYMENOPTERA p - 45 | Chrysididae | Pygmy Green Chryswasp | <i>Chrysis</i> | <i>sp?</i> | predator/ endoparasite | Nov (observed) |
| HYMENOPTERA p - 21 | Colletidae | Yellow-kneed Collbee | <i>nr. Euhesma</i> | <i>sp?</i> | pollinator/fed by adults | Oct |
| HYMENOPTERA p - 45 | Colletidae | Yellow-nape Sooty Collbee | <i>Hylaeorhiza</i> | <i>nr. nubilosa</i> | pollinator/fed by adults | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|---------------------------|---------------|---------------------------------------|----------------------|---------------------------------|-----------------------------------------|---------------|
| HYMENOPTERA p - 45 | Eupelmidae | Pygmy Redeye Spotwing Eupwasp | <i>Gen?</i> | <i>sp?</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 45 | Famly Unknown | Thickwaist Brownbody Pygmy Wasp | <i>Gen?</i> | <i>sp?</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 21 | Formicidae | Alate Little Brownback Ant | <i>Anonychomyrma</i> | <i>nitidiceps</i> | predator/ scavenger/fed by adults | Oct |
| HYMENOPTERA p - 67 | Formicidae | Globeneck Honeyed Ant | <i>Aphaenogaster</i> | <i>poultoni</i> | predator/ scavenger/fed by adults | Oct-April |
| HYMENOPTERA p - 22 | Formicidae | Longback Brown Ant | <i>Cerapachys</i> | <i>greavesi</i> | ant predator/fed by adults | Oct-April |
| HYMENOPTERA p - 22 | Formicidae | False Meat Ant | <i>Camponotus</i> | <i>capito ebeninithorax</i> | predator/ scavenger/fed by adults | Oct-April |
| HYMENOPTERA p - 21 | Formicidae | Charcoal Risetail Ant | <i>Camponotus</i> | <i>cinereus amperei</i> | predator/ scavenger/fed by adults | Oct-April |
| HYMENOPTERA p - 6 | Formicidae | Glossy Honeyhigh Bighead Ant | <i>Camponotus</i> | <i>evae zeuxis</i> | predator/ scavenger/fed by adults | Oct-April |
| HYMENOPTERA p - 46 | Formicidae | Great Meat Ant | <i>Iridomyrmex</i> | <i>greensladei</i> | predator/ scavenger/fed by adults | Oct-April |
| HYMENOPTERA (no photo) | Formicidae | Little Meat Ant | <i>Iridomyrmex</i> | <i>bicknellii brunneaus</i> | predator/ scavenger/fed by adults | Oct-April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|---------------------------|------------|-------------------------------|--------------------|--------------------------------|-----------------------------------------|---------------|
| HYMENOPTERA p - 67 | Formicidae | Little Alate Ant | <i>Melophorus</i> | <i>sp? 'turneri complex 1'</i> | predator/ scavenger/fed by adults | April |
| HYMENOPTERA p - 67 | Formicidae | Little Alate Ant | <i>Melophorus</i> | <i>sp? 'turneri complex 2'</i> | predator/ scavenger/fed by adults | April |
| HYMENOPTERA p - 66 | Formicidae | Medium Queen Ant | <i>Melophorus</i> | <i>sp? 'turneri complex 3'</i> | predator/ scavenger/fed by adults | April |
| HYMENOPTERA p - 45/22 | Formicidae | Little False Meat Ant | <i>Melophorus</i> | <i>turneri</i> | predator/ scavenger/fed by adults | Oct/Nov |
| HYMENOPTERA (no photo) | Formicidae | Little Shiny Brown Ant | <i>Melophorus</i> | <i>sp? JDM 176</i> | predator/ scavenger/fed by adults | Nov |
| HYMENOPTERA p - 22 | Formicidae | Shiny-end Giant Bulldog Ant | <i>Myrmecia</i> | <i>gratiosa</i> | predator/ scavenger/fed by adults | Oct/Nov/April |
| HYMENOPTERA p - 67 | Formicidae | Little Brownwaist Bulldog Ant | <i>Myrmecia</i> | <i>'urens complex JDM 1'</i> | predator/ scavenger/fed by adults | April |
| HYMENOPTERA p - 46 | Formicidae | Pygmy Whitesock Black Ant | <i>Ochetellus</i> | <i>sp? 'glaber complex'</i> | predator/ scavenger/fed by adults | Nov |
| HYMENOPTERA p - 46 | Formicidae | Southern Two-tone Strobe Ant | <i>Opisthopsis</i> | <i>rufithorax</i> | predator/ scavenger/fed by adults | Oct/Nov/April |
| HYMENOPTERA p - 45 | Formicidae | Shiny Redfront Shieldhead Ant | <i>Papyrius</i> | <i>nitidus</i> | predator/ scavenger/fed by adults | Oct-April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|---------------------------|----------------|------------------------------------------------|----------------------|-------------------|----------------------------------------------|---------------|
| HYMENOPTERA (no photo) | Formicidae | Shieldhead Ant | <i>Papyrius</i> | <i>sp?</i> | predator/ scavenger/fed by adults | Oct-April |
| HYMENOPTERA (no photo) | Formicidae | Little Spineback Ant | <i>Pheidole</i> | <i>hartmeyeri</i> | predator/ scavenger/fed by adults | Nov |
| HYMENOPTERA p - 21 | Formicidae | 2-spot Trunk Ant | <i>Podomyrma</i> | <i>adelaidae</i> | predator/ scavenger/fed by adults | Oct-April |
| HYMENOPTERA p - 22/67 | Formicidae | Green-head Ant (alate queen/king worker) | <i>Rhytidoponera</i> | <i>metallica</i> | predator/ scavenger/fed by adults | Oct-April |
| HYMENOPTERA (no photo) | Formicidae | Violet Green- head Ant | <i>Rhytidoponera</i> | <i>violacea</i> | predator/ scavenger/fed by adults | Oct-April |
| HYMENOPTERA p - 22 | Gasteruptiidae | Sharp-jawed Gaswasp | <i>Gen?</i> | <i>sp?</i> | predator/native bee endoparasite | Oct |
| HYMENOPTERA p - 23 | Ichneumonidae | Uniform Night Ichwasp | <i>Netelia</i> | <i>sp?</i> | predator/ endoparasite | Oct |
| HYMENOPTERA p - 22 | Ichneumonidae | Orange-leg Pygmy Ichwasp | <i>Gen?</i> | <i>sp?</i> | predator/ endoparasite | Oct |
| HYMENOPTERA p - 46 | Ichneumonidae | Black-kneed Dotneck Ichwasp | <i>Gen?</i> | <i>sp?</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 46 | Ichneumonidae | Lemon and Ochre Ichwasp | <i>Gen?</i> | <i>sp?</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 46 | Megachilidae | Brownhand Red- bottom Megabee | <i>Megachile</i> | <i>sp?</i> | pollinator - leaf pruner/fed by adults | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-----------------------|--------------|------------------------------------|---------------------|-------------------|---------------------------|---------------|
| HYMENOPTERA p - 46 | Mutillidae | Great Pied Mutilwasp | <i>Ephutomorpha</i> | <i>formicaria</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 23 | Mutillidae | Little Black and Gold Mutilwasp | <i>Ephutomorpha</i> | <i>sp?</i> | predator/ endoparasite | Oct |
| HYMENOPTERA p - 47 | Mutillidae | Greenhead 2-blotch Pygmy Mutilwasp | <i>Ephutomorpha</i> | <i>sp?</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 47 | Mutillidae | Little Redneck Mutilwasp | <i>Ephutomorpha</i> | <i>sp?</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 47 | Mutillidae | Pygmy 2-blotch Goldfront Mutilwasp | <i>Ephutomorpha</i> | <i>sp?</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 47 | Mutillidae | Pygmy Copper and Gold Mutilwasp | <i>Ephutomorpha</i> | <i>sp?</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 47 | Mutillidae | Silver-tipped Black Mutilwasp | <i>Ephutomorpha</i> | <i>sp?</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 67 | Mutillidae | Brownfront Silvered Mutilwasp | <i>Ephutomorpha</i> | <i>sp?</i> | predator/ endoparasite | Mar/April |
| HYMENOPTERA p - 67 | Mutillidae | Meatant Mutilwasp | <i>Ephutomorpha</i> | <i>sp?</i> | predator/ endoparasite | Mar/April |
| HYMENOPTERA p - 23 | Perilampidae | Furrowneck Copper Pygmy Periwasp | <i>Gen?</i> | <i>sp?</i> | predator/ endoparasite | Oct |
| HYMENOPTERA p - 68 | Perilampidae | Furrowneck Green Pygmy Periwasp | <i>Gen?</i> | <i>sp?</i> | predator/ endoparasite | Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-----------------------|----------------|-----------------------------------|--------------------------|---------------------|---------------------------------------|----------------|
| HYMENOPTERA p - 47 | Pompilidae | Lesser Spider Hawk Pomwasp | <i>Cryptocheilus</i> | <i>distinctus</i> | predator/spider endoparasite | Nov |
| HYMENOPTERA p - 47 | Pompilidae | Orangehorn Pomwasp | <i>Fabriogenia</i> | <i>sp?</i> | predator/spider endoparasite | Nov |
| HYMENOPTERA p - 47 | Pompilidae | White-banded Pomwasp | <i>Turneromyia</i> | <i>sp?</i> | predator/spider endoparasite | Nov |
| HYMENOPTERA p - 68 | Pompilidae | Black Pomwasp | <i>Episyron</i> | <i>sp?</i> | predator/spider endoparasite | Mar/April |
| HYMENOPTERA p - 48 | Proctotrupidae | Little Black Tooth-kneed Procwasp | <i>Gen?</i> | <i>sp?</i> | predator/probable beetle endoparasite | Nov |
| HYMENOPTERA p - 68 | Scoliidae | Whiteband Spineleg Scoliwasp | <i>Campsomeris</i> | <i>carinifrons</i> | pollinator/beetle endoparasite | Mar/April |
| HYMENOPTERA p - 68 | Scoliidae | Common Yellowband Scoliwasp | <i>Campsomeris</i> | <i>tasmaniensis</i> | pollinator/beetle endoparasite | Mar/April |
| HYMENOPTERA p - 23 | Scoliidae | Swell-waist Banded Scoliwasp | <i>Dielis</i> | <i>formosa</i> | pollinator/beetle endoparasite | Oct |
| HYMENOPTERA p - 48 | Scoliidae | Lesser Bluewing Scoliwasp | <i>Scolia (Discolia)</i> | <i>verticalis</i> | pollinator/beetle endoparasite | Nov (observed) |
| HYMENOPTERA p - 48 | Sphecidae | Great Longwaist Sphecwasp | <i>Ammophila</i> | <i>instabilis</i> | predator/pollinator/endoparasite | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|---------------------------|-----------|----------------------------------------|-------------------------|-------------------------|------------------------------------------|------------------------------|
| HYMENOPTERA p - 68 | Sphecidae | Maskneck Oliveband Sphecwasp | <i>Bembix</i> | <i>sp?</i> | predator/ pollinator/ endoparasite | Mar/April |
| HYMENOPTERA p - 48 | Sphecidae | Common Redwaist Sphecwasp | <i>Podalonia</i> | <i>tydei suspiciosa</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 68 | Sphecidae | Threadwaist Potter Sphecwasp | <i>Sceliphron</i> | <i>laetum</i> | predator/ endoparasite | Mar/April (observed only) |
| HYMENOPTERA p - 48 | Sphecidae | Medium Black Sphecwasp | <i>Sphex (Sphex)</i> | <i>sp?</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 48 | Sphecidae | Great Brownwing Sphecwasp | <i>Sphex (Sphex)</i> | <i>vestitus</i> | predator/ endoparasite | Nov |
| HYMENOPTERA p - 68 | Sphecidae | Brownleg Bronzetip Sphecwasp | <i>Gen?</i> | <i>sp?</i> | predator/ pollinator/ endoparasite | Mar/April |
| HYMENOPTERA p - 48 | Sphecidae | Dull-banded Sphecwasp | <i>Gen?</i> | <i>sp?</i> | predator/ pollinator/ endoparasite | Nov |
| HYMENOPTERA p - 23 | Tiphiidae | Black Thynine Tiphwasp | <i>Thynnoidea</i> | <i>nephalopterus</i> | predator/ pollinator/ endoparasite | Oct |
| HYMENOPTERA p - 23/49 | Tiphiidae | Longbody Black Tiphwasp | <i>nr. Rhadiogaster</i> | <i>sp?</i> | predator/ pollinator/ endoparasite | Oct/Nov |
| HYMENOPTERA (no photo) | Tiphiidae | Medium Black and Yellow Tiphwasp | <i>Campylothygnus</i> | <i>assimilis</i> | predator/ pollinator/ endoparasite | Nov (found dead) |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-----------------------|-----------------|-------------------------------------------------------------|---------------------|--------------------|------------------------------------------|---------------|
| HYMENOPTERA p - 49 | Tiphiidae | Exclamation –necked Tiphwasp | <i>Gen?</i> | <i>sp?</i> | predator/ pollinator/ endoparasite | Nov |
| HYMENOPTERA p - 49 | Torymidae | Wingdot Redeye Pygmy Torywasp | <i>Megastigmus</i> | <i>sp?</i> | unknown | Nov |
| HYMENOPTERA p - 49 | Vespidae | Thickwaist Potter Veswasp | <i>Abispa</i> | <i>ephippium</i> | predator/ pollinator/ endoparasite | Nov |
| HYMENOPTERA p - 49 | Vespidae | Common Narrow- waist Vespwasp | <i>Delta</i> | <i>bicinctum</i> | predator/ pollinator/ endoparasite | Nov |
| HYMENOPTERA p - 49 | Vespidae | Little Potter Veswasp | <i>Pseudepipona</i> | <i>a. angulata</i> | predator/ pollinator/ endoparasite | Nov |
| HYMENOPTERA p - 49 | Vespidae | Dot-templed Vespwasp | <i>Gen?</i> | <i>sp?</i> | predator/ pollinator/ endoparasite | Nov |
| ISOPTERA p - 23 | Rhinotermitidae | Rhinotermite (soldier) | <i>Gen?</i> | <i>sp?</i> | deadwood recycler/fed by adults | Oct |
| ISOPTERA p - 68 | Family unknown | Blackhead Termite (worker) | <i>Gen?</i> | <i>sp?</i> | deadwood recycler/fed by adults | Mar/April |
| ISOPTERA p - 69 | Family unknown | Pallid Termite (female pre-alate) | <i>Gen?</i> | <i>sp?</i> | deadwood recycler/fed by adults | Mar/April |
| ISOPTERA p - 50 | Termitidae | Pygmy Darkbody Nasute Termite (soldier and worker) | <i>Nasutitermes</i> | <i>sp?</i> | deadwood recycler/fed by adults | Nov/Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|---------------------------|----------------|-----------------------------------|---------------------|----------------------|---------------------------------|----------------------------|
| ISOPTERA p - 23 | Family unknown | Darkbody Termite (queen) | <i>Gen?</i> | <i>sp?</i> | deadwood recycler/fed by adults | Oct |
| | | | | | | |
| LEPIDOPTERA p - 69 | Arctiidae | Pied Ubiquitous Day Arcmoth | <i>Nyctemera</i> | <i>amicus</i> | unknown/leaf pruner | Mar/April |
| LEPIDOPTERA p - 24 | Arctiidae | Pinkbrow Pied Arcmoth | <i>Thallarcha</i> | <i>nr. fusa</i> | pollinator/leaf pruner | Oct |
| LEPIDOPTERA p - 69 | Arctiidae | Southern Lipstick-spotted Arcmoth | <i>Utetheisa</i> | <i>pulchelloides</i> | unknown/leaf pruner | Mar/April |
| LEPIDOPTERA p - 69 | Carposinidae | Snowy Soot-etched Carpmoth | <i>Gen?</i> | <i>sp?</i> | unknown/leaf pruner | Mar/April |
| LEPIDOPTERA p - 50 | Cosmoterygidae | 8-blotch Cosmoth | <i>Macrobathra</i> | <i>sp?</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 50 | Cosmoterygidae | 4-band Orange-edge Cosmoth | <i>Macrobathra</i> | <i>sp?</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 69 | Cosmoterygidae | Rustycap Pied Cosmoth | <i>Macrobathra</i> | <i>sp?</i> | unknown/leaf pruner | Mar/April |
| LEPIDOPTERA p - 69 | Cosmoterygidae | 3-bar Crest-tip Cosmoth | <i>Limnaecia</i> | <i>sp?</i> | unknown/leaf pruner | Mar/April |
| LEPIDOPTERA p - 24 | Cossidae | Uniform Giant Cossmoth | <i>Xyleutes</i> | <i>nubila</i> | non-feeding/borer | Oct |
| LEPIDOPTERA (no photo) | Cossidae | Little Jam Wattle Cossmoth | <i>Gen?</i> | <i>sp?</i> | non-feeding/borer | exuded pupal case post Nov |
| LEPIDOPTERA p - 50 | Cossidae | 4-dot Pygmy Cossmoth | <i>Brevicyttara</i> | <i>cyclospila</i> | non-feeding/borer | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-----------------------|----------------|---------------------------------------|---------------|------------|---------------------------|---------------|
| LEPIDOPTERA p - 24 | Depressariidae | Apricot-frontleg Wedge Depmoth | <i>Pedois</i> | <i>sp?</i> | pollinator/leaf pruner | Oct |
| LEPIDOPTERA p - 70 | Eperminiidae | Blackdot Grey Fringewing Epmoth | <i>Gen?</i> | <i>sp?</i> | unknown/leaf pruner | Mar/April |
| LEPIDOPTERA p - 24 | Family unknown | Ash-flecked Fringetip Moth | <i>Gen?</i> | <i>sp?</i> | pollinator/leaf pruner | Oct |
| LEPIDOPTERA p - 24 | Family unknown | Greytip Tailcrest Sooty Moth | <i>Gen?</i> | <i>sp?</i> | pollinator/leaf pruner | Oct |
| LEPIDOPTERA p - 24 | Family unknown | Sootyleg Wedge Moth | <i>Gen?</i> | <i>sp?</i> | pollinator/leaf pruner | Oct |
| LEPIDOPTERA p - 24 | Family unknown | Streaky Greywaist Moth | <i>Gen?</i> | <i>sp?</i> | pollinator/leaf pruner | Oct |
| LEPIDOPTERA p - 50 | Family unknown | Dull-blotched Beige Moth | <i>Gen?</i> | <i>sp?</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 50 | Family unknown | Head and Shoulder-dashed Moth | <i>Gen?</i> | <i>sp?</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 50 | Family unknown | Little Silvered Pied Moth | <i>Gen?</i> | <i>sp?</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 50 | Family unknown | Little Tailcrest Pied Moth | <i>Gen?</i> | <i>sp?</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 70 | Family unknown | Palechevron-back Streaky Moth | <i>Gen?</i> | <i>sp?</i> | unknown/leaf pruner | Mar/April |
| LEPIDOPTERA p - 70 | Family unknown | Pygmy Tail- dashed Bark Moth | <i>Gen?</i> | <i>sp?</i> | unknown/leaf pruner | Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-----------------------|-------------|-----------------------------------------|-------------------|-------------------|---------------------------|---------------|
| LEPIDOPTERA p - 51 | Gelechiidae | Greycap Bark Gelmoth | <i>Gen?</i> | <i>sp?</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 70 | Gelechiidae | Black-streaked Bark Gelmoth | <i>Gen?</i> | <i>sp?</i> | unknown/leaf pruner | Mar/April |
| LEPIDOPTERA p - 70 | Gelechiidae | Sidestreak Cut-tip Gelmoth | <i>Gen?</i> | <i>sp?</i> | unknown/leaf pruner | Mar/April |
| LEPIDOPTERA p - 51 | Geometridae | Muted Brown and Grey Geomoth | <i>Aporoctena</i> | <i>sp?</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 71 | Geometridae | Pallid 2-dot Darkedge Geomoth | <i>Casbia</i> | <i>sp?</i> | pollinator/leaf pruner | ~April |
| LEPIDOPTERA p - 51 | Geometridae | Pink-shoulder Jade Geomoth | <i>Chlorocoma</i> | <i>assimilis</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 51 | Geometridae | Snow-edged Darkbar Geomoth | <i>Epyaxa</i> | <i>subidaria</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 51 | Geometridae | Charcoal- barred Chestnut Geomoth | <i>Cryphaea</i> | <i>sp?</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 52 | Geometridae | Zigzag Bark Geomoth | <i>Cleora</i> | <i>injectaria</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 25 | Geometridae | Pallid 4-windowed Geomoth | <i>Cleora</i> | <i>sp?</i> | pollinator/leaf pruner | Oct |
| LEPIDOPTERA p - 52 | Geometridae | Common Bark Geomoth | <i>Ectropis</i> | <i>excursaria</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 24 | Geometridae | Green Geomoth Caterpillar | <i>Gen?</i> | <i>sp?</i> | pollinator/leaf pruner | Oct |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|------------------------|---------------|------------------------------------------|---------------------|----------------------|----------------------------|---------------|
| pLEPIDOPTERA p - 25 | Geometridae | Yellow-spotted Geomoth Caterpillar | <i>Gen?</i> | <i>sp?</i> | pollinator/leaf pruner | Oct |
| LEPIDOPTERA p - 70 | Geometridae | Finestripe Geomoth Caterpillar | <i>Gen?</i> | <i>sp?</i> | pollinator/leaf pruner | Mar/April |
| LEPIDOPTERA p - 70 | Geometridae | Weak-marbled Brown | <i>Gastrinodes</i> | <i>nr. argoplaca</i> | pollinator/leaf pruner | Mar/April |
| LEPIDOPTERA p - 51 | Geometridae | Little White-edge Beige Geomoth | <i>Idaea</i> | <i>sp?</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 71 | Geometridae | Zigzag-wedge Longnose Geomoth | <i>Microdes</i> | <i>sp?</i> | pollinator/leaf pruner | Mar/April |
| LEPIDOPTERA p - 70 | Geometridae | Broadwing Grey Bark Geomoth | <i>Phelotis</i> | <i>sp?</i> | pollinator/leaf pruner | Mar/April |
| LEPIDOPTERA p - 25 | Geometridae | Little Lobe- winged Geomoth | <i>Phrissogonus</i> | <i>laticostata</i> | pollinator/leaf pruner | Oct/Nov |
| LEPIDOPTERA p - 52 | Geometridae | Fine-dotted Beige Geomoth | <i>Scopula</i> | <i>sp?</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 51 | Geometridae | 3-barred Bark Geomoth | <i>Stibaroma</i> | <i>sp?</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 71 | Geometridae | Western Satin Y-Geomoth | <i>Thalaina</i> | <i>tetraclada</i> | pollinator/leaf pruner | ~April |
| LEPIDOPTERA p - 71 | Hepialidae | Woodknot Silverstripe Hepmoth | <i>Trictena</i> | <i>atripalpis</i> | non-feeding/root borer | Mar/April |
| LEPIDOPTERA p - 71 | Lasiocampidae | Pallid Wavywing Lasiomoth | <i>Pernattia</i> | <i>chlorophragma</i> | non-feeding/leaf pruner | Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|--------------------------|-------------|------------------------------------------|----------------------|--------------------|---------------------------|---------------|
| LEPIDOPTERA p - 25 | Limacodidae | Orange-dotted Limamoth | <i>Pseudanapaea</i> | <i>trigona</i> | pollinator/leaf pruner | Oct |
| LEPIDOPTERA p - 71 | Lycaenidae | Saltbush Blue Lycawing | <i>Theclinesstes</i> | <i>serpentata</i> | pollinator/leaf pruner | Mar/April |
| LEPIDOPTERA p - 72 | Noctuidae | Snowy Brown Pasture Noctumoth | <i>Apina</i> | <i>callisto</i> | pollinator/leaf pruner | ~April |
| LEPIDOPTERA p - 52 | Noctuidae | Bronzed Muted Noctumoth | <i>Athetis</i> | <i>sp?</i> | pollinator/root pruner | Nov/Mar/April |
| LEPIDOPTERA p - 52&72 | Noctuidae | Crested Silvermark Noctumoth | <i>Chrysodeixis</i> | <i>argentifera</i> | pollinator/root pruner | Nov/Mar/April |
| LEPIDOPTERA p - 52 | Noctuidae | Southern Old Lady Noctumoth | <i>Dasypodia</i> | <i>selenophora</i> | pollinator/root pruner | Nov |
| LEPIDOPTERA p - 25 | Noctuidae | False Bark Geometer Noctumoth | <i>Diatenes</i> | <i>aglossoides</i> | pollinator/root pruner | Oct |
| LEPIDOPTERA p - 25 | Noctuidae | Orange-tip Owlet Noctumoth | <i>Donuca</i> | <i>spectabilis</i> | pollinator/root pruner | Oct |
| LEPIDOPTERA p - 52 | Noctuidae | Charcoalneck Noctumoth caterpillar | <i>Gen?</i> | <i>sp?</i> | pollinator/root pruner | Nov |
| LEPIDOPTERA p - 52&72 | Noctuidae | Native Budworm Noctumoth | <i>^Helicoverpa</i> | <i>punctigera</i> | pollinator/root pruner | Nov/Mar/April |
| LEPIDOPTERA p - 71 | Noctuidae | Common Woodknot Noctumoth | <i>^Heliiothis</i> | <i>punctifera</i> | pollinator/root pruner | Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-----------------------|--------------|-----------------------------------|----------------------|----------------------|--------------------------------------------|---------------|
| LEPIDOPTERA p - 52 | Noctuidae | Crested Woodknot Noctumoth | <i>Neumichtis</i> | <i>nr. nigerrima</i> | pollinator/root pruner | Nov |
| LEPIDOPTERA p - 53 | Noctuidae | Southern Armyworm Noctumoth | <i>^Persectania</i> | <i>ewingii</i> | pollinator/root pruner | Nov |
| LEPIDOPTERA p - 72 | Noctuidae | Snowtip Woodgrain Noctumoth | <i>Proteuxoa</i> | <i>florescens</i> | pollinator/leaf pruner | ~April |
| LEPIDOPTERA p - 72 | Notodontidae | Acacia Bag Notomoth (caterpillar) | <i>Ochrogaster</i> | <i>lunifer</i> | non-feeding/leaf pruner | Mar/April |
| LEPIDOPTERA p - 53 | Nymphalidae | Lesser Wanderer Nymphwing | <i>Danaus</i> | <i>chrysippus</i> | vagrant pollinator/ vagrant leaf pruner | Mar/April |
| LEPIDOPTERA p - 53 | Nymphalidae | Western Xenica Nymphwing | <i>Geitoneura</i> | <i>minyas</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 25 | Nymphalidae | Australian Painted Lady Nymphwing | <i>Vanessa</i> | <i>kershawi</i> | pollinator/leaf pruner | Sept-April |
| LEPIDOPTERA p - 53 | Nymphalidae | Yellow Admiral Nymphwing | <i>Vanessa</i> | <i>itea</i> | pollinator/vagrant leaf pruner | Nov |
| LEPIDOPTERA p - 72 | Nymphalidae | Meadow Argus Nymphwing | <i>Junonia</i> | <i>villida</i> | pollinator/leaf pruner | Mar/April |
| LEPIDOPTERA p - 25 | Oecophoridae | Rosecrest Pinkedge Oecomoth | <i>nr. Ptyoptila</i> | <i>sp?</i> | pollinator/ dead gumleaf consumer | Sept/Oct |
| LEPIDOPTERA p - 53 | Oecophoridae | Darkfringe Apricot Oecomoth | <i>Eochrois</i> | <i>caminius</i> | pollinator/ dead gumleaf consumer | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-----------------------|--------------|------------------------------------------------|-------------------|-------------------------------|-----------------------------------------|---------------|
| LEPIDOPTERA p - 53 | Oecophoridae | Darkedge Satin Oecomoth | <i>Philobota</i> | <i>nr. productella</i> | pollinator/ dead gumleaf consumer | Nov |
| LEPIDOPTERA p - 72 | Oecophoridae | Blackcollar 4-blotch Oecomoth | <i>Gen?</i> | <i>sp?</i> | pollinator/deadleaf consumer | Mar/April |
| LEPIDOPTERA p - 72 | Oecophoridae | Brown-speckled Fringewing Oecomoth | <i>Gen?</i> | <i>sp?</i> | pollinator/deadleaf consumer | Mar/April |
| LEPIDOPTERA p - 73 | Papilionidae | Australian Chequered Papwing | <i>Papilio</i> | <i>demoleus sthenulus</i> | vagrant pollinator/ leaf pruner | Mar/April |
| LEPIDOPTERA p - 26 | Pieridae | Wood White Pierwing | <i>Delias</i> | <i>aganippe</i> | pollinator/leaf pruner | Oct/Nov |
| LEPIDOPTERA p - 26 | Pieridae | Cabbage White Pierwing | ^ <i>Pieris</i> | <i>rapae</i> | vagrant pollinator/ leaf pruner | Oct/Nov |
| LEPIDOPTERA p - 53 | Psychidae | Untidy Psychmoth (case only) | <i>Gen?</i> | <i>sp?</i> | non-feeding adult/ leaf pruner | Nov/Mar/April |
| LEPIDOPTERA p - 97 | Pyralidae | Wavy-edged Brown Pyralmoth | ^ <i>Achyra</i> | <i>affinitalis</i> | pollinator/leaf pruner | ~April |
| LEPIDOPTERA p - 26 | Pyralidae | Dark and Pale- edge Pyralmoth | <i>Antigastra</i> | <i>catalaunalis</i> | pollinator/leaf pruner | Sept/Oct |
| LEPIDOPTERA p - 26 | Pyralidae | Pallid Wavy- barred Pyralmoth | <i>Callionyma</i> | <i>sarcodes</i> | pollinator/leaf pruner | Oct/Nov |
| LEPIDOPTERA p -54 | Pyralidae | Whitestripe Longnose Legume Pyralmoth | ^ <i>Etiella</i> | <i>behrii</i> | Introduced pollinator/leaf pruner | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|---------------------------|-------------|--------------------------------------|--------------------------------|--------------------------------------------------------|----------------------------------------|---------------|
| LEPIDOPTERA p - 73 | Pyralidae | Ripplewaist Longnose Pyralmoth | <i>Hednota</i> | <i>longipalpella</i> | pollinator/leaf pruner | Mar/April |
| LEPIDOPTERA (no photo) | Pyralidae | Darkblotch Pallid Pyralmoth | <i>Hellula</i> | <i>hydralis</i> | pollinator/leaf pruner | Mar/April |
| LEPIDOPTERA (no photo) | Pyralidae | Jagged-banded Water Pyralmoth | * <i>Hygraula</i> | <i>nitens</i> (as 'LEPIDOPTERA sp' Savage et al) | pollinator/aquatic leaf pruner | June |
| LEPIDOPTERA p - 73 | Pyralidae | Etched Multibrown Pyralmoth | <i>Mimaglossa</i> | <i>sp?</i> | pollinator/leaf pruner | Mar/April |
| LEPIDOPTERA p - 73 | Pyralidae | Anglestreak Longwing Pyralmoth | <i>Nomophila</i> | <i>nr. corticalis</i> | pollinator/leaf pruner | Mar/April |
| LEPIDOPTERA p - 26 | Pyralidae | Lidded Bark Pyralmoth | <i>Salma</i> | <i>sp?</i> | pollinator/leaf pruner | Sept/Oct |
| LEPIDOPTERA p - 73 | Pyralidae | White-barred Dark Pyralmoth | <i>Spoladea</i> | <i>recurvalis</i> | pollinator/leaf pruner | Mar/April |
| LEPIDOPTERA p - 53 | Pyralidae | Brushwing Bark Pyralmoth | <i>Spectrotrota</i> | <i>nr. fimbrialis</i> | pollinator/lucerne leaf pruner pest | Nov |
| LEPIDOPTERA p - 26 | Pyralidae | Bignose Narrow Bark Pyralmoth | <i>Subgenus Phycitinae</i> | <i>sp?</i> | pollinator/leaf pruner | Oct |
| LEPIDOPTERA p - 54 | Pyralidae | Dark-scalloped Ground Pyralmoth | <i>Uresiphita</i> | <i>ornithopteralis</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 54 | Tineidae | Little Whitewig Tinemoth | <i>Monopis</i> | <i>nr. icterogastra</i> | pollinator/leaf pruner | Nov |
| LEPIDOPTERA p - 73 | Tortricidae | Satin Beige Lucerne Tortmoth | ^ <i>Merophyas</i> | <i>divulsana</i> | unknown/leaf pruner | Mar/April |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-----------------------|--------------|-------------------------------------|-----------------------|---------------------|----------------------------------|---------------|
| MANTODEA p - 54/73 | Mantidae | 8-spotted Straw Mantis | <i>Mantis</i> | <i>octospilota</i> | predator | Nov |
| MECOPTERA p - 26 | Bittacidae | Blackhumped Bitmecofly | <i>Harpobittacus</i> | <i>quasisimilis</i> | predator | Oct |
| NEUROPTERA p - 54 | Ascalaphidae | Yellow-blothched Hairy Ascalacewing | <i>Gen?</i> | <i>sp?</i> | predator | Nov |
| NEUROPTERA p - 54 | Ascalaphidae | Thorny Ascalacewing larva | <i>Gen?</i> | <i>sp?</i> | predator | Nov |
| NEUROPTERA p - 54 | Ascalaphidae | Curvelobe Ascalacewing larva | <i>Pilacmonotus</i> | <i>sabulosus</i> | predator | Nov |
| NEUROPTERA p - 54 | Chrysopidae | Lesser Green Lacewing | <i>Mallada</i> | <i>sp?</i> | predator | Nov |
| NEUROPTERA p - 55 | Chrysopidae | Green Lacewing larva | <i>Gen?</i> | <i>sp?</i> | predator | Nov |
| NEUROPTERA p - 26 | Hemerobiidae | Brown Anglewing Hemlacewing | <i>nr. Drepanacra</i> | <i>sp?</i> | predator | Oct |
| NEUROPTERA p - 27 | Hemerobiidae | Ubiquitous Peppered Hemlacewing | <i>Micromus</i> | <i>tasmaniae</i> | predator | Oct |
| NEUROPTERA p - 55 | Mantispidae | Great Rose-tinted Mantilacewing | <i>Campion</i> | <i>australasiae</i> | predator/spider egg sac parasite | Nov |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|--------------------------|-----------------|----------------------------------------|------------------------|-------------------------------------------------------------------------|------------------------------|-----------------------|
| NEUROPTERA p - 55 | Myrmeleontidae | Beige Hornband Myrmlacewing | <i>Glenoleon</i> | <i>osmyloides</i> | predator | Nov/Mar/April |
| NEUROPTERA (no photo) | Myrmeleontidae | larval Myrmlacewing | <i>Gen?</i> | <i>sp?</i> | predator | Nov (observed) |
| NEUROPTERA p - 74 | Nymphidae | Nymlacewing (larva) | <i>Gen?</i> | <i>sp?</i> | predator | Mar/April |
| | | | | | | |
| ODONATA p - 27 | Coenagrionidae | Common Bluetail Coenadamselfly | *# <i>Ischnura</i> | <i>heterosticta</i> (as <i>Ischnura</i> sp. <i>Savage et al</i>) | predator/aquatic predator | Oct/Nov/Mar/ April |
| ODONATA p - 74 | Coenagrionidae | Red-fronted Coenadamselfly | *# <i>Xanthagrion</i> | <i>erythroneurum</i> | predator/aquatic predator | June/Mar/April |
| ODONATA p - 74 | Aeshnidae | Australian Emperor Aeshdragonfly | <i>Hemianax</i> | <i>papuensis</i> | predator/aquatic predator | Mar/April |
| ODONATA p - 74 | Hemicorduliidae | Australian Emerald Hemidragonfly | *# <i>Hemicordulia</i> | <i>tau</i> | predator/aquatic predator | June/Mar/April |
| ODONATA p - 74 | Lestidae | Blue Ringtail Lestidamselfly | <i>Austrolestes</i> | <i>annulosus</i> | predator/aquatic predator | Mar/April |
| ODONATA p - 74 | Libellulidae | Wandering Glider Libdragonfly | * <i>Pantala</i> | <i>flavescens</i> | predator/aquatic predator | June |
| ODONATA p - 55 | Libellulidae | Blue Skimmer Libdragonfly | *# <i>Orthetrum</i> | <i>caledonicum</i> | predator/aquatic predator | June-Nov |
| ODONATA p - 74 | Libellulidae | Scarlet Percher Libdragonfly | <i>Diplacodes</i> | <i>bipunctata</i> | predator/aquatic predator | Mar/April |
| | | | | | | |

