



BUSH BLITZ SPECIES DISCOVERY PROGRAM



Charles Darwin Reserve WA

3-9 May · 14-25 September · 7-18 December 2009

Kadji Kadji, Karara, Lochada Reserves WA

14-25 September · 7-18 December 2009



CARING FOR OUR COUNTRY



What is Bush Blitz?

Bush Blitz is a four-year, multi-million dollar partnership between the Australian Government, BHP Billiton, and Earthwatch Australia to document plants and animals in selected properties across Australia's National Reserve System.

This innovative partnership harnesses the expertise of many of Australia's top scientists from museums, herbaria, universities, and other institutions and organisations across the country.

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Summary

Bush Blitz fieldwork was conducted at four National Reserve System properties in the Western Australian Avon Wheatbelt and Yalgoo Bioregions during 2009. This included a pilot study at Charles Darwin Reserve and a longer study of Charles Darwin, Kadji Kadji, Lochada and Karara reserves. Results include 651 species added to those known across the reserves and the discovery of 35 putative species new to science. The majority of these new species occur within the heteroptera (plant bugs) and lepidoptera (butterflies and moths) taxonomic groups.

Malleefowl (*Leipoa ocellata*), listed as vulnerable under the federal *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act), were observed on Charles Darwin Reserve. One plant species listed as vulnerable under the EPBC Act and as a declared rare flora under the *Western Australian Wildlife Conservation Act 1950* (WC Act), *Eucalyptus synandra*, was found on Karara and Kadji Kadji reserves. A second species also listed in Western Australia, *Acacia woodmaniorum* was located on Karara reserve. Vertebrate pests including feral cats, foxes, goats, mice and rabbits were identified on all four reserves. The European Honey Bee (*Apis mellifera*) was found on Lochada reserve. Weeds were prominent in disturbed areas.

Abbreviations

ANHAT

Australian Natural Heritage Assessment Tool

EPBC Act

Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

IBRA

Interim Biogeographic Regionalisation for Australia

WC Act

Wildlife Conservation Act 1950 (Western Australia)



Scientists and BHP Billiton participants, Charles Darwin Reserve, May 2009 © A Cowley



Introduction

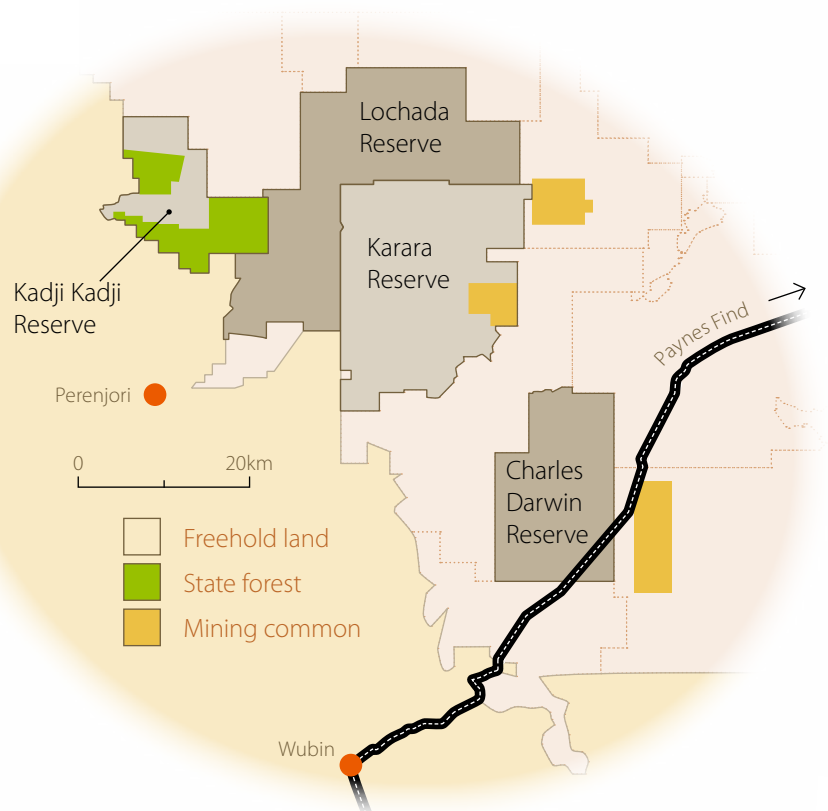
Bush Blitz is Australia's largest nature discovery project, conducting surveys in areas recently added to the National Reserve System in order to document biodiversity and discover species new to science. Bush Blitz is an initiative of the Australian Government, through the Australian Biological Resources Study in partnership with BHP Billiton and Earthwatch Australia. The Bush Blitz objectives are:

