6. ARACHNID AND MYRIAPOD FAUNA

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6.1 Introduction

The invertebrate fauna of Australia is one of the most poorly studied in the world, with vast numbers of undescribed species. Virtually any collection will contain at least one new species, especially from remote regions such as the semi-arid deserts. Irregular collections of invertebrates from the Pilbara have made their way into museum collections. Some of this material has formed part of taxonomic revisions, thus allowing scientific names to be applied to some of the elements of the fauna. However, detailed collections spanning several seasons have not previously been made from the region. The data presented here provide a base-line list of the taxa collected (excluding insects, crustaceans and molluscs) from the Abydos-Woodstock Reserve, along with notes on taxa of importance.

6.2 Study Area and Methods

The sites are documented in Appendix I and the history, vegetation and physiography of the Reserve outlined in Chapters 1-4 (this volume).

Specimens were collected by a variety of methods. Pitfall trapping for vertebrates was conducted at many sites, and many larger invertebrates were also obtained from these pitlines (see Chapter 5, this volume). Supplementary pitfall traps filled with preservative were used on several surveys to assess the smaller invertebrates. Night collecting with the aid of head-torches allowed further sampling of the nocturnal invertebrates.

All specimens were preserved in 75% ethanol and are lodged in the Western Australian Museum.

6.3 Arachnids

Approximately 130 species in 5 orders (Scorpionida, Araneae, Pseudoscopionida, Opilionida, Acarida) were collected (Table 6.1).

Scorpionida

Two species of *Lychas* (Buthidae), *Urodacus armatus* Pocock and *Urodacus* sp. (Scorpionidae) were taken in small numbers from pitfall traps on the Reserve. *Lychas* spp. and *Urodacus armatus* have been previously recorded from the Pilbara (Koch, 1977). The status of *Urodacus* sp. is uncertain due to problems in the identification of Australian scorpions.

Araneae

Mygalomorphae

All of the mygalomorphs were collected from pitfall traps. A single male of *Missulena* sp. was collected at WS4 in February 1989, and three specimens of *Aganippe* sp. were

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collected in March 1988 and February 1989. At least five species of Nemesiidae (*Aname* spp., *Kwonkan* sp. and *Yilgarnia* sp.) were taken. The most abundant was *Aname* sp. 1, which was common in February 1989 and October-November 1990.

Araneomorphae

Araneomorph spiders were clearly the most abundant and diverse arachnid group collected on the Reserve.

Araneidae: The "true" orb-weaving spiders were well-represented on the Reserve with seven species. *Argiope dietrichae* was fairly common on the rock walls above gorge pools at WS14 and WS15 in April 1989. Further sightings were made in October 1990, but specimens were not collected. This species is only known from northern Western Australia and the Northern Territory (Levi, 1983). *Argiope protensa* was found in February and April 1989 amongst spinifex; this species is widely distributed across Australia (Levi, 1983). Other araneids were sporadically found on the Reserve. A single immature *Dolophones* sp. was collected in October-November 1990 from WS2, and two specimens of a small species of *Eriophora* were collected on different surveys. Three unidentified genera were also found in small numbers.

Clubionidae: *Clubiona* sp. was collected twice, and a single specimen of *Meedo* sp. was taken at WS5 during February 1989. The latter is a significant range extension of the genus, which has previously only been recorded from Meedo Station, near Shark Bay (Main, 1987). Its true familial placement must await a review of the Australian "clubionid" fauna (N.I. Platnick, pers. comm.).

Corinnidae: Two species of Corinnidae were collected in low numbers from pitfall traps: *Supunna* sp. and a species of an unidentified genus.

Ctenidae: The two species apparently belong to different genera and were moderately abundant in pitfall trap samples.

Desidae: A single nest of the colonial spider, *Badumna candida*, was found at WS17 during April 1989. The nest contained a mature female and numerous medium-sized immatures. *Forsterina* sp. and Genus A were found in low numbers.

Gallieniellidae: Immature specimens of an undescribed genus were taken in pitfall traps in February 1989.