| Order | Family | Common name | Genus | Species | Adult/Juvenile eco role | Sample Period |
|-------------------------|-----------|--------------------------------------|----------------------|---------------------|------------------------------|-------------------|
| ORTHOPTERA p - 75 | Acrididae | Giant Slantface Acrihopper | <i>Acrida</i> | <i>conica</i> | leaf pruner | Mar/April |
| ORTHOPTERA p - 27 | Acrididae | Small Plague Acrihopper | <i>^Austroicetes</i> | <i>cruciata</i> | leaf pruner | Oct |
| ORTHOPTERA p - 27 | Acrididae | Australia Plague Acrihopper | <i>^Chortoicetes</i> | <i>terminifera</i> | leaf pruner | Oct |
| ORTHOPTERA p - 75 | Acrididae | Common Bark Acrihopper | <i>Coryphistes</i> | <i>ruricola</i> | leaf pruner | Oct/Mar/April |
| ORTHOPTERA p - 27&75 | Acrididae | Ridgeback Deadleaf Acrihopper | <i>Goniaea</i> | <i>australasiae</i> | Eucalyptus leaf scavenger | Oct/Nov/Mar/April |
| ORTHOPTERA p - 75 | Acrididae | Longleg Bandwing Acrihopper | <i>Heteropternis</i> | <i>obs curella</i> | leaf pruner | Mar/April |
| ORTHOPTERA p - 55 | Acrididae | False Gumleaf Acrihopper | <i>Goniaeoides</i> | <i>sp?</i> | leaf pruner | Nov |
| ORTHOPTERA p - 75 | Acrididae | Common Pardillana Acrihopper | <i>Pardillana</i> | <i>limbata</i> | leaf pruner | Mar/April |
| ORTHOPTERA p - 75 | Acrididae | Harlequin- thighed Pardillana | <i>Pardillana</i> | <i>sp?</i> | leaf pruner | Mar/April |
| ORTHOPTERA p - 55 | Acrididae | Common Bandwing Acrihopper | <i>Pycnostictus</i> | <i>seriatus</i> | leaf pruner | Nov |
| ORTHOPTERA p - 74 | Acrididae | Blackthigh Black- tear Acrihopper | <i>Gen?</i> | <i>sp?</i> | leaf pruner | Mar/April |

