

Rungulla National Park Bush Blitz

Spiders

1-10 May 2022

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Nomenclature and taxonomy used in this report is consistent with:
World Spider Catalog <https://wsc.nmbe.ch/> and Key to Spider Subfamilies of
Australia <https://apps.lucidcentral.org/spiders/>

Includes changes **not yet reflected** in
The Australian Faunal Directory (AFD)

<https://biodiversity.org.au/afd/home/>

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List of contributors

List of contributors to this report.			
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Abstract

In the Bush Blitz survey of Rungulla National Park, 1-13 May 2022, over 200 spiders were collected: these belonged to 32 families and numbered 97 species. However, of those more than half the species (49) were represented only by juveniles. The suddenness of The Dry, despite the 181 mm of rain during the survey, seems to have severely reduced the number of orb weavers and jumping spiders, usually the most dominant families. One species of *Matilda*, a genus otherwise with rainforest or at least closed forest distributions was taken from a under rocks on a dry mountaintop ridge; this has not been seen before. A tarantula of the genus *Selenotypus* belongs to a species that is known but not yet described. The burrow was remarkable for its shallow depth but zigzagged in the space; that s valuable information. A number of other species are believed to be unnamed but considerable research would be needed to be able to verifiably state that they are unnamed.

1. Introduction

Thorough spider surveys in Queensland began with ABRS supported rainforest and vine thicket surveys from Iron Range through the Wet Tropics to Lamington National Park in south-east Queensland. These generally involved at least two arachnologists working over 5-6 days at each site and, as with this survey, benefited by arachnid collections by fellow scientists. A survey of vertebrate hotspots in the QM collections revealed high diversity areas in rainforests of Iron Range, the Wet Tropics, Eungella, the MacPherson Macleay overlap and, surprisingly, the brigalow landscape of Lake Broadwater (Ingram & Raven, 1991). The rainforest areas were predicted to be hotspots but the Lake Broadwater collection was remarkable. I have long given talks estimating that the diversity of rainforest spiders is around 140-180 species per site but that of open forest only 80-120 species per site. These figures were confirmed by surveys around Brisbane (Stanisic et al., 2003, Stanisic et al., 2005, Burwell et al., 2010) that included rainforest, wetlands and eucalypt forests).

The Lake Broadwater collection extended over one full year including pitfall trapping and was largely sustained by the Lake Broadwater Natural History Association (Davies, 1988). The survey strongly showed how wrong was our presumption of the higher diversity of rainforests over the drier forests (eucalypt, brigalow, mallee, heath, and desert) and how, by sustained surveys, the real diversity of these drier forests can be recognised. However, these data, as noted used vertebrates as surrogates and the spiders of the Lake Broadwater collection has been studied only for a few spider groups.

Harris, Raven, Maxwell & Murray (in mss) further confirmed the “cryptic” high spider diversity in a 18 month long survey of secondary eucalypt forest just west of Brisbane) and recorded 226 species, well above the expected number for rainforests, more so undisturbed open forest.

Hence, the proposed survey of Rungulla was primed with much anticipation. Scientifically, the spider collection from Rungulla in May, 2022 gave few gems. Presumably, despite the heavy rainfall during the expedition, the sharp change to a Dry Season had a dramatic affect: only juveniles of many species were taken. Rungulla, itself, had not been surveyed at all but small collections of larger spiders (Tarantulas, Theraphosidae) had been taken from nearby locations, e.g., Georgetown.

2. Methods

2.1 Site selection

On previous surveys in drier areas of Queensland (e.g., Quinkan, Olkola), the highest diversity was in the actual base camp area. Since, this an area in which only incidental collecting would be done but at hours of activity, fruitful attention was given to the area near the camp, including standard sites. Also, because of the close proximity to NPWS tools, innovative techniques could be applied with heavier equipment. As collections of interest came in from Museum entomologists, acarologists and herpetologists, attention was directed at those sites. Equally, one overnight survey was sought and that needed to be with other colleagues who felt a site deserved attention.