Gnaphosidae: The ground-dwelling gnaphosid fauna was found to be quite diverse, with 10 species in 10 genera. Only *Echemus* sp. and Genus A sp. occurred in moderate numbers, while the others (*Aristerus* sp., *Ceryerda* sp., *Eilica* sp., *Hemicloea* sp., Genus B sp., Genus C sp., Genus D sp. and Genus E sp.) were collected sporadically.

Hersiliidae: Two immature specimens of *Tamopsis* sp. were collected in April 1989 at WS11 and WS17. They may represent different species as one was collected from the bark of a tree, while the other was collected on a granite rock.

Heteropodidae: At least four species of huntsman spiders were collected on the Reserve, along with a number of unidentified juveniles which may represent other species. *Isopeda* sp., *Olios* sp. and Genus A were collected only during February 1989, while *Pediana horni* was found during March 1988, May 1988 and February 1989. Specimens from Abydos-Woodstock Reserve were cited by Hirst (1989).

Table 6.1: List of arachnids collected on Abydos-Woodstock Reserve.

SCORPIONIDA	
Buthidae	*Lychas* sp. 1
	Lychas sp. 2
Scorpionidae	*Urodacus armatus* Pocock
	Urodacus sp.
ARANEAE	
Mygalomorphae	
Actinopodidae	*Missulena* sp.
Idiopidae	*Aganippe* sp.
Nemesiidae	*Aname* sp. 1
	Aname sp. 2
	Aname sp. 3
	Kwonkan sp.
	Yilgarnia sp.
Araneomorphae	
Araneidae	*Argiope dietrichae* Levi
	Argiope protensa L. Koch
	Dolophones sp.
	Eriophora sp.
	Genus A sp.
	Genus B sp.
	Genus C sp.
Clubionidae	*Clubiona* sp.
"Clubionidae"	*Meedo* sp.
Corinnidae	*Supunna* sp.
	Genus A sp.
Ctenidae	Genus A sp.
	Genus B sp.
Desidae	*Badumna candida* (L. Koch)
	Forsterina sp.
	Genus A sp.
Gallieniellidae	Genus A sp.
Gnaphosidae	*Aristerus* sp.
	Ceryerda sp.
	Echemus sp.
	Eilica sp.
	Hemicloea sp.
	Genus A sp.
	Genus B sp.
	Genus C sp.
	Genus D sp.
	Genus E sp.
Hersiliidae	*Tamopsis* sp.
Heteropodidae	*Isopeda* sp.
	Pediana horni (Hogg)
	Olios sp.
	Genus A sp.

Table 6.1 (continued)

Lamponidae	*Lampona* sp.
	Lamponina sp.
Linyphiidae	*Erigone* sp.
	Genus A sp.
Liocranidae	*Orthobula* sp.
Lycosidae	*Lycosa* cf. *arenaris* Hogg
	Lycosa cf. *clara* L. Koch
	Lycosa gibsoni McKay
	Lycosa cf. *woodna* McKay
	Lycosa sp. 2
	Lycosa sp. 3
	Lycosa sp. 4
	Lycosa sp. 5
	Lycosa sp. 6
	Trochosa sp. 1
	Trochosa sp. 2
Miturgidae	*Miturga* sp. 1
	Miturga sp. 2
	Miturga sp. 3
	Miturga sp. 4
	Genus A sp.
Oonopidae	*Gamasomorpha* sp.
	Grymeus sp.
	Opopaea sp.
	Triaeris sp.
	Genus A sp.
Oxyopidae	*Oxyopes* sp.
Pholcidae	Genus A sp.
Pisauridae	*Dolomedes* sp.
	Genus A sp.
Prodidomidae	Molycriinae sp. 1
	Molycriinae sp. 2
	Molycriinae sp. 3
	Genus A sp.
Salticidae	*Clynotis viduus* (L. Koch)
	Holoplatys sp.
	Holoplatys ? sp.
	Lycidas sp. 1
	Lycidas sp. 2
	Margaromma ? sp.
	'Menemerus' bracteatus (L. Koch)
	Ocrisiona ? sp.
	Simaetha sp.
	Zenodorus ? sp.
	Genus A sp.
	Genus B sp.
	Genus C sp.
	Genus D sp.
	Genus E sp.