| | | | | | | |
|----------------------|---------------|-----------------------------------------------|----------------------------------------|----------------------------------------|-------------------|-----------|
| ORTHOPTERA p - 75 | Acrididae | Darkedge Paletrim Acrihopper | <i>Schizobothrus flavovittatus</i> | <i>Schizobothrus flavovittatus</i> | leaf pruner | Mar/April |
| ORTHOPTERA p - 27 | Gryllidae | Spectacled Field Grylcricket | <i>Lepidogryllus</i> | <i>sp?</i> | omnivore | Oct |
| ORTHOPTERA p - 27 | Gryllidae | 2-stripe Bigthigh Grylcricket | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| ORTHOPTERA p - 55 | Gryllidae | White-edge Grylcricket | <i>Gen?</i> | <i>sp?</i> | unknown | Nov |
| ORTHOPTERA p - 56 | Tettigoniidae | Creamstripe Marauding Tettihopper | <i>Metaballus</i> | <i>sp?</i> | predator | Nov |
| ORTHOPTERA p - 56 | Tettigoniidae | Shortwing Minute Shieldback Tettihopper | <i>Oligodectes</i> | <i>sp?</i> | unknown | Nov |
| | | | | | | |
| PSOCOPTERA p - 28 | Fam(1)? | Smoky Spotwing Psoclouse | <i>Gen?</i> | <i>sp?</i> | unknown | Oct |
| PSOCOPTERA p - 56 | Fam(2)? | Darkneck Brown Psoclouse | <i>Gen?</i> | <i>sp?</i> | unknown | Nov |
| PSOCOPTERA p - 75 | Fam(2)? | Pale Honey Psoclouse | <i>Gen?</i> | <i>sp?</i> | unknown | Mar/April |
| | | | | | | |
| THYSANURA p - 28 | Lepismatidae | Bristled Peppered Day Lepisilverfish | <i>Acrotelsella</i> | <i>d. devriesiana</i> | detritivore | Oct/Nov |
| THYSANURA p - 56 | Nicoletiidae | Goldern Termite Nicosilverfish | <i>Atopetalura</i> | <i>michaelseni</i> | termite inquiline | Nov |

| | | | | | | |
|-----------------------|---------------|-----------------------------------------|------------------------|------------------------------------------------------------|-------------------------------------|----------------|
| THYSANURA p - 76 | Fam? | Dead Tree Crevice Silverfish | <i>Gen?</i> | <i>sp?</i> | suspected rotting wood fungivore | Mar/April |
| | | | | | | |
| TRICHOPTERA p - 28 | Leptoceridae | Spotted Grey Longpalp Leptocaddis | *# <i>Oecetis</i> | <i>sp?</i> | non-feeding/ predator | June-Nov |
| TRICHOPTERA p - 76 | Leptoceridae | Common Southern Leptocaddis | *# <i>Triplectides</i> | <i>australis</i> | non-feeding/ predator | June/Mar/April |
| TRICHOPTERA p - 28 | Leptoceridae | Spotwing Olive Leptocaddis | *# <i>Notalina</i> | <i>spira</i> | non-feeding/ predator | June-Nov |
| TRICHOPTERA p - 76 | Leptoceridae | Large Beige Leptocaddis | <i>Gen?</i> | <i>sp?</i> | non-feeding/ predator | Mar/April |
| TRICHOPTERA p - 28 | Hydroptilidae | Mothy Shortwing Hydrocaddis | *# <i>Acritoptila</i> | <i>globosa (as Hydroptilidae sp. Savage et al)</i> | non-feeding/ aquatic omnivore | June/Mar/April |

PHYLUM CHORDATA**APPENDIX 6(a) CLASS AMPHIBIA****Table 1 - Order Anura (Frogs)**

| Number | Family | Common Name | Genus | Species | Sample Period |
|--------------|----------------|----------------------|------------------------|-------------------------|---------------|
| 1 page - 29 | Myobatrachidae | Western Froglet | * <i>Crinia</i> | <i>pseudinsignifera</i> | June |
| 2 page - 29 | Myobatrachidae | Western Spotted Frog | * <i>Heleioporus</i> | <i>albopunctatus</i> | June |
| 3 (no photo) | Myobatrachidae | Moaning Frog | * <i>Heleioporus</i> | <i>eyrei</i> | June |
| 4 page - 29 | Myobatrachidae | Pobblebonk | * <i>Limnodynastes</i> | <i>dorsalis</i> | June |
| 5 page - 29 | Myobatrachidae | Guenther's Toadlet | * <i>Pseudophryne</i> | <i>guentheri</i> | June |
| 6 page - 57 | Hylidae | Motorbike Frog | * <i>#Litoria</i> | <i>moorei</i> | June/Nov |

APPENDIX 6(b) CLASS REPTILIA**TABLE 2 - Order Squamata (Lizards) Sub order Pleurdira**

| | | | | | |
|-------------|-------------|------------------------------|------------------------|---------------------|-------------|
| 1 page - 29 | Gekkonidae | Common Tree Dtella | <i>Gehyra</i> | <i>variegata</i> | Oct/Nov/Apr |
| 2 page - 77 | Gekkonidae | South-western Clawless Gecko | <i>Crenadactylus</i> | <i>o. ocellatus</i> | Mar/April |
| 3 page - 77 | Pygopodidae | Fraser's Delma | <i>Delma</i> | <i>fraseri</i> | Mar/April |
| 4 page - 29 | Scincidae | Sun Skink | <i>Cryptoblepharus</i> | <i>buchanani</i> | Oct/Nov/Apr |
| 5 page - 77 | Scincidae | Barred Wedge-snout Ctenotus | <i>Ctenotus</i> | <i>schomburgkii</i> | Mar/April |
| 6 page - 29 | Scincidae | Common Dwarf Skink | <i>Menetia</i> | <i>greyii</i> | Oct/Nov/Apr |

| | | | | | |
|-------------|-----------|---------------------------|----------------|-------------------|-----------------------------------------------|
| 7 page - 77 | Varanidae | Black-tailed Tree Monitor | <i>Varanus</i> | <i>t. tristis</i> | ~late April (juvenile - pers. comm. T. Clack) |
|-------------|-----------|---------------------------|----------------|-------------------|-----------------------------------------------|

APPENDIX 6(c) CLASS REPTILIA

Table 3 – Order Squamata (Snakes)

| Number | Family | Common Name | Genus | Species | Sample Period |
|-------------|-------------|--------------------------|-----------------------|-----------------------|--------------------|
| 1 page - 57 | Elapidae | Western Gwardar | <i>Pseudonaja</i> | <i>mengdeni</i> | Nov (dead on road) |
| 2 page - 57 | Elapidae | King Brown Snake | <i>Pseudechis</i> | <i>australis</i> | Nov (dead on road) |
| 3 page - 57 | Typhlopidae | Prong-snouted Blindsnake | <i>Ramphotyphlops</i> | <i>bituberculatus</i> | Oct |

APPENDIX 6(d) CLASS REPTILIA

Table 4 - Order Testudines (Turtles)

| | | | | | |
|-------------|----------|--------------------|---------------------|----------------|------|
| 1 page - 29 | Chelidae | Long-necked Turtle | *# <i>Chelodina</i> | <i>oblonga</i> | June |
|-------------|----------|--------------------|---------------------|----------------|------|

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

| APPENDIX 7 – TABLE OF COMMON NAMING CODES | | | | |
|--------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------|
| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also will be available on Spineless Wonders Website). |
| Arachnida | ACARINA | Megamites | TBC | mites |
| | | Geobeetle Mites | Leptolaelapidae | Leptomites |
| | | Velvet Mites | Trombidiidae | Trombimites |
| | ARANEAE | Orb Weavers – other spider Families build orb webs. | Araneidae | Araspiders |
| | | Sac Spiders - more help in the field than in the lab. | Clubionidae | Clubispiders |
| | | Ground Sac Spiders (American) – might be confused with other terrestrial ‘sac’ spiders. | Corinnidae | Corispiders |
| | | Net-casting Spiders – one of the more accurate current designations. | Deinopidae | Deinospiders |
| | | Lace-web Spiders - one of the more accurate current field designations, though unhelpful in lab. | Desidae | Desispiders |