2.2 Survey techniques

Method	Eucalypt	Riverine
Log Rolling	OK	OK
Rock Rolling	OK	OK
Bark Brushing	OK	OK
Litter (Day)	OK	OK
Night Collection	OK	OK
Creek Bank	OK	OK
Bark Stripping	OK	OK
Pitfall	OK	OK
Soil Brushing	OK	OK
Night litter	OK	OK
Banks (inc Creek) night	OK	OK
Curled Bark	OK	OK
4WD Diesel vibration	OK	--
Power blower over litter	OK	--
Lycosids night spotting	OK	OK

4WD Diesel vibration involves using vibration generated by the engine to attract spiders.

A power blower over the ground clears leaf litter and blows trapdoor lids open.

2.2.1 Methods used at standard survey sites

All methods, except power blower and 4WD Diesel vibration, in the above, were used at SSS2, and no creeks at SSS1.

2.3 Identifying the collections

1. Reference to previous surveys, see above plus Bush Blitz at Olkola & Quinkan.
2. Reference to QM Collections
3. References as attached

All identifications by RJ Raven

Spiders in Appendix 1 listed as sp were juvenile, not registered in the QM collection and not considered putative new. Those listed as putative new were arguably new species but descriptions are not possible because males were not taken.

3. Results and Discussion

Appendix 1 lists all spiders recorded during the Bush Blitz. Collections made during this Bush Blitz will result in 100 specimen records being added to public collections and an equivalent number of records added to publicly accessible databases.

3.1 Un-named or not formalised taxa

Table 1. Putatively un-named or not formalised taxa	
Taxon	Comment
<i>Selenotypus</i> sp. nov.	An unnamed species of tarantula previously known from the area but not from Rungulla NP

3.2 Putative new species (new to science)

In this report, 'putative new species' means an unnamed species that, as far as can be ascertained, was identified as a new species as a direct result of this Bush Blitz. Note: of these I can be verifiably certain. Other species marked as spnov are based upon assumptions of high local endemicity and no previous collections in the area.

Table 2. Putative new species (new to science)	
Species	Comment
<i>Matilda</i> sp. nov.	A new species previously unknown to science and in quite a xeric habitat
<i>Karaops</i> sp. nov.	A new species previously unknown to science. The species show highly localised distributions and the area had not been survey so the species is presumed new.

3.3 Exotic and pest species

Table 3. Exotic and pest species recorded			
Exotic/pest species	Location sighted/observed	Indication of abundance	Comments
<i>Latrodectus hasseltii</i>	Campsite Rungulla	Easily found	Introduced from WA & SA in 19 th Century
<i>Artema atlanta</i>	Campsite Rungulla	uncommon	Imported in western areas on machinery

3.4 Threatened species



Selenotypus sp. nov., a small burrowing tarantula found in Rungulla NP

Table 4. Threatened species			
Species	Listing status and level (EBPC, State/Territory)	Location sighted/observed	Indication of abundance
<i>Selenotypus</i> sp. nov.	Listed family, Tarantula, Theraphosidae	Rungulla, 3 sites	Rare

3.5 Range extensions

Table 5. Range extensions or significant infill in distribution records for species			
Species	Location sighted/observed	Distance from nearest known record (km)	Comments
<i>Cethegus robustus?</i>	Rungulla NP	Chillagoe, ca. 300km distant	Spiders are still alive, being reared to adult male when it may prove to be a new species



The large expansive webs of these spiders were found under boulders. The species is possibly *Cethegus robustus*, which I described from Chillagoe in 1984 and has not been reported since. Two specimens are being reared in the hope that they will moult into males from which confident identification can ensure. These spiders take up to five years to mature: adult males then mate and die; females go on to moult each year with some of this genus having been kept in captivity for over 5 years. Estimated life span is around 15-20 years.

3.6 Genetic information

Material of the tarantula has been handed to a PhD student, of Zodariidae to a European research group and the Selenopidae are being sent to a US study.

4. Information on species lists

Most of the specimens taken were immature and although a couple matured during the trip, most did not. Identification of immature spiders is almost impossible and, as a rule, they are not kept and registered in the QM State collection. Hence, although the list itself is reasonably good, the scientific yield is low. No previous collections have been made at Rungulla but limited collections of larger spiders from nearby Georgetown are in the collection.

5. Information for land managers

The most significant issue with these findings are the Tarantula and Curtainweb spider: the mere publication of this report will ensure the two are targeted for illegal collecting.