Table 6.1 (continued)

	Genus F sp.
	Genus G sp.
	Genus H sp.
	Genus I sp.
	Genus J sp.
Segestriidae	Genus A sp.
Selenopidae	*Selenops* sp.
Tetragnathidae	*Nephila edulis* (Labillardiere)
	Tetragnatha sp.
Theridiidae	*Euryopis* sp.
	Latrodectus hasseltii Thorell
	Steatoda sp.
	Genus A sp.
Thomisidae	Genus ?
Trochanteriidae	*Rebilus* sp.
Uloboridae	*Uloborus* sp.
	Zosis sp. 1
	Zosis sp. 2
Zodariidae	*Habronestes* sp.
	Storena sp.
	Genus A sp.
	Genus B sp.
	Genus C sp.
	Genus D sp.
	Genus E sp.
Zoridae	Genus A sp.
	Genus B sp.
	Genus C sp.
New family?	Genus A sp.
PSEUDOSCORPIONIDA	
Chernetidae	*Haplochernes* sp.
Garypidae	*Synsphyronus* sp.
Olpiidae	*Xenolpium* sp.
OPILIONIDA Assamiidae	*Dampetrus* sp.
ACARIDA: IXODIDA	
Argasidae	*Ornithodoros* sp.
Ixodidae	*Amblyomma albolimbatum* Neumann
	Amblyomma sp.
	Rhipicephalus sanguineus (Latreille)

Lamponidae: *Lamponina* sp. was common in pitfall traps, while single specimens of *Lampona* sp. were collected at WS2, WS3 and WS5.

Linyphiidae: A single specimen of *Erigone* sp. was collected at WS9 during February 1989, while other unidentified specimens were taken during September 1988 and February 1989.

Liocranidae: Several specimens of *Orthobula* sp. were taken in wet pitfall traps at WS8 and WS9 in February 1989.

Lycosidae: At least 11 lycosid species were collected on the Reserve, wih further juveniles possibly representing additional species. The *Trochosa* sp. 1 was collected only once from WS8 in February 1989.

Miturgidae: Five miturgid species in two genera were trapped in medium numbers on the Reserve.

Oonopidae: At least five species of these small spiders were collected during the survey. Of interest is the unusual genus *Grymeus* which has previously been reported only from South Australia, Victoria and New South Wales (Harvey, 1987).

Oxyopidae: *Oxyopes* sp. was commonly found in pitfall traps or on vegetation in many areas of the Reserve.

Pholcidae: A single species of pholcid was found in pitfall traps and under rock overhangs and crevices at several sites (WS2, WS8, WS10 and WS15).

Pisauridae: A large female and several juveniles of *Dolomedes* sp. were found in vegetation near pools of water at WS15 during April 1989 and October 1990. The female was carrying an egg-sac, and others were observed during night searches of the gorge. A second pisaurid was collected at WS3 in February 1989 in a pitfall trap.

Prodidomidae: Three species of Molycriinae were collected on the Reserve, along with a fourth species of the family.

Salticidae: Numerous species of this family were found during the survey. The *Margaromma*? sp. were active during daylight hours on granite boulders at WS17 and WS18 during April 1989.

Segestriidae: Two specimens of this family were found, one at WS2 and the other at WS18.

Selenopidae: Specimens of *Selenops* sp. were found under exfoliating granite at WS15 and WS18 during April 1989.

Tetragnathidae: Adult females of the Golden Orb-weaving Spider, *Nephila edulis*, were often observed in their conspicuous webs in many areas of the Reserve, although none were present in February 1989 or October 1989. *Tetragnatha* sp. was common in vegetation near rock pools at WS15.

Theridiidae: *Euryopis* sp. was found at several sites, mostly in pitfall traps. A single specimen of the Red-back Spider, *Latrodectus hasselti*, was found at Woodstock Homestead (WS12). *Steatoda* sp. was found at WS2 and WS9, and a single specimen of Genus A sp. was taken at WS8.

Thomisidae: Three immature specimens were collected at different sites on the Reserve.

Trochanteriidae: Two specimens of *Rebilus* sp. were taken at WS10 and WS12.

Uloboridae: The three uloborid species were most commonly found in small orb-webs in the gorge sites WS14, WS15, and WS17.