| | | | | |
|--|--|--------------------------------------------------------------------------------------|--------------|----------------------|
| | | Wandering Sac Spiders – All "sac spiders wonder. | Gnaphosidae | Gnaphospiders |
| | | White-tailed Spiders – not all species have 'white tails'. | Lamponidae | Lamspiders |
| | | Wolf Spiders – not a good idea to name one of many hunting spiders after a dog. | Lycosidae | Lycospiders |
| | | Large Sac Spiders – more help in the field than in the lab. | Miturgidae | Miturspiders |
| | | New Family. | Nephilidae | Nephispiders |
| | | Lynx Spiders - not a good idea to name one of many hunting spiders after a cat. | Oxyopidae | Oxyspiders |
| | | Long-spinneret Ground Spider – in treeless areas Hersiliids may be on the ground. | Prodidomidae | Prodispiders |
| | | Jumping Spiders - one of the more accurate current designations. | Salticidae | Saltispiders |
| | | Huntsmen – not a good idea to name after traditional human behavior. | Sparassidae | Sparaspiders |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|---------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Long-jawed Spiders – not both sexes and all genera have large jaws. | Tetragnathidae | Tetraspiders |
| | | Tangle-web Spiders – Other spiders make tangled webs. | Theridiidae | Therispiders |
| | | Crab spiders – not applicable to many genera and species; lacks enlarged chelae of a crab. | Thomisidae | Thomispiders |
| | | Knobble Spiders – presumably refers to small ‘knob-like’ cephalothorax; common to many other spider Families. | Zodariidae | Zodaspiders |
| | | Zorid Spiders. | Zoridae | Zorispiders |
| | | | | |
| Arachnida | OPILIONIDA | Harvestmen - a European agricultural concept – no Family level designation. | | Opispiders |
| | | No common name. | Triaenonychidae | Triopispiders |
| | | | | |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------------|--------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | PSEUDO-SCORPIONIDA | Pseudoscorpions – no Family level designations. | Family TBC | D oscorpions |
| | SCORPIONIDA | Scorpions – no Family level designations. | | |
| | | Marbled Scorpions – not all genera and species are marbled. | Buthidae | B uscorpions |
| | | Scorpions. | Urodacidae | U roscorpions |
| Chilopoda | | Centipedes – Most species do not have 100 legs - no Family level designations. | | Ch ilopedes |
| | SCOLOPENDRIDA | Scolopendrid Centipedes. | Scolopendridae | S colopedes |
| | GEOPHILIDA | Earth Centipedes – no Family level designations (most centipedes are 'earth-based'). | Geophilidae | G eopedes |
| | LITHOBIOMORPHA | Lithobiid Centipedes. | Lithobiidae | L ithopedes |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|----------------------------|----------------|-----------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------|
| | LITHOBIOMORPHA | Henicopid Centipedes. | Henicopidae | Henipedes |
| Subphylum Crustacea | | | | |
| Malacostraca | ISOPODA | Slaters, Pill Bugs, Sow Bugs – a northern hemisphere concept. | | Slaters |
| | | | Armadillidiidae (Rolling Slaters) | Armaslaters |
| | | | Philosciidae (Running Slaters) | Philoslaters |
| Diplopoda | | Millipedes – no millipedes have anywhere near 1,000 legs. No Family level designations. | | Diplopedes |
| | POLYDESMIDA | Paradoxosommatid Millipedes. | Paradoxosomatidae | Paradioplopedes |
| Insecta | BLATTODEA | Cockroaches - no Family level designations. | | Cockroaches |
| | | No common names. | Blaberidae | Blabroaches |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|---------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | No common names. | Blattidae | Blatroach |
| | | No common names. | Blatellidae | Blatelroaches |
| | | | | |
| | COLEOPTERA | Beetles – common names available for a minority of Families. | | |
| | | No common names. | Anthicidae | Anthibeetles |
| | | No common names. | Belidae | Beliweevils |
| | | Auger Beetles – many boring beetles create circular boreholes. | Bostrichidae | Bostribeetles |
| | | Soldier Beetles – members of many Families can be gregarious. | Cantharidae | Canthabeetles |
| | | Ground Beetles – many thousands of beetles occur on the ground. | Carabidae | Carabeetles |
| | | Long-horned, Longhorn, Longicorn beetles are not the only beetles with long antennae. | Cerambycidae | Cerambeetles |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|-------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Leaf Beetles – Tens of thousands of species alight on, and/or feed on leaves. | Chrysomelidae | Chrysobeetles |
| | | Checkered Beetles – hundreds of beetles have checkered patterns. | Cleridae | Cleribeetles |
| | | Ladybirds – nothing to do with ladies or birds! | Coccinellidae | Coccibeetles |
| | | Weevils. | Curculionidae | Curcweevils |
| | | Museum, Carpet, Skin beetles either refers to specific species or genera. | Dermestidae | Dermbeetles |
| | | Diving Beetles – at least 5 Families of beetles dive. | Dytiscidae | Dytibeetle |
| | | Click Beetles – only relevant to live examples. | Elateridae | Elatbeetles |
| | | Dor Beetles – a European concept relating to bumblebee noise. | Geotrupidae | Geobeetles |
| | | Variegated Mud-loving Beetles. | Heteroceridae | Heterobeetles |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|--------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Hydraenid Beetles. | Hydraenidae | Hydrabeetles |
| | | Water Scavenger Beetles – other aquatic beetle families scavenge. | Hydrophilidae | Hydrobeetles |
| | | Leiodid Beetles – no common name. | Leiodidae | Leiobeetles |
| | | Blister Beetles – other beetle Families may cause blisters with defensive chemicals. | Meloidae | Melobeetles |
| | | Soft-winged Flower Beetles - other soft-winged beetle Families visit flowers. | Melyridae | Melybeetles |
| | | Tumbling Flower Beetles – members other beetle Families are clumsy on the flower. | Mordellidae | Mordbeetles |
| | | Sap-feeding Beetles – other Families of beetles have members that feed on sap. | Nitidulidae | Nitibeetles |
| | | Shining Flower Beetles – thousands of flower-visiting beetles are shiny. | Phalacridae | Phalabeetles |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|--------------------------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------|
| | | Leaf-rolling Weevils – at least another Family of Weevils rolls leaves. | Rhynchitidae | Rhynbeetles |
| | | Scarabs, Rhino Beetles, Dung Beetles etc – these are very broad designations. | Scarabaeidae – Subfamily prefixes included; | Scarabeetles |
| | | Rove Beetles – many Families of beetles ‘rove’. | Staphylinidae | Staphbeetles |
| | | Darkling Beetles – there are thousands of beetles that are both dark and like dark places. | Tenebrionidae | Tenebeetles |
| | | Hide Beetles – other beetle Families are associated with animal hides. | Trogidae | Trogbeetles |
| | | | | |
| | DERMAPTERA | Earwigs – Old English concept. | | Earwigs |
| | | No common names. | Anisolabidae | Anisowigs |
| | | No common names. | Labiduridae | Labiwigs |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | DIPTERA | Wood Gnats, Window Gnats – many gnat and midge Families are seen around wood and on windows. | Anisopodidae | Anisomidges |
| | | Robber Flies – almost all species hunt for themselves rather than ‘rob’ from other predators. | Asilidae | Asilflies |
| | | Bee Flies – most do not resemble bees. | Bombyliidae | Bomflies |
| | | Blow Flies – other Families of flies are attracted to carcasses. | Calliphoridae | Calliflies |
| | | Sand Flies – many flies associated with sand. | Ceratopogonidae | Ceramidges |
| | | Non-biting Midges – Other Families of midges do not bite, and the males of biting midges don’t bite. | Chironomidae | Chiromidges |
| | | Chloropid Flies. | Chloropidae | Chloroflies |
| | | Mosquitos. | Culicidae | Culimidges |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Long-legged Flies – many fly Families have long-legged members. | Dolichopodidae | Doliflies |
| | | Empidid Flies or Dance Flies – latter redundant Anthropomorphic designation. | Empididae | Empiflies |
| | | Shore Flies – other fly Families present on shores. | Ephydriidae | Ephyflies |
| | | Heleomyzid Flies. | Heleomyzidae | Heleoflies |
| | | Lauxaniid Flies. | Lauxaniidae | Lauxaflies |
| | | Lonchaeid Flies. | Lonchaeidae | Lonchaflies |
| | | House Fly (1 species of thousands) Family. | Muscidae | Musciflies |
| | | Mydas Flies – redundant Anthropomorphic designation. | Mydidae | Mydiflies |
| | | Flesh Flies - other Families of flies are attracted to carcasses. | Sarcophagidae | Sarcoflies |
| | | Soldier Flies - redundant Anthropomorphic designation. | Stratiomyidae | Stratflies |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | March Flies, Horse Fly, Deer Fly – a northern hemisphere seasonal concept - females of other flies bite large mammals in March. | Tabanidae | Tabflies |
| | | Bristle Flies – members of other fly Families may sport conspicuous bristles. | Tachinidae | Tachflies |
| | | Fruit Flies – many flies are attracted to fruit and not all members of Family are fruit feeders. | Tephritidae | Tepflies |
| | | Crane Flies – at least 2 other sympatric fly Families may be confused with this 'bird-named' fly. | Tipulidae | Tipuflies |
| | | | | |
| | HEMIPTERA | Broad-headed Bugs – many bug Families have members with broad heads. | Alydidae | Alybugs |
| | | Aphids. | Aphididae | Aphibugs |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Cuckoo Spit, Spittle Bugs – at least one other Family, Cercopidae, makes spittle. | Aphrophoridae | Aphrohoppers |
| | | Leafhoppers, Sharpshooters (American) – many hopper Families sit on leaves. | Cicadellidae | Cicahoppers |
| | | Cicadas. | Cicadidae | Cicabugs |
| | | No common name. | Cixiidae | Cixihoppers |
| | | Water Boatman – anthropomorphic designation of limited value. | Corixidae | Corixibugs |
| | | Burrowing Bugs – one of the few appropriate designations – a field character only. | Cydnidae | Cydnibugs |
| | | Eurybrachyid Planthoppers – long designation. | Eurybrachyidae | Eurybrahoppers |
| | | Flatid Planthoppers – many 'hoppers' sit on plants. | Flatidae | Flatihoppers |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|--------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Toadbugs – present in Australia but no native toads. | Gelastocoridae | Gelabugs |
| | | Seed Bugs – other bug Families feed on seeds. | Lygaeidae | Lygabugs |
| | | Plant Bugs – the majority of the Order are associated with plants. | Miridae | Miribugs |
| | | Damsel Bugs - anthropomorphic designation of limited value. | Nabidae | Nabibugs |
| | | No common name. | Nogodinidae | Nogohoppers |
| | | Backswimmers – only appropriate for live animals. | Notonectidae | Notobugs |
| | | No common name. | Pachygronthidae | Pachybugs |
| | | Stink or Shield Bugs. | Pentatomidae | Pentabugs |
| | | Lerps – general public are unfamiliar with this term. | Psyllidae | Psylbugs |
| | | Assassin Bugs – other Families of bugs are predators. | Reduviidae | Redubugs |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Dirt-coloured Seed Bugs – a bit cumbersome for a Familial designation. | Rhyparochromidae | Rhybugs |
| | | Jewel Bugs – not all members of Family 'jewelled'. | Scutelleridae | Scutelbugs |
| | | | | |
| | HYMENOPTERA | Honeybees – specifically refers to one species. Carpenter, Cuckoo, and Digger Bees et al – these are Generic rather than Familial designations. | Apidae | Apibeas |
| | | No common name. | Bethylidae | Bethwasps |
| | | No common name. | Braconidae | Bracwasps |
| | | Chalcidid Wasps. | Chalcididae | Chalwasps |
| | | Cuckoo Wasps – implies the wasp has the lifestyle of the cuckoo – in evolutionary terms probably the reverse. | Chrysididae | Chryswasps |
| | | Plasterer, Masked, Yellow-faced Bees et al – these are Generic rather than Familial designations. | Colletidae | Colbees |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|-------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Eupelmid Wasps. | Eupelmidae | Eupwasps |
| | | Ants – can be prefixed by subfamily. | Formicidae | Ants |
| | | No common name. | Gasteruptiidae | Gaswasps |
| | | Ichneumon Wasp. | Ichneumonidae | Ichwasps |
| | | Leafcutter, Mason Bees et al – these are Generic rather than Familial designations. | Megachilidae | Megabees |
| | | Velvet Ants – confusing as it calls a wasp an ant, and refers to wingless females only. | Mutillidae | Mutilwasps |
| | | Perilampid Wasps. | Perilampidae | Periwasps |
| | | Spider Wasps – Other wasp Families prey on spiders. | Pompilidae | Pomwasps |
| | | Proctotrupid Wasps. | Proctotrupidae | Procwasps |
| | | Flower Wasp – many wasp Families visit flowers. | Scoliidae | Scoliwasp |
| | | Digger and Thread-waisted Wasps – members of other Families dig and have 'thread waists'. | Sphecidae | Sphecwasps |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|-----------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Flower Wasps – confused with Scoliidae. | Tiphiidae | Tiphwasps |
| | | Torymelid Wasps | Torymidae | Torywasps |
| | | Hornets, Paper, Potter, Yellowjackets - these are Generic/ Subfamilial rather than Familial designations. | Vespidae | Veswasps |
| | | | | |
| | ISOPTERA | White Ants – not even in same Order as ants. | | Termites |
| | | Subterranean Termites – most Families subterranean. | Rhinotermitidae | Rhinotermites |
| | | Higher Termites – An arguable concept. | Termitidae | Termites |
| | | | | |
| | LEPIDOPTERA | Tiger Moths – many Families have ‘tiger bands’. | Arctiidae | Arcmoths |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Carpenter, Leopard (both American), or Wood Moths – more than one Family of moths are wood-borers while others have leopard patterns. | Cossidae | Cossmoths |
| | | No common name. | Cosmopterigidae | Cosmomoths |
| | | No common name. | Depressariidae | Depmoths |
| | | Twirler Moths – other Families have caterpillars that used twirled leaves as shelters. | Gelechiidae | Gelmoths |
| | | Inchworms (American), Loopers, Geometer Moths – mixed larval and adult designations. | Geometridae | Geomoths |
| | | Eggars, Snout Moths, Lappet Moths – referrable to northern hemisphere. | Lasiocampidae | Lasimoths |
| | | Cup Moths – hard to tell from caterpillar or adult that the cocoon is cuplike. | Limacodidae | Limamoths |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|---------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Owlet, Miller Moths, etc (many generic and specific designations). | Noctuidae | Noctumoths |
| | | Brush-footed, Nymph, Satyr, Tiger, Crow, et al Butterflies - many generic and specific designations. | Nymphalidae | Nymphwings |
| | | Blues, Hairstreaks, Coppers and many other generic and specific designations. | Lycaenidae | Lycawings |
| | | Concealer Moths – many Families have members that are masters of concealment. | Oecophoridae | Oecomoths |
| | | Birdwings, Swallowtails etc - many generic and specific designations. | Papilionidae | Papwings |
| | | Whites, Yellows - many generic and specific designations. | Pieridae | Pierwings |
| | | Bagworms, Case Moths – both designations refer to larval shelters; other Families have members bearing cases. | Psychidae | Psychmoths |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|-----------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Pyralid Moths - many generic and specific designations. | Pyralidae | Pyralmoths |
| | | Clothes Moths – specific species designation. | Tineidae | Tinemoths |
| | | | | |
| | MANTODEA | Preying Mantid/ Mantis – no Family level designations. | | |
| | | Mantids | Mantidae | Mantises |
| | | | | |
| | MECOPTERA | Scorpion Flies – most Australian species do not hold their abdomens in a ‘scorpion-like’ way. | | Mecoflies |
| | | | Bittacidae | Bitmecofly |
| | | | | |
| | NEUROPTERA | Lacewings - no Family level designations. | | |
| | | Owlfly – best not to describe insects as resembling birds – fanciful. | Ascalaphidae | Ascalacewings |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|--------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Green Lacewings – another Family (Nymphidae) has green members. | Chrysopidae | Chrysolacewings |
| | | Brown Lacewings – other Families have brown members. | Hemerobiidae | Hemlacewings |
| | | Mantis Lacewings – one of the few accurate designations. | Mantispidae | Mantilacewings |
| | | Antlion Lacewings – refers to larvae that are most unlike adults. | Myrmeleontidae | Myrmlacewings |
| | | Nymphid Lacewings. | Nymphidae | Nymlacewings |
| | | | | |
| | ODONATA | Dragonflies, Damselflies – European mystical and fairytale designations. | | |
| | | Hawkers – more than one dragonfly Family exhibits this behavior. | Aeshnidae | Aeshdragonflies |
| | | Pond Damselflies – many Families are associated with ponds. | Coenagrionidae | Coenadamselflies |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | | Reedlings – many damselfly Families perch on reeds. | Lestidae | Lestidamselfies |
| | | Skimmers and Perchers – others Families overlap in these behaviours. | Libellulidae | Libeldragonflies |
| | | Emeralds, Baskettails and many other designations – generally confusing. | Hemicorduliidae | Hemidragonflies |
| | | Shorthorn Grasshoppers – generally accurate. | Acrididae | Acrihoppers |
| | | Crickets. | Gryllidae | Grylcrickets |
| | | Bush Crickets (Africa) – many crickets live in the bush; Katydids (call - America) - only useful when alive, no value in specimen collections. | Tettigoniidae | Tettihoppers |
| | | | | |
| | PSOCOPTERA | Booklice (one species in Aust.), Barklice, Woodlice – not true ectoparasitic lice - Psocids. | Family 1TBC | Psoclice |
| | | No common names. | Family 2 TBC | Psoclice |

| Class | Order | Existing common Family name/s | Latin Family name | Google friendly Family name (also available on Spineless Wonders Website). |
|--------------|--------------|---------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------|
| | THYSANURA | Silverfish – no Family level designation, not fish, most not 'silver'. | Lepismatidae | Lepisilverfish |
| | | Nicoletiid Silverfish. | Nicoletiidae | Nicosilverfish |
| | | | | |
| | TRICHOPTERA | Caddisflies – refers to particuclar 'finish' of laval case of European species. | Leptoceridae | Leptocaddis |
| | | No common names in Australia. | Hydroptilidae | Hydrocaddis |

Appendix 1 (b) Arachnida - SPRING



ACARINA (MITES & TICKS)

Trombidiidae Shorthair Red-brown
Trombimite *Gen. sp.* TBC BL 8.5mm



Leptolaelapidae Pallid Geobeetle
Leptomite *Paradoxiphis sp.* TBC Yanchep W.A.
BL ca 2.3mm © T. Houston W.A. Museum



Leptolaelapidae Pallid Geobeetle
Leptomite *Paradoxiphis sp.* TBC Yanchep W.A.
BL ca 2.3mm © T. Houston W.A. Museum



ARANEAE (SPIDERS)

Araneidae Xmas or Common Spiny Araspider
Austracantha minax F Broome W.A. BL 8.0mm



Araneidae Lesser Tuberculated
Tuberculated Orbweaver *Backobourkia sp.*
TBC (imm.) BL 11.7mm



Corinnidae Spotted Racing Corispider
Supunna picta F Perth W.A.
BL 10.0mm



Gnaphosidae Glossed and Matt Black
Gnaphospider *Gen. sp.* TBC M
© V. Framenau



Miturgidae Pied Head-stripe Miturspider
Gen. sp. TBC M © V. Framenau

Appendix 1 (b) Arachnida - SPRING



Prodidomidae Finegrain Brown
Prodispider *Molycrta vokes* F
© V. Framenau



Salticidae Black and Silver Ant
Saltispider *Myrmarachne* sp TBC F
BL 10.0mm



Salticidae Black and Silver Ant
Saltispider *Myrmarachne* sp. TBC F BL
10.0mm © V. Framenau



Theridiidae Redback Therispider
Latrodectus hasselti (imm.) F Perth area
Western Australia BL 10.0mm



Theridiidae Enamelled Yellow-backed
Therispider *Gen. sp.* TBC (imm.)
BL 5.0mm



Thomisidae Fine-tufted Bark
Thomispid spider *Stephanopis* sp. TBC F
BL10.0mm

Appendix 1 (b - c - d) Arachnida - SPRING



OPILIONIDA ('HARVESTMAN')

Triaenonychidae Rustyface Broadback
Triopispider *Gen. sp.* TBC
BL 6.8mm



PSEUDOSCORPIONIDA (PSEUDOSCORPIONS)

Family TBC TBC
BL 3.0mm



SCORPIONIDA (SCORPIONS)

Buthidae Marbled Buscorpion
Lychas 'splendens' M
BL 35.0mm



Urodacidae Western Uroscorpion
Urodacus sp. TBC F
BL 65.0mm

Appendix 2 Chilopoda - SPRING



Henicopidae (example) Anopsobiine
Henipede Tasmania © B. Mesibov
nr. Dichelobius flavus



Scolopendridae Racing Tailband Day
Scolopede *Scolopendra laeta* (subadult)
BL 42.7mm

Appendix 3 Crustacea - SPRING



MALACOSTRACA Isopoda

Armadillidiidae White-dashed Rolling Armadillid (*Buddelundia* sp.)
TBC BL 9.3mm



Philosciidae Grey-marbled Running Philosclerid *Laevophiloscia* sp.
TBC BL 10.2mm



Philosciidae Shagreened Running Philosclerid *Gen. sp.*
TBC BL 6.7mm

Appendix 4 Diplopoda - SPRING



Paradoxosomatidae (example)
Western Paradiplopede *Antichiropus* sp.
TBC Mundaring W.A.
BL 34.6mm

Appendix 5 Insecta SPRING



BLATTODEA - Blaberidae
Wingless Matt Ground Blabroach
Calolampra nr. marginalis BL 21.0mm



Blatellidae Uniform Ellipsoid
Ellypsidion sp. TBC (late instar nymph)
BL 8.6mm



Blatellidae Western Day-flitting
Blatelloid *Ellypsidion sp.* TBC
BL 14.2mm



Blattidae 2-striped Blatelloid
Gen. sp. TBC (nymph)
BL 5.9mm



Blattidae Yellowleg Resiny Blatelloid
Platyzosteria (Melanozosteria)
nr. sublobata BL 23.2mm



COLEOPTERA Anthicidae
Ashyhair Mud Anthbeetle *Formicomus sp.*
TBC BL 3.9mm



Bostrichidae Hairy-eyebrow Pygmy
Bostrichbeetle *Gen. sp.* TBC
BL 7.1mm



Byrrhidae Byrrbeetle
Microchaetes sphaericus
BL 3.0mm

Appendix 5 Insecta SPRING



Carabidae Blackhead Patterned Dark Carabeetle *Anomotarus crudelis*
BL 6.5mm



Carabidae Bombardier Carabeetle *Pheropsophus verticalis*
BL 16.4mm.