6. Conclusions

With a survey yielding only 97 species, and less than half of which are of limited value to science, it is clear that much more research is needed on the spiders of the region. This produces severe logistical issues and the Wet Season closes the Park: we were one of the earliest groups in.

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Appendix 1. List of Spiders recorded during the Rungulla National Park Bush Blitz						
Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State Act)	Exotic/ pest
Araneidae	Araneus sp	Orb weaver	N	N	N	N
Araneidae	Argiope keyserlingi	St Andrew's Cross spider	N	N	N	N
Araneidae	Argiope mascordi	St Andrew's Cross spider	N	N	N	N
Araneidae	Argiope ocyaloides	St Andrew's Cross spider	N	N	N	N
Araneidae	Argiope protensa	St Andrew's Cross spider	N	N	N	N
Araneidae	Austracantha minax	Jewel spider	N	N	N	N
Araneidae	Cyrtobil darwini	Darwin's cyrtobil	N	N	N	N
Araneidae	Cyrtophora hirta	Russian Tent spider	N	N	N	N
Araneidae	Hortophora transmarina	Orb weaver	N	N	N	N
Araneidae	Neoscona theisi	Orb weaver	N	N	N	N
Araneidae	Phonognatha wagneri	Leaf curling spider	N	N	N	N
Araneidae	Plebs eburnus	Orb weaver	N	N	N	N
Araneidae	Trichonephila edulis	Golden Orb weaver	N	N	N	N
Barychelidae	Zophorame spnov22	Brush-footed trapdoor	N	N	N	N
Cheiracanthiidae	Cheiracanthium sp6	Slender Sac spider	N	N	N	N
Clubionidae	Clubiona sp2	Stout Sac spider	N	N	N	N
Corinnidae	Iridonyssus sp	Ant-mimicking spider	N	N	N	N
Corinnidae	Nyssus pseudomaculata	Ant-mimicking spider	N	N	N	N
Corinnidae	Poeciliptra sp	Ant-mimicking spider	N	N	N	N
Cyatholipidae	Matilda spnov30	Litter spider	Y	N	N	N
Deinopidae	Asianopsis subrufa	Net-casting spider	N	N	N	N
Desidae	Phryganopus candidus	Colonial web spider	N	N	N	N
Dipluridae	Cethegus lugubris?	Curtainweb spider	N	N	N	N
Filistatidae	Wandella sp	Ground spider	N	N	N	N
Gnaphosidae	Austrammo sp	Ground spider	N	N	N	N
Gnaphosidae	Eilica sp	Ground spider	N	N	N	N
Gnaphosidae	Encoptarthria sp	Ground spider	N	N	N	N
Gnaphosidae	Gnaphosidae sp23	Ground spider	N	N	N	N
Gnaphosidae	Gnaphosidae sp24	Ground spider	N	N	N	N
Gnaphosidae	Molycrria sp	Long tailed ground spider	N	N	N	N

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State Act)	Exotic/ pest
Gnaphosidae	Wyndura spnov28	Long tailed ground spider	N	N	N	N
Hersiliidae	Tamopsis sp	Two-tailed spider	N	N	N	N
Lamponidae	Pseudolampona spnov25	False white-tailed spider	N	N	N	N
Linyphiidae	Laperousea sp4	Money spider	N	N	N	N
Lycosidae	Allocosa palabunda?	Wolf spider	N	N	N	N
Lycosidae	Artoria sp	Wolf spider	N	N	N	N
Lycosidae	Lycosa sp16	Wolf spider	N	N	N	N
Lycosidae	Venatrix sp	Wolf spider	N	N	N	N
Lycosidae	Venonia micarioides	Wolf spider	N	N	N	N
Miturgidae	Argoctenus spnov26	Ghost spider	N	N	N	N
Miturgidae	Genspnov spnov27	Prowling spider	N	N	N	N
Miturgidae	Hestimodema sp.	Prowling spider	N	N	N	N
Miturgidae	Mituliodon tarantulina	Prowling spider	N	N	N	N
Miturgidae	Miturga gilva?	Prowling spider	N	N	N	N
Miturgidae	Thasyraea sp1	Prowling spider	N	N	N	N
Miturgidae	Tuxoctenus gloverae	Prowling spider	N	N	N	N
Nesticidae	Nesticella sp5	Cave spider	N	N	N	N
Oonopidae	Oonopidae sp3	Goblin spider	N	N	N	N
Oonopidae	Opopaea spnov15	Goblin spider	N	N	N	N
Oonopidae	Orchestina spnov10	Goblin spider	N	N	N	N
Oxyopidae	Oxyopes sp17	Lynx spider	N	N	N	N
Oxyopidae	Oxyopes sp9	Lynx spider	N	N	N	N
Oxyopidae	Artema atlanta	Giant Daddy long legs	N	N	N	Y
Pholcidae	Psilochorus sphaeroides	Daddy long legs	N	N	N	N
Pholcidae	Wugigarra sp	Daddy long legs	N	N	N	N
Pisauridae	Dendrolycosa icadia	Tree water spider	N	N	N	N
Pisauridae	Dolomedes facetus?	Elegant water spider	N	N	N	N
Pisauridae	Dolomedes instabilis?	Western water spider	N	N	N	N
Pisauridae	Perenethis venusta	Grass spider	N	N	N	N
Salticidae	Cosmophasis micans	Jumping spider	N	N	N	N
Salticidae	Maratus griseus	Peacock spider	N	N	N	N
Salticidae	Maratus sp14	Peacock spider	N	N	N	N