Zodariidae: Seven species of Zodariidae were collected on the reserve, mainly in pitfall traps. *Habronestes* sp. and Genus B sp. appeared to be the most common, while others such as *Storena* sp. and Genus E sp. were rarely encountered.

Zoridae: The three zorid species were observed on only a few occasions.

New family?: A suspected new family of araneoid spider was collected in a wet pitfall trap at WS2 in February 1989. Unfortunately, only a single male was found, and repeated searches at the site in October-November 1990 failed to uncover further specimens.

Pseudoscorpionida

Three species of pseudoscorpions, all undescribed, were found. *Xenolpium* sp. was frequently taken from pitfall traps filled with preservative. *Synsphyronus* sp. was restricted to granite outcrops (WS17 and WS18) where it was found under slabs of exfoliating granite. A single specimen of *Haplochernes* sp. was found under the bark of a eucalypt tree at WS8.

Opilionida

A single specimen of *Dampetrus* sp. was collected in a wet pitfall trap at WS6 in March 1988.

Acarida

Numerous mites were collected from wet pitfall traps, under rocks, in pools, or from mammals, but have not been identified for this study. Several tick species (Ixodida) were removed from their mammal hosts. *Ornithodoros* sp. was recorded once from the Woodstock homestead (WS12). A single specimen of the Brown Dog Tick, *Rhipicephalus sanguineus*, was also found at the Woodstock homestead (WS12), and presumably came from a dog kept by the Reserve Manager. Several specimens of *Amblyomma albolimbatum* were collected from the Northern Quoll, *Dasyurus hallucatus*, which represents a new host record for this reptile tick (Roberts, 1970). The poor physical condition of the Quoll may have allowed the opportunistic attachment and feeding of the ticks away from their normal hosts. *Amblyomma* sp. was taken from *Zyzomys argurus* at WS17 in November 1990. This is the first record of an *Amblyomma* sp. from the genus *Zyzomys* (Roberts, 1970).

6.4 Millipedes and Centipedes

Only a single species of millipede and several species of centipedes were recorded from the Reserve (Table 6.2).

Diplopoda: Polyxenida

Polyxenidae: Several specimens of a pincushion millipede, *Unixenus* sp., were collected on the Reserve. *Unixenus mjobergi* was found to be abundant in Karijini area of the Pilbara by Koch (1985).

Chilopoda: Scolopendrida

Cryptopidae: Specimens of this family were found at WS2, WS3 and WS5.

Scolopendridae: Nine species of scolopendrid centipedes were collected on the Reserve. The three specimens of *Asanada* sp. are the first Australian specimens of the genus to be found outside of Cape York (Koch, 1983a), and represent a remarkable range extension. *Arthrorhabdus paucispinus* and *Cormocephalus strigosus* are newly

recorded from the Pilbara, and the 12 specimens of *C. westangelasensis* represent the first record of the species since its description. *Ethmostigmus curtipes*, *Scolopendra laeta* and *S. morsitans* were commonly collected on the Reserve.

Chilopoda: Scutigerida

Scutigeridae: The two species of *Allothereua* (*A. lesueuri* and *A. maculata*) were found at various sites on the Reserve.

Table 6.2: List of millipedes and centipedes collected on Abydos-Woodstock Reserve.

POLYXENIDA	
Polyxenida	*Unixenus* sp.
SCOLOPENDRIDA	
Cryptopidae	Genus A sp.
Scolopendridae	*Arthrorhabdus paucispinus* L.E. Koch
	Asanada sp.
	Cormocephalus strigosus Kraepelin
	Cormocephalus westangelasensis L.E. Koch
	Ethmostigmus curtipes L.E. Koch
	Ethmostigmus parkeri L.E. Koch
	Scolopendra laeta Haase
	Scolopendra morsitans Linnaeus
SCUTIGERIDA	
Scutigeridae	*Allothereua lesueuri* (Lucas)
	Allothereua maculata (Newport)

6.5 Discussion

This study is the result of collections made by different personnel who placed different emphasis on the specimens collected. Therefore, the results are not quantitative, and only broad comparisons can be made between seasons. However, the lack of rain in 1990 clearly affected the invertebrate fauna, which by October-November 1990 was clearly depleted, with species collected during previous surveys failing to appear in the traps.