Carabidae Brown Heartneck Pygmy Carabeetle *Mecylothorax ambiguus*
BL 5.6mm.



Carabidae Brown-edged Smallneck Carabeetle *Notagonum submetallicum*
BL 10.0mm



Carabidae Carabidae (larva)
Gen. sp. TBC
BL 13.8mm



Carabidae Common Stinking Green Carabeetle *Calosoma schayeri* Perth area W.A. BL 20mm



Carabidae Glossy Rounded Pygmy Carabeetle *Hypharpax ranula*
BL 7.2mm



Carabidae Green Ridged Smallhead Carabeetle *Chleanius greyanus* Perth W.A. BL 13.8mm

Appendix 5 Insecta SPRING



Carabidae Pygmy Slender Carabeetle
Clivina sp. TBC
BL 7.1mm



Carabidae Yellow-shinned Broadneck
Carabeetle *Gnathaphanus adelaidae*
BL 9.4mm



Carabidae Yellow-thighed Pygmy
Carabeetle *Cenogmus castelnaui*
BL 8.1mm



Cerambycidae Wart-necked Gum
Cerambeetle *Coleoctopus senio*
BL 13.4mm



Chrysomelidae Amber-blotched
Longhorn Chrysobeetle *Cadmus* sp. TBC
BL 5.2mm



Chrysomelidae Ashy Helmet
Chrysobeetle *nr. Paropsis* sp. TBC
BL 8.4mm



Chrysomelidae Pallidleg Gunmetal
Pygmy Chrysobeetle *Gen. sp.* TBC
BL 2.8mm



Cleridae Sombre Flower Cleribeetle
Elaele sp. TBC
BL 10.6mm

Appendix 5 Insecta SPRING



Coccinellidae (late instar larva) Gen.
sp. TBC
BL 9.0mm



Coccinellidae Little Blackbrow
Coccibeetle *Coelophora inaequalis*
BL 5.7mm



Curculionidae Bristled Pygmy Ground
Curcweevil *Essolithna maculata*
BL 5.5mm



Curculionidae Clubbed Barebottom
Pygmy Curcweevil *Laemosacellus
magdalodes* BL 2.7mm



Curculionidae Coarsewool Knob-brow
Curcweevil *Zephyrne sordida*
BL 7.3mm



Curculionidae Rusty Pygmy Shynose
Curcweevil *Cryptoplus tibialis*
BL 3.2mm



Curculionidae Tan-spined Pygmy
Curcweevil Gen. sp. TBC
BL 3.9mm



Dermestidae Fringeneck Long
Dermbeetle *Dermestes* sp. TBC
BL 8.4mm

Appendix 5 Insecta SPRING



Dermestidae Squat Whitehair
Dermbeetle *Anthrenocerus australis*
BL 2.2mm



Dytiscidae Striped Pallid Dytibeetle
Lancetes lanceolatus
BL 10.4mm



Dytiscidae Lesser Stripe-blotched
Dytibeetle *Necterosoma darwini*
BL 3.9mm



Dytiscidae Pencilled Oliveneck
Dytibeetle *Necterosoma penicillatum*
BL 4.7mm



Dytiscidae Common Dytibeetle
Paroster sp. TBC
BL 3.2mm



Dytiscidae Brownline 2- dot Dytibeetle
Platynectes nr. *aenescens* TBC
BL 7.9mm



Geotrupidae Lesser Unicorn Geobeetle
Bolborhachium recticorne M
BL 13.0mm



Gyrinidae Great Fine-ridged Gyrbeetle
Macrogyrus nr. *reichei* TBC
BL 14.0mm

Appendix 5 Insecta SPRING



Gyrinidae Little Pale-edge Gyrbeetle
Aulonogyrus strigosus
BL 6.0mm



Hydraenidae (example) Cape Hydrabeetle
Ochthebius capicola South Africa
BL 2.28mm ©U. Schmidt



Hydrophilidae (example) *Berosus* sp.
larva Florida USA
BL 7.0mm



Rhynchitidae Dull Blotched Rhyneweevil
Auletobius eucalypti
BL 2.6mm



Hydrophilidae Common Glossy Helmet
Hydrobeetle *Limnoxenus zealandicus*
BL 9.0mm



Melyridae Red and Yellow Melbeetle
Dicranolaius sp. TBC
BL 5.3mm



Nitidulidae Clubbed Brown Seed
Nitibeetle *Idaethina* sp. TBC
BL 3.5mm



Scarabaeidae Big-horned Giant
Rolling Scarabeetle *Colpochila antennalis*
BL 24.8mm

Appendix 5 Insecta SPRING



Scarabaeidae Chestnut Pygmy Day
Scarab beetle *Liparetrus* sp. TBC
BL 7.5mm



Scarabaeidae Dark-ochred Rolling
Scarab beetle *Gen. sp.* TBC
BL 8.7mm



Scarabaeidae Large-spined Rolling
Scarab beetle *Gen. sp.* TBC
BL 14.7mm



Scarabaeidae South African Lawn
Scarab beetle *Heteronychus arator*
BL 14.7mm



Scarabaeidae Line-haired Scarab beetle
Gen. sp. TBC
BL 8.2mm



Scarabaeidae Pygmy Smallhorn
Scarab beetle *Neodon pecuarius*
BL 16.0mm



Scarabaeidae Dull-line Day Scarab beetle
Aphodius sp. TBC
BL 9.9mm



Scarabaeidae Tri-horned Dung
Scarab beetle *Onthophagus* sp. TBC
BL 16.1mm

Appendix 5 Insecta SPRING



Staphylinidae Pygmy Pale-legged
Staphbeetle *Oxytelus sculptus*
BL 4.0mm



Tenebrionidae Giant Ptreohalaeine
Tenebeetle *Pterohelaeus* sp. TBC
BL 20.8mm



Tenebrionidae Hairy Piedish
Tenebeetle *Helea perforata* Perth area W.A.
BL 23.0mm



Tenebrionidae Little Long-bristled
Tenebeetle *Ectyche* sp. TBC
BL 6.3mm



Tenebrionidae Mediterranean
Tenebeetle *Cheirodes caulobioides*
BL 5.2mm



Tenebrionidae Pallid Riverbank
Tenebeetle *Gonocephalum misellum*
BL 9.7mm



Tenebrionidae Pimpled Pygmy
Tenebeetle *Isopteron breve*
BL 5.5mm



Tenebrionidae Shiny Unpeaked
Tenebeetle *Pterohelaeus* sp. TBC
BL 14.9mm

Appendix 5 Insecta SPRING



Tenebrionidae Tenebrionidae (late instar larva) *Gen. sp.* TBC
BL 38.0mm



Trogidae Finegrain Ashy Trogbeetle
Omorgus stellatus
BL 8.5mm



DIPTERA Anisopodidae
Patchneck Patterwing Anisomidge
Gen. sp. TBC WL 9.6mm



Asilidae Ashy Long-tailed Asilfly
Cerdistus sp. TBC
BL 17.6mm



Bombyliidae Dark-edge Jet Bomfly
Gen. sp. TBC
BL 8.3mm



Calliphoridae Lesser Brown Califly
Calliphora dubia
BL 9.2mm



Calliphoridae Wavy-eyed Jaguar Califly
Stomorphina sp. TBC
BL 8.3mm



Calliphoridae Western Australian Brown Callifly
Calliphora albifrontalis
BL 8.0mm

Appendix 5 Insecta SPRING



Ceratopogonidae Sand Ceramidge
Nilobezzia curticornis TBC

Ceratopogonidae Sand Ceramidge
(as *Monohelia* sp.) Savage et al 1997

Ceratopogonidae (example) Sand Ceramidge
Gen. sp. F Lake Monger W.A.
BL 3mm ©J. Taylor



Chironomidae Green Neck-marked Chiromidge
Gen. sp. TBC
BL 4.4mm



Chironomidae Green-tinged Chiromidge
Gen. sp. TBC M
BL 7.5mm



Chironomidae Little Robust Chiromidge
Gen. sp. TBC F
BL 2.3mm



Chloropidae Pygmy 5-windowed Chlorofly
Gen. sp. TBC
BL 3.2mm



Culicidae Largenose Culimidge
Gen. sp. TBC M
BL 9.9mm



Culicidae Yellow-knee Culimidge
Gen. sp. TBC F
WL 8.9mm

Appendix 5 Insecta SPRING



Dolichopodidae Bronzed Green Dolifly
Gen. sp. TBC
BL 3.5mm



Ephydriidae Pallid Pygmy Riverbank
Ephyfly *Gen. sp.* TBC
BL 4.5mm



Family unknown
Largeclaw False Housefly *Gen. sp.* TBC
BL 6.0mm



Family unknown
White-haltered Hunchback Midge
Gen. sp. TBC BL 3.3mm



Lauxaniidae Dull Stripe-necked Pygmy
Lauxafly *Gen. sp.* TBC
BL 4.9mm



Lauxaniidae Weak-striped Rusty
Lauxafly *Lyciella sp.* TBC
BL 7.6mm



Lonchaeidae Pygmy Dark Green Lon-
chafly *Gen. sp.* TBC
BL 2.6mm



Muscidae Centre-legged Shore Muscify
Lispe sp. TBC
BL 6.4mm

Appendix 5 Insecta SPRING



Muscidae Stable Muscify
Stomoxys calcitrans
BL 7.5mm



Sarcophagidae Red eyed Sarcophly
Liosarcophaga (Sarcophaga) aurifrons
Perth W.A. BL 15mm



Sciomyzidae (example) English Snail
Scioly fly *Euthycera fumigata* ©J. Lee



Stratiomyidae (example) Stratfly
nr. Odontomyia sp. TBC



Syrphidae Common Spotted Syrphly
Austrosyrphus viridiceps
BL 8.6mm



Tabanidae Muted-eye Tabfly
Gen. sp. TBC
BL 10.3mm



Tachinidae Golden Green Metallic
Tachfly *Rutilla sp.* TBC Mount O'Brien W.A.
BL 13.8mm



Tachinidae Redeye 2-dot Tachfly
Gen. sp. TBC
BL 6.6mm

Appendix 5 Insecta SPRING



Tipulidae Dark-veined Tipulfly
Gen. sp. TBC F
 BL 8.8mm



Tipulidae Dove Grey Tipulfly
Gen. sp. TBC F
 BL 9.2mm



HEMIPTERA Aphididae Pale
 Wingbase Black Aphibug *Gen. sp.* TBC
 BL 2.1mm



Aphrophoridae 2-banded Beetle
 Aphrohopper *Bathyllus albicinctus*
 BL 4.5mm



Cicadellidae Humpneck Bark
 Cicahopper *Kyphocotis sp.* TBC (nymph)
 BL 3.6mm



Cicadellidae Longhorn Cicahopper
Gen. sp. TBC (nymph)
 BL 7.1mm



Cicadellidae Palevein Green-neck
 Cicahopper *Gen. sp.* TBC
 BL 3.7mm



Cicadellidae Spade-headed Bark
 Cicahopper (nymph) *Gen. sp.* TBC
 BL 7.6mm

Appendix 5 Insecta SPRING



Cicadellidae Teary Longhorn
Cicahopper *Gen. sp.* TBC (nymph)
BL 3.0mm



Cicadellidae Windowed Humpy Grey
Cicahopper *Macropsinae Gen. sp.* TBC
BL 3.4mm



Cicadidae Western Tick-tock Cicada
Cicadetta quadricincta M Perth W.A.
BL 15mm



Corixidae Dark Fronted Corixibug
Agraptocorixa parvipunctata
BL 8.8mm



Corixidae Shortwing Pale-edge
Corixibug *Micronecta sp.* TBC
BL 6.7mm



Cydnidae Common Black Cydnibug
Adrisa atra
BL 11.0mm



Eurybrachyidae Straightnose
Eurybrahopper *Platybrachys sp.* TBC
(nymph) BL 5.3mm



Lygaeidae Burnt-edged Lygabug *Gen. sp.*
TBC (nymph)
BL 5.0mm

Appendix 5 Insecta SPRING



Miridae Bronzed Beetle Miribug
Gen. sp. TBC
BL 3.4mm



Miridae Burnt Scuted Miribug
Gen. sp. TBC
BL 4.0mm



Miridae Green Miribug *Gen. sp.* TBC
(nymph)
BL 2.6mm



Nabidae Ornate-necked Nabibug
Nabis kinbergii
BL 8.5mm



Notonectidae Fullkeel Notobug
Anisops sp. 1 TBC (dorsal)
BL 7.3mm



Notonectidae Fullkeel Notobug
Anisops sp. 1 TBC (ventral)
BL 7.3mm



Pentatomidae Common Brown
Pentabug *Dictyotus caenosus*
BL 8.8mm



Pentatomidae One-spot Trunk Pentabug
Poecilometis apicalis
BL 20.7mm

Appendix 5 Insecta SPRING



Psyllidae Orange-tinged Blackleg
Psyllid Genus 1 *Gen. sp.* TBC M
WL 3.5mm



Psyllidae Signalwing
Psyllid Genus 2 *Gen. sp.* TBC M
WL 4.2mm



Psyllidae Smokytip Brown Psyllid
Genus 2 *Gen. sp.* TBC M
WL 3.6mm



Reduviidae Orange Shield Ground
Redubug *Peirates sp.* TBC
BL 12.5mm



Scutelleridae Grey Roughbark Scutel-
bug *Austrotichus rugosus* (nymph)
BL 9.2mm



HYMENOPTERA Apidae
Blue-banded Apibee *Amegilla sp.* TBC
BL 13.6mm



Apidae Honeybee
Apis mellifera Perth W.A.
BL 15.0mm



Bethylidae Brownhead Longbody
Pygmy Bethwasp *Gen. sp.* TBC
BL 5.7mm

Appendix 5 Insecta SPRING



Braconidae 2-spot Brownleg Pygmy Bracwasp *Gen. sp.* TBC
BL 2.7mm



Braconidae (example) Yellowhead Yellow-waist Bracwasp *Callibracon sp.* TBC
F Brisbane Qld. WL 13.8mm

Chalcididae
(no photo)



Chrysididae Blue-bottomed Chryswasp *Chrysis sp.* TBC Julimar SF W.A.
BL 9.5mm



Colletidae Yellow-kneed Collbee *nr. Euhesma sp.* TBC
BL 5.5mm



Formicidae 2-spot Trunk Ant *Podomyrma adelaidae*
BL 5.9mm



Formicidae Alate Little Brownback Ant *Anonychomyrma nitidiceps*
BL 3.4mm



Formicidae Charcoal Risetail Ant *Camponotus cinereus amperei*
(major worker) BL 9.1mm

Appendix 5 Insecta SPRING



Formicidae False Meat Ant
Camponotus capito ebeninithorax
BL 9.3mm



Formicidae Green-head Ant
(Alate queen) *Rhytidoponera metallica*
BL 8.0mm



Formicidae Green-head Ant
Rhytidoponera metallica (with Termitidae
prey) Perth area W.A. BL 7.0mm