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State Act)	Exotic/ pest
Salticidae	Maratus sp7	Peacock spider	N	N	N	N
Salticidae	Mopsus mormon	Monkey face Jumping spider	N	N	N	N
Salticidae	Myrmarachne sp12	Ant-mimicking jumping spider	N	N	N	N
Salticidae	Opisthoncus sp	Jumping spider	N	N	N	N
Salticidae	Sandalodes sp8	Jumping spider	N	N	N	N
Salticidae	Simaethula sp	Jumping spider	N	N	N	N
Salticidae	Zenodorus orbiculatus	Jumping spider	N	N	N	N
Selenopodidae	Karaops spnov19	Flattie	N	N	N	N
Sparassidae	Neosparassus sp11	Shield Huntsman	N	N	N	N
Tetragnathidae	Leucauge granulata	Camelback orb spider	N	N	N	N
Tetragnathidae	Tetragnatha sp	Fourjawed spider	N	N	N	N
Theraphosidae	Selenotypus spnov29	Western Tarantula	Y	Y	Y, listed	N
Theridiidae	Achaearana sp	Comb-footed spider	N	N	N	N
Theridiidae	Argyrodes antipodiana	Silver dewdrop spider	N	N	N	N
Theridiidae	Euryopis elegans	Ant eating comb-footed spider	N	N	N	N
Theridiidae	Latrodectus hasseltii	Redback spider	N	N	N	Y
Theridiidae	Phoroncidia sp	Comb-footed spider	N	N	N	N
Theridiidae	Theridion sp13	Comb-footed spider	N	N	N	N
Thomisidae	Cymbacha sp	Crab spider	N	N	N	N
Thomisidae	Poecilothomisus sp	Ornate crab spider	N	N	N	N
Thomisidae	Sidymella hirsuta	Crab spider	N	N	N	N
Thomisidae	Tharpyna spnov20	Crab spider	N	N	N	N
Thomisidae	Tharrhalea multopunctata	Crab spider	N	N	N	N
Thomisidae	Tharrhalea sp21	Crab spider	N	N	N	N
Thomisidae	Thomisus spectabilis	White crab spider	N	N	N	N
Thomisidae	Tmarus variabilis	Crab spider	N	N	N	N
Thomisidae	Zygomelis xanthogaster	Milky Crab spider	N	N	N	N
Trachycosmiidae	Trachycosmiidae sp	Flattie	N	N	N	N
Uloboridae	Philoponella sp	Hackled orb spider	N	N	N	N
Zodariidae	Habronestes sp21	Ant spider	N	N	N	N
Zodariidae	Hetaerica scenica	Ant spider	N	N	N	N
Zodariidae	Holasteron sp22	Ant spider	N	N	N	N

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State Act)	Exotic/ pest
Zodariidae	Neostorena sp	Ant spider	N	N	N	N
Zodariidae	Storena sp	Ant spider	N	N	N	N
Zodariidae	Zodariidae sp	Ant spider	N	N	N	N