Formicidae Little False Meat Ant
Melophorus turneri
BL 5.4mm



Formicidae Longback Brown Ant
Cerapachys greavesi
BL 7.2mm



Formicidae Shiny-end Giant Bulldog Ant
Myrmecia gratiosa
BL 20.0mm



Gasteruptionidae Sharp-jawed Gaswasp
Gen. sp. TBC M
BL 8.1mm



Ichneumonidae Orange-leg Pygmy
Ichwasp Gen. sp. TBC M
BL 6.4mm

Appendix 5 Insecta SPRING



Ichneumonidae Uniform Night Ichwasp
Netelia sp. TBC F
BL 18.5mm



Mutillidae Little Black and Gold
Mutilwasp *Ephutomorpha* sp. TBC F
BL 6.8mm



Perilampidae Furrowneck Copper
Pygmy Periwasp *Gen.* sp. TBC
BL 2.2mm



Scoliidae Swell-waist Banded
Scolwasp *Dielis formosa* M
BL 11.3mm



Tiphiidae Black Thynine Tiphwasp
Thynnoidea nephalopterus M
BL 12.7mm



Tiphiidae Longbody Black Tiphwasp
nr. Rhadiogaster M
BL 16.4mm



ISOPTERA Family Unknown
Termite *Gen.* sp. TBC (queen)
BL 17.7mm



Rhinotermitidae Rhinotermitide
Gen. sp. TBC (soldier)
BL 5.8mm

Appendix 5 Insecta SPRING



LEPIDOPTERA Arctiidae
Pinkbrow Pied Arcmoth *Thallarcha nr. fusa*
WL 12.2mm



Cossidae Uniform Giant Cossmoth
Xyleutes nubila
WL 59.8mm



Depressariidae Apricot-frontleg Wedge
Depmoth *Depmois sp.* TBC
WL 10.1mm



Family unknown Ash-flecked Fringetip
Moth Gen. sp. TBC
WL 12.5mm



Family unknown Greytip Tailcrest
Sooty Moth Family Gen. sp. TBC
WL 9.4mm



Family unknown Sootyleg Wedge
Moth Gen. sp. TBC
WL 9.8mm



Family unknown Streaky Greywaist
Moth Gen. sp. TBC
WL 13.8mm



Geometridae Green Geomoth
Caterpillar Gen.sp. TBC
BL 16.3mm

Appendix 5 Insecta SPRING



Geometridae Little Lobe-winged
Geomoth *Phrissogonus laticostata* M
WS 16.1mm



Geometridae Pallid 4-windowed
Geomoth *Cleora* sp. TBC
WS 32mm



Geometridae Yellow-spotted Geomoth
caterpillar *Gen. sp.* TBC
BL 12.9mm



Limacodidae Orange-dotted Limamoth
Pseudanapaea trigona M
BL 14.9mm



Noctuidae False Bark Geometer
Noctumoth *Diatenes aglossoides*
WS 34mm



Noctuidae Orange-tip Owlet Noctumoth
Donuca spectabilis
WS 50mm



Nymphalidae Australian Painted Lady
Nymwing *Vanessa kershawi* Perth area
W.A.WS 45mm



Oecophoridae Rosecrest Pinkedged
Beige Oecomoth *nr. Ptyoptila* sp. TBC
BL 11.0mm

Appendix 5 Insecta SPRING



Pieridae Cabbage White Pierwing
Pieris rapae Perth area
WS 44.0mm



Pieridae Wood White Pierwing
Delias aganippe
WS 62.0mm © A. Sundholm



Pyralidae Pallid Wavy-barred Pyralmoth
Callionyma sarcodes
WL 11.1mm



Pyralidae Bignose Narrow Bark
Pyralmoth *Phycitinae* sp. TBC
BL 10.2mm



Pyralidae Dark and Pale-edge Pyralmoth
Antigastra catalaunalis
WL 15.6mm



Pyralidae Lidded Bark Pyralmoth
Salma sp. TBC
BL 14.2mm



MECOPTERA Bittacidae
Black humped Bitmeco fly *Harpobittacus*
quasisimilis BL 18.5mm



NEUROPTERA Hemerobiidae
Brown Angewing Hemlancewing *nr.*
Drepanacra sp. TBC Perth W.A. WL 10.0mm

Appendix 5 Insecta SPRING



Hemerobiidae Ubiquitous Peppered Hemilacewing *Micromus tasmaniae*
WL 14.8mm



ODONATA Coenagrionidae
Common Bluetail Coenadamselfly
Ischnura heterosticta M BL 34mm



ORTHOPTERA Acrididae
Australian Plague Acrihopper *Chortoicetes terminifera* BL 28.0mm



Acrididae Ridgeback Deadleaf Acrihopper (nymph) *Goniaea australasiae*
BL 30.0mm



Acrididae Small Plague Acrihopper
Austroicetes cruciata
BL 25.0mm



Acrididae Western Roughbark Acrihopper *Coryphistes ruricola* (nymph)
BL 31.8mm



Gryllidae 2-stripe Bigthigh Grylcricket
Gen. sp. TBC
BL 6.9mm



Gryllidae Spectacled Field Grylcricket
Lepidogryllus sp. TBC F
BL 21.3mm

Appendix 5 Insecta SPRING



PSOCOPTERA Family unknown
Smoky Spotwing Psocouse Family TBC
WL 3.2mm



THYSANURA Lepismatidae
Bristled Peppered Day Lepisilverfish
Acrotelsella d. devriesiana BL 10.0mm



TRICHOPTERA Hydroptilidae
(example) *Acritoptila globosa* general larval
form BL 3.0mm



Leptoceridae Spotted Grey Longpalp
Leptocaddis *Oecitis* sp. TBC
WL 17.1mm



Leptoceridae Spotwing Olive
Leptocaddis *Notalina spira*
WL 9.9mm

Appendix 6 (a,b,d) Amphibia and Reptilia SPRING



ANURA - Myobatrachidae
Western Froglet *Crinia pseudinsignifera*
Boyagarring Hill W.A. SVL 26.0mm © B. Maryan



Myobatrachidae Western Spotted Frog
Heleioporus albopunctatus Boyagin Rock
W.A. SVL 75mm © B. Maryan



Myobatrachidae Pobblebonk
Limnodynastes dorsalis Clare W.A. SVL
85.0mm © B. Maryan



Myobatrachidae Gunther's Toadlet
Pseudophryne guentheri Coarina Rock
W.A. SVL 35.0mm © B. Maryan



LIZARDS - ORDER SQUAMATA
SUBORDER SAURIA Gekkonidae
Common Tree Dtella *Gehyra variegata*
Disappointment Rock W.A.
SVL 50mm © B. Maryan



Scincidae Common Dwarf Skink
Menetia greyii (breeding male) SVL 36mm



Scincidae Sun Skink
Cryptoblepharus buechanani
SVL 42mm



TURTLES ORDER TESTUDINES
SUBORDER PLEURODIRA Chelidae
Long-necked Turtle *Chelodina oblonga*
Pipidinny Swamp W.A.
shell length to 40cm © B. Maryan

Appendix 1 (a,b) Arachnida SUMMER



ACARINA (MITES AND TICKS)

Family unknown Brown Flower Mite
(on *Aphodius lividus*) TBC BL 0.6mm



Trombidiidae Red Velvet Mite
(example) *Gen. sp.* TBC Port Douglas
Queensland BL 2.6mm



ARANEAE (SPIDERS)

Araneidae Silvered Longbody Araspider
Argiope protensa F (subadult) BL 9.3mm



Araneidae St. Andrew's Cross Araspider
Argiope trifasciata (juv.)
BL 4.9mm



Clubionidae Whitestripe Olive
Clubspider *Clubiona. sp.* TBC (imm.)
BL 3.9mm



Deinopidae Rusty Deinospider
Deinopis sp. TBC (subadult)
BL 7.2mm



Desidae Black Laceweb Desispider
Badumna insignis F Perth W.A.
BL 18.0mm



Lamponidae Sooty Groundracer
Lamspider ?*Lampona sp.* TBC (imm.)
BL 3.3mm

Appendix 1 (b) Arachnida SUMMER



Gnaphosidae 6-spot Gnaphospider
?Eilica sp. TBC F
BL 7.2mm



Lycosidae Black-chevroned Lycospider
Lycosa australicola F
BL 13.4mm



Lycosidae Mottled Grey Day Lycospider
Gen. sp. TBC (imm.) F
BL 8.7mm



Lycosidae Mottled Grey Day Lycospider
Gen. sp. TBC (imm.) M
BL 10.7mm



Lycosidae Greater Southern Grey
Lycospider *Tasmanicosa leuckartii* (imm.)
BL 15.0mm



Lycosidae Wavy Brown Chevron
Lycospider *Gen. sp.* TBC (imm.)
BL 14.0mm



Oxyopidae Dark-blazed Grey Oxyspider
Oxyopes sp. TBC F
BL 5.4mm



Salticidae 2-blotch Sapphire Saltspider
Lycidas chrysomelas F
BL 3.7mm

Appendix 1(b) Arachnida SUMMER



Salticidae 2-blotch Sapphire Saltspider
Lycidas chrysomelas M Mundaring area
W.A. BL 5.8mm



Salticidae Common Orange Peacock
Saltspider *Maratus pavonis* M Perth area
W.A. BL 5.0mm



Salticidae Damask-backed Saltspider
Opisthoncus sp. TBC F
BL 5.3mm



Salticidae Red-streaked Blackhigh
Saltspider *Opisthoncus* sp. TBC M
©V. Framenau



Sparassidae Hills Grey-mottled
Sparaspider *Gen. sp.* TBC M
BL 25.2mm



Sparassidae Southern Black-fronted
Sparaspider *Eodelena lapidicola* M
BL 27.0mm



Sparassidae Sparaspider *Gen. sp.* TBC
(juv.)
BL 4.0mm



Theridiidae 5-blotch Black Therispider
Steatoda sp. TBC (imm.)
BL 3.4mm

Appendix 1(b) SUMMER



Theridiidae Blackface Brownhead
Therispider *Achaearanea* sp. TBC
BL 3.2mm



Theridiidae Silvered Globe
Therispider *Euryopsis* ?*elegans* F
BL 3.2mm



Thomisidae Brown Bark Thomispider
Thomispider *Stephanopis cambridgei* F
BL 9.4 mm



Thomisidae Dots and Dash Bark
Thomispider *Tharpyna campestrata*
BL 10.1mm



Thomisidae Greenhead Flower
Thomispider *Diaea* sp. TBC F
BL 6.0mm



Thomisidae Mini Eye-spotted
Thomispider *Tmarus* sp. TBC
BL 2.9mm



Thomisidae Pygmy Dotted Flower
Thomispider *Diaea* sp. TBC M
BL 3.0mm



Thomisidae Wavy-bellied Long
Thomispider *Synalus* sp. TBC
BL 5.3mm

Appendix 1 (b) Arachnida - SUMMER



Zodariidae 3-spot Yellow-tip Zodaspider
Masasteron compektor F
BL 9.5mm



Zodariidae 3-spot Yellow-tip Zodaspider
Masasteron compektor M
BL 7.2mm

Appendix 5 Insecta SUMMER



COLEOPTERA - Anthicidae
Pygmy 2-spot Anthibeetle *Gen. sp.* TBC
BL 3.4mm



Belidae Brown-speckled Broad
Beliweevil *Isacanthodes sp.* TBC
BL 16.2mm



Belidae Little Ashyback Beliweevil
Rhinotia acaciae
BL 10.3mm



Bostrichidae Roughneck Brownish
Bostribeetle *Gen. sp.* TBC
BL 3.5mm



Buprestidae Greenface Black Pygmy
Bubeetle *Neocuris sp.* TBC
BL 7.9mm



Buprestidae Great Ridgeback Jam
Bubeetle *Pseudotaenia gigas* Yellowdine
area W.A. BL 39.5mm



Buprestidae Rededge 3-band Bubeetle
Castiarina simulata
BL 15.2mm

Appendix 5 Insecta SUMMER



Carabidae Little Line-backed
Paletip Carabeetle *Gen. sp.* TBC
BL 11.7mm



Carabidae Plate-horned Flatleg
Carabeetle *Arthropterus sp.* TBC
BL 12.0mm



Chrysomelidae Hunchback
Chrysobeetle *Cryptocephalus sp.* TBC
BL 9.9mm



Chrysomelidae Little Creamstreak
Helmet Chrysobeetle *Gen. sp.* TBC
BL 3.2mm



Cleridae Dull Gold-green Cleribeetle
Phlogistus sp. TBC
BL 7.1mm



Cleridae Pygmy Blood-marked Clero-
beetle *Gen. sp.* TBC
BL 4.2mm



Cleridae Pygmy Creamstripe Bristled
Cleribeetle *Gen. sp.* TBC
BL 5.6 mm



Coccinellidae Little Blackbrow
Coccibeetle *Coelophora inaequalis*
BL 4.4mm

Appendix 5 Insecta SUMMER



Coccinellidae Piedneck Coccinellid
Hippodamia variegata
BL 3.8mm



Curculionidae Pygmy Blacksnout
Curcweevil *Xeda amplipennis*
BL 1.6mm



Curculionidae Chequered Whitescute
Curcweevil *Titinia brevicollis* M
BL 3.4mm



Curculionidae Little Blackscape
Greyspeckle Curcweevil *Myllocerus nr. abstarsus* BL 8.0mm



Curculionidae White-toed Magdelinine
Curcweevil *Neolaemosaccus brevis*
BL 3.4mm



Dytiscidae Angle-blotched Dytibeetle
Megaporus howitti
BL 7.2mm



Dytiscidae Masked Reticulated
Dytibeetle *Rhantus suturalis*
BL 11.5mm



Dytiscidae Tan Stripe-blotched Dytibeetle
Antiporus gilbertii
BL 7.0mm

Appendix 5 Insecta SUMMER



Elateridae Slender-Black punctured
Elatbeetle *Gen. sp.* TBC
BL 13.8mm



Elateridae Smooth-shoulder Linehair
Elatbeetle *Gen. sp.* TBC
BL 12.9mm



Heteroceridae Muted Pygmy Hetbeetle
Heterocerus sp. TBC
BL 4.0mm



Meloidae Uniform Blackleg Melobeetle
nr. Zonitis sp. TBC
BL 11.5mm



Melyridae Redhead Shortwing Melbeetle
Carphurus sp. TBC
BL 8.8mm



Mordellidae Little Charcoal Morbeetle
Mordellistena concolor
BL 2.5mm



Mordellidae Long Coal Morbeetle
Gen. sp. TBC
BL 5.2mm



Phalacridae Pygmy False Ladybird
Phalbeetle *Parasemus sp.* TBC
BL 1.6mm

Appendix 5 Insecta SUMMER



Scarabaeidae African Bronzed Dung
Scarabeetle *Onitis alexis*
(introduced - Africa) BL 15.0mm



Scarabaeidae Little Darkstripe
Scarabeetle *Aphodius lividus* (with mite)
TBC BL 4.4mm



Scarabaeidae Waxy Chestnut Rolling
Meloscarabeetle *Gen. sp.* TBC
BL 14.8mm



Staphylinidae Longneck Sharptail
Black Staph beetle *Lathrobium sp.* TBC
BL 7.4mm



Tenebrionidae Shining Trunk
Tenebeetle *Chalcopteroides yorkensis*
BL 11.6mm



Tenebrionidae Tricoloured Alleculine
Tenebeetle *Dimorphochilus apicalis*
BL 9.3mm



DERMAPTERA - Anisolabidae
Band-legged Black Anisowig
Gonolabis woodwardi BL 13.2mm



Labiduridae Palenotch Coal Labiwig
Gen. sp. TBC
BL 15.8mm

Appendix 5 Insecta SUMMER



DIPTERA Asilidae Black-lapped Wasp Asilfly *Chrysopgon albopunctatus*
BL 19.7mm



Bombyliidae White-tip Inkstain Bomfly *Ligyra sinuatifascia*
WS 30.8mm



Calliphoridae Dull Green Charcoal Callifly *Calliphora augur*
BL 9.1mm



Chironomidae Crested Greenback Chiromidge *Gen. sp. TBC*
BL 4.1mma



Chironomidae Pygmy Bronzeback Chiromidge *Gen. sp. TBC M*
BL 2.3mm



Empididae Orange Spearnose Empfly *Gen. sp. TBC*
BL 4.6mm



Family unknown 4-spot Pygmy Midge *Gen. sp. TBC*
WL 2.3mm



Lauxaniidae Yellowleg Grey Lauxafly *Gen. sp. TBC*
BL 6.5mm

Appendix 5 Insecta SUMMER



Muscidae Bush Muscify *Musca vetustissima*
BL 5.6mm



Mydidae Little Redbody Mydifly *Gen. sp.*
TBC
BL 11.6mm



Sarcophagidae Little Banded Satellite Sarcophly *nr. Protomiltogramma sp.* TBC
BL 7.7mm



Syrphidae Common Yellow Syrflly *Simosyrphus grandicornis*
BL 8.5mm



Tachinidae Humped Blackleg Tachfly *Gen. sp.* TBC
BL 8.8mm



Tephritidae Little Antwing Tepfly *nr. Trupanea sp.* TBC
WL 4.3mm



HEMIPTERA- Alydidae Common Wattlepod Alydibug *Melanacanthus margineguttatus* Perth W.A. BL 13.0mm



Cicadellidae Beige-fronted Smokewing Cicahopper *Brunotartessus fulvus* BL 8.9mm

Appendix 5 Insecta SUMMER



Cicadellidae Black-tail Green Pygmy Cicahopper *Gen. sp.* TBC
BL 3.0mm



Cicadellidae Pygmy Green-striped Cicahopper *Gen. sp.* TBC
BL 4.0mm



Cicadellidae Speckled Grey Windowed Cicahopper *Ipoides sp.* TBC
BL 4.7mm



Cicadellidae Speckled Spadehead Cicahopper *Gen. sp.* TBC (nymph)
BL 11.2mm



Cixiidae Spoke-tipped Ashy Cixihopper *Candicarina geroldi*
WL 4.5mm



Corixidae Shortwing Pale-edge Corixibug *Agraptocorixa sp. 2* TBC
BL 7.3mm



Cydnidae Lesser Bristle-edge Cydnibug *Blaena cirra*
BL 8.0mm



Flatidae Red-edge Flatihopper *Siphanta sp.* TBC
WL 12.3mm

Appendix 5 Insecta SUMMER



Flatidae Summer Flatihopper *Siphanta*
sp. TBC (nymph)
BL 6.2mm



Geocoridae Tilt-backed Broadhead
Geobug *Geocoris* *sp.* TBC
BL 3.2mm



Miridae Black-V-ed Miribug *Gen. sp.* TBC
BL 3.1mm



Miridae Greater Green Miribug
Gen. sp. TBC
BL 8.8mm



Miridae Green-tinged Pallid Miribug
Gen. sp. TBC
BL 3.0mm



Miridae Pygmy Green Miribug
Gen. sp. TBC (nymph)
BL 3.4mm



Miridae Redbrow Glossy Black Miribug
Gen. sp. TBC
BL 4.2mm



Miridae Redhorn Yellowscute Miribug
Gen. sp. TBC
BL 8.8mm

Appendix 5 Insecta SUMMER



Nogodinidae Tiara-ed Nogohopper
Bilbilcallia sp. TBC (nymph)
BL 2.4mm



Pachygronthidae Pallid Forktail
Pachybug *Stenophyella macreta*
BL 7.9mm



Pentatomidae Speckled One-spot
Pentabug *Gen. sp.* TBC
BL 14.0mm



Psyllidae Pink and Ochre Psyllbug
Gen. 2 sp. TBC M
WL 4.9mm



Psyllidae Pinkish Pygmy Psyllbug
Gen. 1 sp. TBC M
BL 3.3mm



Reduviidae Scutdash Woody Redubug
Gen. sp. TBC
BL 10.2mm



Rhyparochromidae White-edge Black
Rhybug *Gen. sp.* TBC
BL 5.1mm



HYMENOPTERA - Bethylidae
Long Body Pristocerine Bethwasp
Rhabdepyris sp. TBC F BL 10.1mm

Appendix 5 Insecta SUMMER



Bethylidae Longbody Pristocerine
Bethwasp *Rhabdepyris* sp. TBC M
BL 12.8mm



Chalcididae White-kneed Chalwasp
Gen sp. TBC
BL 4.7mm



Chrysididae (example) Pygmy Green
Chryswasp *Chrysis* sp. TBC
BL 7.2mm



Colletidae Yellow-nape Sooty Collbee
Hylaeorhiza nubilosa
WL 9.2mm



Eupelmidae Pygmy Redeye Spotwing
Eupwasp Gen. sp. TBC
BL 4.2mm



Family unknown Thickwaist
Brownbody Pygmy Wasp Gen. sp. TBC
BL 3.9mm



Formicidae Shiny Redfront Shieldhead
Ant *Papyrius nitidus*
BL 6.2mm



Formicidae Little False Meat Ant
Melophorus turneri
BL 3.5mm

Appendix 5 Insecta SUMMER



Formicidae Great Meat Ant
Iridomyrmex greensladei
BL 10.3mm



Formicidae Pygmy Whitesock Black Ant
Ochetellus sp. 'glaber complex'
BL 2.6mm



Formicidae Southern Two-tone Strobe Ant
Opisthopsis rufithorax
BL 6.4mm



Ichneumonidae Black-kneed Dotneck Ichwasp Gen. sp. TBC
BL 13.0mm



Ichneumonidae Lemon and Ochre Ichwasp Gen. sp. TBC F
BL 11.7mm



Ichneumonidae Lemon and Ochre Longbody Ichwasp Gen. sp. TBC M
BL 11.0mm



Megachilidae Brownhand Red-bottom Megabee
Megachile sp. TBC M
BL 9.3mm



Mutillidae Great Pied Mutilwasp
Ephutomorpha formicaria F Dingo Rocks Conservation Reserve W.A. BL 17.2mm

Appendix 5 Insecta SUMMER



Mutillidae Greenhead 2-blotch Pygmy Mutilwasp *Ephutomorpha* sp. TBC F
BL 7.1mm



Mutillidae Little Redneck Mutilwasp *Ephutomorpha* sp. TBC M
BL 7.5mm



Mutillidae Pygmy 2-blotch Goldfront Mutilwasp *Ephutomorpha* sp. TBC F
BL 6.4mm



Mutillidae Pygmy Copper and Gold Mutilwasp *Ephutomorpha* sp. TBC F
BL 5.0mm



Mutillidae Silver-tipped Black Mutilwasp *Ephutomorpha* sp. TBC M
BL 10.8mm



Pompilidae Lesser Spider Hawk Pomwasp *Cryptocheilus distinctus* F
BL 20.0mm



Pompilidae Orangehorn Pomwasp *Fabriogenia* sp. TBC
BL 12.5mm



Pompilidae White-banded Pomwasp *Turneromyia* sp. TBC
BL 16.2mm

Appendix 5 Insecta SUMMER



Proctotrupidae Little Black
Tooth-kneed Procwasp *Gen. sp.* TBC
BL 4.3mm



Scoliidae (example) Lesser Bluewing
Scoliwasps *Scolia sp.* eastern Australia
©M. G. Jeffries (*S. verticalis* similar)



Sphecidae Common Redwaist
Sphecwasp *Podalonia tydei suspiciosa*
Perth area W.A. BL 20mm



Sphecidae Dull-banded Wasp
Gen. sp. TBC
BL 14.1mm



Sphecidae Great Brownwing
Sphecwasp *Sphex (Sphex) vestitus*
BL 23.5mm.



Sphecidae Great Longwaist Sphecwasp
Ammophila instabilis F
BL 29mm



Sphecidae Medium Black Sphecwasp
Sphex (Sphex) sp. TBC
BL 12.8mm

Appendix 5 Insecta SUMMER



Tiphiidae Exclamation-necked Tiphwasp
Gen. sp. TBC F
BL 7.5mm



Tiphiidae Exclamation-necked Tiphwasp
Gen. sp. TBC (M left)
BL 7.5mm



Tiphiidae Longbody Black Tiphwasp
nr. Rhadiogaster sp. TBC F
BL 10.8mm



Torymidae Wingdot Redeye Pygmy
Torywasp *Megastigmus sp.* TBC F
BL 5.3mm



Vespidae Common Narrow-waist
Vespwasp *Delta bicinctum* Perth area W.A.
BL 24.0mm



Vespidae Dot-templed Vespwasp
Gen. sp. TBC
BL 12.9mm



Vespidae Little Potter Vespwasp
Pseudepipona a. angulata
BL 10.8mm



Vespidae Thickwaist Potter Vespwasp
Abispa ephippium Perth area W.A.
BL 30mm

Appendix 5 Insecta SUMMER



ISOPTERA Termitidae Pygmy
Darkbody Nasute Termite *Nasutitermes* sp.
TBC (soldier) BL 3.4mm



LEPIDOPTERA Cosmopterygidae
4-band Orange-edge Cosmoth
Macrobathra sp. TBC BL 10.1mm



Cosmopterygidae 8-blotch Cosmoth
Macrobathra sp. TBC
WL 6.1mm



Cossidae 4-dot Pygmy Cosmoth
Brevicyttara cyclospila M
BL 18.9mm



Family unknown Dull blotched
Beige Moth *Gen. sp.* TBC
WL 11.1mm



Family unknown Head and
Shoulder-dashed Moth *Gen. sp.* TBC
WL 12.1mm



Family unknown Little Silvered Pied
Moth *Gen. sp.* TBC
WL 6.3mm



Family unknown Little Tailcrest
Pied Moth *Gen. sp.* TBC
WL 5.9mm

Appendix 5 Insecta SUMMER



Gelechiidae Greycape Bark Gelmoth
Gen. sp. TBC
WL 14.0mm



Geometridae 3-barred Bark Geomoth
Stibaroma sp. TBC
WL 16.2mm



Geometridae Charcoal-barred Chestnut
Geomoth *Cryphaea sp.* TBC
WS 30mm



Geometridae Common Bark Geomoth
Ectropis excursaria Perth W.A.
WS 28mm



Geometridae Little White-edge Beige
Geomoth *Idaea sp.* TBC
WS 19.4mm



Geometridae Muted Brown and Grey
Geomoth *Aporoctena sp.* TBC
WL 12.1mm



Geometridae Pink-shoulder Jade
Geomoth *Chlorocoma assimilis*
WS 26.0mm



Geometridae Snow-edged Darkbar
Geomoth *Epyaxa subidaria*
WS 21.1mm

Appendix 5 Insecta SUMMER



Geometridae Fine-dotted Beige
Geomoth *Scopula* sp. TBC
WL 11.2mm



Geometridae Zigzag Bark Geomoth
Cleora sp. TBC
WS 36mm



Noctuidae Bronzed Muted Noctumoth
Athetis sp. TBC
WL 14.8mm



Noctuidae Charcoalneck Noctumoth
caterpillar *Gen. sp.* TBC
BL 23.3mm



Noctuidae Southern Old Lady
Noctumoth *Dasypodia selenophora*
Perth area W.A. WS 65mm



Noctuidae Crested Silvermark
Noctumoth *Chrysodeixis argentifera*
WL 19.8mm



Noctuidae Crested Woodknot
Noctumoth *Neumichtis* nr. *nigerrima* M
WS 26mm



Noctuidae Native Budworm Noctumoth
Helicoverpa punctigera
WS 38mm

Appendix 5 Insecta SUMMER



Noctuidae Southern Armyworm
Noctumoth *Persectania ewingii* Perth area
W.A. WS 44.0mm



Nymphalidae Lesser Wanderer
Nymphwing *Danaus chrysippus* M Perth
W.A. WS 75.0mm



Nymphalidae Western Xenica
Nymphwing *Geitoneura minyas* F Perth
W.A. WS 35.0mm



Nymphalidae Yellow Admiral Nymph-
wing *Vanessa itea* Perth W.A.
WS 60.0mm © J. Taylor



Oecophoridae Darkedge Satin
Oecomoth *Philobota nr. productella* TBC
WL 12.4mm



Oecophoridae Darkfringe Apricot
Oecomoth *Eochrois caminiis*
WL 12.1mm



Psychidae Untidy Psychmoth (case)
Gen. sp. TBC
Case Length 30.2mm



Pyralidae Brush-wing Bark Pyralmoth
Spectrotrota nr. fimbrialis TBC M
WL 10.0mm

Appendix 5 Insecta SUMMER



Pyralidae Dark-scalloped Ground
Pyralmoth *Uresiphita ornithopteralis*
WL 17.0mm



Pyralidae Whitestripe Longnose Legume
Pyralmoth *Etiella behrii*
WL 13.6mm



Tineidae Little Whitewig Tinmoth
Monopis nr. icterogastra TBC
WL 8.6mm



Mantidae 8-spotted Straw Mantis
Mantis octospilota M
BL 68.0mm



NEUROPTERA - Ascalaphidae
Curvelobe Ascalacewing *Gen. sp.* TBC
(larva) BL 16.6mm



Ascalaphidae Thorny Ascalacewing
Gen. sp. TBC (early instar larva)
BL 5.8mm

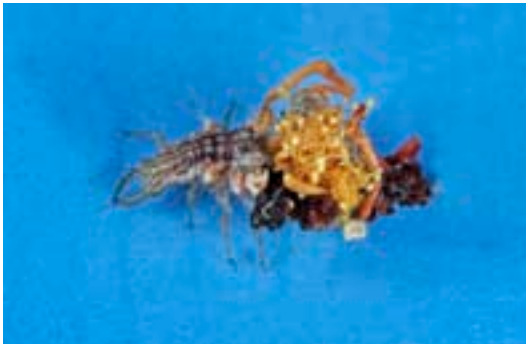


Ascalaphidae Yellow-blotched Hairy
Ascalacewing *Pilacmonotus sabulosus* F
BL 32.0mm



Chrysopidae Lesser Green Lacewing
Mallada sp. TBC
BL 15.0mm

Appendix 5 Insecta SUMMER



Chrysopidae Green Lacewing larva
Gen. sp. TBC
BL 4.7mm



Mantispidae Great Rose-tinted
Mantilacewing *Campion australasiae*
WL 20.9mm



Myrmeleontidae Beige Hornband
Myrmlacewing *Glenoleon osmyloides*
BL 20.0mm



ODONATA - Libellulidae
Blue Skimmer Libelddragonfly
Orthetrum caledonicum F BL 45.0mm



Libellulidae Blue Skimmer
Libelddragonfly *Orthetrum caledonicum* M
WS 72.0mm



ORTHOPTERA - Acrididae
Common Bandwing Acrihopper
Pycnostictus seriatus (with mites) BL 27.0mm



Acrididae False Gumleaf Acrihopper
Goniaeoidea sp. TBC
BL 36.9mm

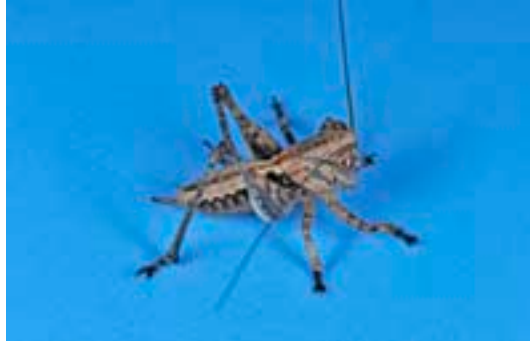


Gryllidae White-edge Grylcricket
Gen. sp. TBC
BL 12.2mm

Appendix 5 Insecta SUMMER



Tettigoniidae Creamstripe Marauding
Tettihopper *Metaballus* sp. TBC
BL 41.9mm



Tettigoniidae Shortwing Minute
Shieldback Tettihopper
Oligodectes sp. TBC BL 9.2mm



PSOCOPTERA Family Un-
known 2 *Gen. sp.* TBC
Darkneck Brown Psocouse WL 2.3mm



THYSANURA - Nicoletiidae
Golden Termite Nicosilverfish
Atopatelura michaelsoni BL 7.9mm

Appendix 6(a,c) Amphibia and Reptiles SUMMER



ANURA Hylidae Motobike Frog *Litoria moorei* Perth area W.A.
SVL 110mm © B. Maryan



SNAKES ORDER SQUAMATA SUBORDER SERPENTES

Elapidae Common Mulga Snake
Pseudechis australis Ajana W.A.
SVL 170cm © B. Maryan



Elapidae Western Gwardar
Pseudonaja mengdeni Paynes Find area
W.A. SVL 135cm



Typhlopidae Prong-snouted Blindsnake
Ramphotyphlops bituberculatus
TL 360mm

Appendix 1(b) Arachnida AUTUMN



ARANEAE (SPIDERS)

Araneidae Pygmy Flatwaist Araspider
Araneus ?amblycyphus (imm.)
BL 3.4mm



Araneidae St. Andrew's Cross Araspider
Argiope trifasciata F
BL 20.0mm



Araneidae Variable Tuberculated
Orbweb Araspider *Eriophora biapicata* F
BL 17.6mm



Barychelidae Brownback Blackhead
Baryspider *?Synothele* sp. TBC (imm.)
BL 6.0mm



Desidae Brown-marbled Desispider
Badumna sp. TBC (pen.) M
BL 5.6mm



Desidae Marble Whiteback Spider
Phryganoporus sp. TBC (imm.)
BL 2.9mm



Lycosidae Dot-backed Darkface
Lycospider *Venatrix arenaris* (imm.)
BL 4.0mm



Lycosidae Dot-backed Darkface
Lycospider *Venatrix arenaris* F
(with eggsac) BL 9.1mm

Appendix 1(b) Arachnida AUTUMN



Lycosidae Spot-backed
Longbody Lycospider *Gen. sp.* TBC (imm.)
BL 6.2mm



Nephilidae Southern Golden Orb
Nephspider *Nephila edulis* F
BL 29.3mm



Nephilidae Southern Golden Orb
Nephspider *Nephila edulis* M
BL 3.9mm



Salticidae Blackglove Flat Bark
Saltspider *Holoplatys nr. delongi* TBC M
BL 5.4mm



Salticidae Pygmy Palestripe Bark
Saltspider *Gen. sp.* TBC M
BL 2.9mm



Salticidae Damask-backed Saltspider
Opisthoncus sp. TBC (juv.)
BL 2.3mm



Tetragnathidae Western Large-jawed
Tetraspider *Tetragnatha sp.* TBC M
BL 7.7mm



Theridiidae Brownstain Globe
Therispider *Euryopis sp.* TBC F
BL 3.6mm

Appendix 1(a,b) Arachnida SPRING



Theridiidae Reticulated Angleback
Therispider *Gen. sp.* TBC F
BL 7.2mm



Theridiidae Quicksilver Therispider
Argyrodes sp. TBC F
BL 3.1mm



Thomisidae Greenhead Flower
Thomispider *Diaea sp.* TBC
BL 2.8mm



Zoridae Woody Tuftback Zorispider
Argoctenus sp. TBC (pen.) M
BL 6.0mm



Zodariidae Brown-marbled Zodaspider
?Habronestes. sp. TBC (imm.) F
BL 6.3mm



Zodariidae Brown-marbled
Zodaspider *?Habronestes sp.* TBC (imm.)
M BL 6.7mm

Appendix 5 Insecta AUTUMN



BLATTODEA - Blatellidae
Blackhead Long Cerci Blatelloid
Neotemnoteryx nr. fulva WL 15.5mm



Blattidae Wingless Banded Erect
Blatelloid *Platyzosteria* sp. TBC
BL 11.2mm



COLEOPTERA - Anobiidae
Flathair Helmet Anobeetle
Deltocryptus sp. TBC BL 2.3mm



Anthicidae Yellowthigh Bristleback
Anthibeetle *nr. Lagrioida* sp. TBC
BL 4.1mm



Anthicidae Hairy False Carab
Anthibeetle *Gen. sp.* TBC
BL 3.0mm



Cantharidae Western Orangeneck
Canthbeetle *Chauliognathus* sp. TBC F
BL 11.0mm



Coccinellidae Common Wavyband
Coccibeetle *Coccinella transversalis* Perth
W.A. BL 5.9mm



Curculionidae Headstripe Embroidered
Curcweevil *Gen. sp.* TBC
BL 9.4mm

Appendix 5 Insecta AUTUMN



Curculionidae Small bristle Paleside Curcweevil *Gen. sp.* TBC
BL 5.8mm



Elateridae Brownspine Dark Elatbeetle *Gen. sp.* TBC
BL 7.6mm



Family unknown Glossy Black Helmet Beetle *Gen. sp.* TBC
BL 5.4mm



Family unknown Tiny Blackhead Dull-blotch Beetle *Gen. sp.* TBC
BL 2.4mm



Hydrophilidae Rimneck Hydrobeetle *Helochares (Hydrobaticus) tenuistriatus*
BL 4.7mm



Leiodidae Thickleg Brown Helmet Leiobeetle nr. *Zeadolopus sp.* TBC
BL 2.5mm



Phalacridae Black Largescute Helmet Phalbeetle nr. *Phalacrinus sp.* TBC
BL 2.7mm



Staphylinidae Redneck 3-prong Staphbeetle *Gen. sp.* TBC
BL 6.0mm

Appendix 5 Insecta AUTUMN



Staphylinidae Pygmy Squareneck
Staphbeetle *Gen. sp.* TBC
BL 2.5mm



Staphylinidae Redwing 3-prong
Staphbeetle *nr. Correa sp.* TBC
BL 5.7mm



Tenebrionidae Ridged Broad Piedish
Tenebeetle *Helea sp.* TBC
BL 20.5mm



DERMAPTERA - Labiduridae
Common Handsome Labiwig *Labidura
truncata* F BL 27.7mm



DIPTERA - Bombyliidae Powder-
bottom Inkstain Bomfly *Lygyra cingulata*
WS 25.4mm



Chironomidae Ridgehump
Smudgewing Chiromidge *Gen. sp.* TBC
BL 4.3mm



Dolichopodidae Copper Patternwing
Dolifly *nr. Austrosciapus sp.* TBC
BL 8.1mm



Family unknown Largehump 2-dash
Midge Chiromidge *Gen. sp.* TBC
BL 3.6mm

Appendix 5 Insecta AUTUMN



Family unknown Wedge-shouldered
2-dot Midge *Gen. sp.* TBC M
BL 3.9mm



Muscidae Australian Bush Muscafly
Musca vetustisissima
BL 5.1mm



Tabanidae Large Browneye Tabfly
Gen. sp. TBC
BL 14.9mm



Tipulidae Brown Longsnout Tipufly
Gen. sp. TBC
WL 12.4mm



HEMIPTERA - Aradidae
Cheekhorn Arabug *Brachyrhynchus nr.*
wilsoni TBC BL 4.3mm



Cicadellidae Green Redeye Clearwing
Cicahopper *Rosopaella citrinella*
WL 7.2mm



Cicadellidae Sulphur Cicahopper
Gen. sp. TBC (nymph)
BL 3.5mm



Cicadidae South-west Orange Cicada
Cicadetta convergens (nymphal case)
BL 22.0mm

Appendix 5 Insecta AUTUMN



Corixidae Large neck Pale-edge
Corixibug *Agraptocorixa* sp. 1 TBC
BL 7.4mm



Corixidae Little Smudge-line Corixibug
Micronecta robusta
BL 4.0mm



Lygaeidae Whitewaist Darkedge
Lygabug *Gen. sp.* TBC
BL 5.8mm



Membracidae Southwest Memhopper
Gen. sp. TBC (nymph)
BL 5.8mm



Notonectidae Orangeneck Fullkeel
Notobug *Anisops thienemanni*
BL 7.4mm



Pentatomidae Bright-mottled Bark
Pentabug *Alcaeus varicornis*
BL 15.4mm



Pentatomidae Western Spineless Bark
Pentabug *Oncocoris apicalis*
BL 9.8mm



Psyllidae Slender Spotted Psylbug
Gen. 3 TBC M
BL 3.5mm

Appendix 5 Insecta AUTUMN



Psyllidae Red and Green Psyllid
Gen. 4 sp. TBC M
BL 4.5mm



Reduviidae Southern Harlequin
Redbug *Havinthus rufovarius*
BL 15.6mm



Rhyparochromidae Trilobe-necked
Rhybug Gen. sp. TBC
BL 5.8mm



HYMENOPTERA - Braconidae
Honeyshin 2-dot Braconid
Apanteles ippeus WL 3.5mm



Braconidae (example) Redhead
Whitewaist Braconid *Callibracon* sp. © K.
Hobart (dwarf species similar)



Chalcididae Honeyleg 2-dash Chalwasp
Gen. sp. TBC
WL 6.7mm



Chalcididae Whitesock Green
Chalwasp Gen. sp. TBC
BL 3.5mm



Formicidae Medium Queen Ant
Melophorus 'turneri' complex 3'
BL 7.2mm

Appendix 5 Insecta AUTUMN



Formicidae Globeneck Honeyed Ant
Aphaenogaster poultoni
BL 3.9mm



Formicidae Glossy Honeyhigh
Bighead Ant *Camponotus evae zeuxis*
(major worker) BL 8.0mm



Formicidae Little Brownwaist Bulldog
Ant *Myrmecia* sp. 'urens complex JDM 1'
BL 7.7mm



Formicidae Little Alate Ant *Melophorus*
sp. 'turneri complex 1'
BL 3.4mm



Formicidae Little Alate Ant *Melophorus*
sp. 'turneri complex 2'
BL 3.8mm



Formicidae Greenhead Ant
Rhytidoponera metallica (king)
WL 8.5mm



Mutillidae Brownfront Silvered
Mutilwasp *Ephutomorpha* sp. TBC F
BL 10.0mm



Mutillidae Meatant Mutilwasp
Ephutomorpha sp. TBC F
BL 6.8mm

Appendix 5 Insecta AUTUMN



Perilampidae Furrowneck Green
Pygmy Periwasp *Gen. sp.* TBC
BL 2.4mm



Pompilidae (example) Black Pomwasp
© J. Dockens (similar to *Episyron sp.*)
BL 18.0mm



Scoliidae Common Yellowband
Scoliwasp *Campsomeris tasmaniensis*
BL 12.6mm



Scoliidae Whiteband Spineleg
Scoliwasp *Campsomeris carinifrons*
BL 15.0mm



Sphecidae Brownleg Bronzetip
Sphecwasp *Gen. sp.* TBC
BL 9.5mm



Sphecidae Maskneck Oliveband
Sphecwasp *Bembix sp.* TBC
BL 15.3mm



Sphecidae Threadwaist Potter
Sphecwasp *Sceliphron laetum* Australia-wide
BL 27.0mm © M.G. Jeffries



Family unknown Blackhead Termite
Gen. sp. TBC (worker)
BL 6.3mm

Appendix 5 Insecta AUTUMN



Family unknown Pallid Termite
Gen. sp. TBC (female pre-alate)
BL 6.4mm



Termitidae Pygmy Darkbody Termite
Nasutitermes sp. TBC (worker)
BL 3.1mm



LEPIDOPTERA - Arctiidae
Southern Lipstick Spotted Arcmoth caterpillar
Utetheisa pulchelloides BL 33.9mm



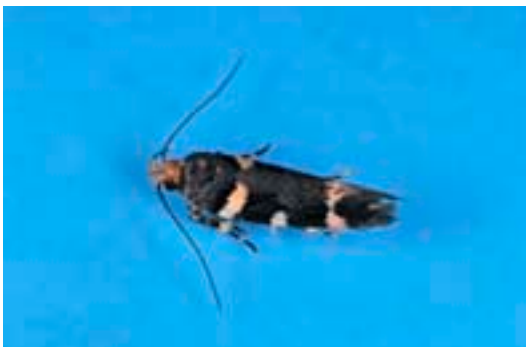
Arctiidae Southern Lipstick Spotted
Arcmoth *Utetheisa pulchelloides*
WL 19.0mm



Arctiidae Pied Ubiquitous Day Arcmoth
Nyctemera amicus
WS 29.2mm.



Carposinidae Snowy Soot-etched
Carpmoth *Gen. sp.* TBC
WL 8.8mm



Cosmopterigidae Rustycap Pied
Cosmoth *Macrobathra sp.* TBC
WL 6.7mm



Cosmopterigidae 3-bar Pied Crest-tip
Cosmoth *Limnaecia sp.* TBC
WL 6.4mm

Appendix 5 Insecta AUTUMN



Eperminiidae Blackdot Grey Fringewing
Epmoth *Gen. sp.* TBC
WL 6.8mm



Family unknown Palechevron-back
Streaky Moth *Gen. sp.* TBC
WL 9.0mm



Family Unknown Pygmy Tail-dashed
Bark Moth *Gen. sp.* TBC
WL 7.1mm



Gelechiidae Black-streaked Bark
Gelmoth *Gen. sp.* TBC
WL 9.0mm



Gelechiidae Sidestreak Cut-tip Gelmoth
Gen. sp. TBC
WL 7.6mm



Geometridae Broadwing Grey Bark
Geomoth *Phelotis sp.* TBC
WL 25.8mm



Geometridae Weak-marbled Brown
Geomoth *Gastrinodes nr. argoplaca* TBC
WL 14.6mm



Geometridae Finestripe Geomoth
Caterpillar *Gen. sp.* TBC
BL 15.6mm

Appendix 5 Insecta AUTUMN



Geometridae Pallid 2-dot Darkedge
Geomoth *Casbia* sp. TBC
WS 24.3mm



Geometridae Western Satin Y-Geomoth
Thalaina tetraclada
WL 18.9mm



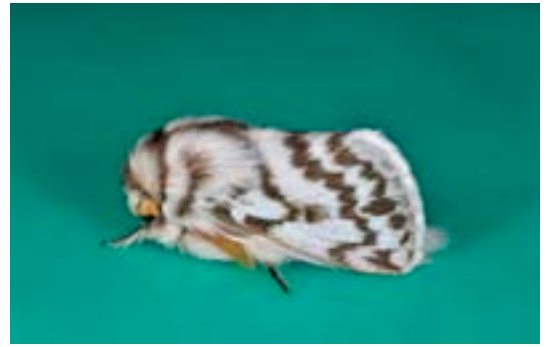
Geometridae Zigzag-wedge Longnose
Geomoth *Microdes* sp. TBC
WL 12.4mm



Hepialidae Woodknot Silverstripe
Hepmoth *Trictena atripalpis* M
WL 49.2mm



Lasiocampidae Pallid Wavywing
Lasiomoth *Pernattia chlorophragma* F
WL 19.5mm



Lasiocampidae Pallid Wavywing
Lasiomoth *Pernattia chlorophragma* M
WL 18.0mm



Lycaenidae Saltbush Blue Lycawing
Theclinesstes serpentata
WS 18.0mm



Noctuidae Common Woodknot
Noctumoth *Heliothis punctifera* F
WL 16.7mm

Appendix 5 Insecta AUTUMN



Noctuidae Crested Silvermark
Noctumoth *Chrysodeixis argentifera*
WL 19.5mm



Noctuidae Native Budworm Noctumoth
Helicervopa punctigera
WL 20.0mm



Noctuidae Snowtip Woodgrain
Noctumoth *Proteuxoa floescens*
WL 16.2mm



Noctuidae Snowy Brown Pasture
Noctumoth *Apina callisto* M Sawyer's
Valley W.A. WS 34.0mm © E. McCrum



Notodontidae Processionary Notomoth
caterpillar *Ochrogaster lunifer*
BL 22.0mm



Nymphalidae Meadow Argus
Nymphwing *Junonia villida* M
WS 52.0mm



Oecophoridae Blackcollar 4-blotch
Oecomoth *Gen. sp.* TBC
WL 10.0mm



Oecophoridae Brown-speckled
Fringewing Oecomoth *Gen. sp.* TBC
WL 7.0mm

Appendix 5 Insecta AUTUMN



Papilionidae Australian Chequered Papwing *Papilio demoleus sthenulus*
Cammowael Qld. WS 74.0mm



Pyralidae Anglestreak Longwing Pyralmoth *Nomophila nr. corticalis*
WL 13.4mm



Pyralidae Etched Multibrown Pyralmoth *Mimaglossa sp.* TBC
WL 13.0mm



Pyralidae Ripplewaist Longnose Pyralmoth *Hednota longipalpella* M
WL 14.8mm



Pyralidae Wavy-edged Brown Pyralmoth *Achyra affinitalis*
WL 11.8mm



Pyralidae White-barred Dark Pyralmoth *Spoladea recurvalis*
WL 16.7mm



Tortricidae Satin Beige Lucerne Tortmoth *Merophyas divulsana*
WL 10.5mm



MANTODEA - Mantidae Mantid egg-case (ootheca) *Gen. sp.* TBC
BL 30.0mm

Appendix 5 Insecta AUTUMN



NEUROPTERA - Nymphidae
Nymlacewing *Gen. sp.* TBC larva
BL 6.0mm



ODONATA- Aeshnidae Australian
Emperor Aeshdragonfly *Hemianax
papuensis* BL 65.0mm



Coenagrionidae Red-fronted
Coenadamselfly *Xanthagrion erythroneurum*
M BL 32.8mm



Hemicorduliidae Australian Emerald
Hemidragonfly *Hemicordulia tau*
WS 70.0mm



Lestidae Blue Ringtail Lestidamselfly
Austrolestes annulosus M
BL 36.3mm



Libellulidae Wandering Glider Libel-
dragonfly *Pantala flavescens* M Auburn R.
Qld. WS 75.0mm © J. Taylor



Libellulidae Scarlet Percher
Libel-dragonfly *Diplacodes bipunctata* M
WS 49.0mm



ORTHOPTERA - Acrididae
Blackthigh Black-tear Acridhopper
Gen. sp. TBC BL 28.2mm

Appendix 5 Insecta AUTUMN



Acrididae Common Bark Acrihopper
Coryphistes ruricola (violet, purple race)
WL 52.2mm



Acrididae Ridgeback Deadleaf
Acrihopper *Goniaea australasiae* M
WL 29.0mm



Acrididae Common Pardillana
Acrihopper *Pardillana limbata* M
WL 38.4mm



Acrididae Darkedge Paletrim Acrihopper
Schizobothrus flavovittatus
WL 29.1mm



Acrididae Giant Slantface Acrihopper
Acrida conica M
WL 43.5mm



Acrididae Harlequin-thighed Pardillana
Pardillana sp. TBC M (from spider web)
WL 26.7mm



Acrididae Longleg Bandwing Acrihopper
Heteropternis obscurella
WL 28.2mm



PSOCOPTERA - Family unknown
Pale Honey Psocouse *Gen. sp.* TBC
WL 4.4mm

Appendix 5 Insecta AUTUMN

Thysanura Family unknown

Dead Tree Crevice Silverfish
Gen. sp. TBC BL 14.0mm



TRICHOPTERA - Hydroptilidae

Mothy Shortwing Hydrocaddis
Acritoptila globosa WL 5.7mm



Leptoceridae Common Southern
Leptocaddis *Triplectides australis*
WL 11.2mm



Leptoceridae Large Beige Leptocaddis
Oecitis sp. TBC
WL 18.8mm

Appendix 6 (b,c) Reptilia AUTUMN



REPTILIA - Gekkonidae South-western Clawless Gecko *Crenadactylus ocellatus ocellatus* (juv.) SVL 17.5mm



Gekkonidae South-western Clawless Gecko *Crenadactylus ocellatus ocellatus* SVL 31.2mm



Pygopodidae Fraser's Delma *Delma fraseri* Goomalling area W.A. SVL 140mm © B. Maryan



Scincidae Barred Wedge-snout *Ctenotus schomburgkii* Bindoon area W.A. SVL 50mm © B. Maryan



Varanidae Black-tailed Tree Monitor *Varanus tristis* Bindoon area W.A. SVL 280mm © B. Maryan