- + to promote, publicise and demonstrate the importance of taxonomy through the vehicle of species discovery;
- + to undertake a national species discovery program targeted at recently acquired properties of the National Reserve System of Australia;
- + to support the science of taxonomy in Australia through training students and early career researchers, provision of grants for species description and resolution of taxonomically problematic, nationally important groups;
- + to promote partnerships between science, governments, industry and non-government organisations; and
- + to inform the National Reserve System, Reserve Managers and other stakeholders of the results of the Bush Blitz Project.

Four Western Australian reserves were surveyed during this Bush Blitz. All occur approximately 350 km north of Perth, at the northern end of the Avon Wheatbelt Bioregion and southern edge of the Yalgoo Bioregion. The reserves occur just to the north of an intensive agricultural zone, but fall within a largely

intact landscape that has a comparatively high level of integrity. The region has been subject to extensive prospecting for mining and exploration has occurred on or adjacent to several of the properties.

A preliminary trial of Bush Blitz was carried out on Charles Darwin Reserve from 3–9 May 2009, with the aim to test survey logistics. BHP Billiton participants assisted scientists on the initial trip to Charles Darwin Reserve in May. A full survey was then undertaken from 14–25 September 2009 across Charles Darwin, Kadji Kadji, Lochada and Karara reserves. Four days were spent on Charles Darwin Reserve and seven days on the three interconnecting reserves to the north-west (Kadji Kadji, Lochada and Karara). A supplementary trip targeting reptiles and frogs was conducted from 7–18 December 2009 across the four reserves.



Reserves Overview



Charles Darwin

Bush Heritage Australia

Date of purchase

10 January 2003

Area

68,600 ha

Description

Charles Darwin Reserve consists of a mosaic of plant communities that inhabit extensive plains of yellow sand, red sandy clay or loam, granite rocks, lateritic breakaways, greenstone ridges or hills, and wetlands such as salt lakes, claypans and ephemeral swamps. The vegetation includes extensive areas of species-rich shrubland of several variants. These are representative of flora considered characteristic of the wheatbelt and of the arid zone rangelands: acacia-dominated shrubland on red soil plains, eucalyptus woodlands on heavier clay-containing soils and chenopod shrublands on saline sites. The eucalyptus woodlands are of three different kinds: York Gum (*Eucalyptus loxophleba*) woodland, Salmon Gum (*E. salmonophloia*) woodland, and Gimlet (*E. salubris*) woodland.

National Reserve System conservation values

The nationally vulnerable *Environment Protection Biodiversity Conservation Act 1995* (EPBC Act) listed species Malleefowl (*Leipoa ocellata*), has been recorded on the property, as has Australian Bustard (*Ardeotis australis*) which is listed as near-threatened in *The action plan for Australian birds*. In addition, Charles Darwin Reserve provides habitat for a significant guild of woodland birds which are in serious decline across their range, including Major Mitchell Cockatoo (*Lophochroa leadbeateri*) which is specially protected in Western Australia, and Red-tailed Black Cockatoo (*Calyptorhynchus banksii*). The reserve also supports five plants that are listed as priority species for conservation under the *Western Australian Wildlife Conservation Act 1950* (WC ACT): *Philotheca nutans*, *Persoonia pentasticha*, *Comesperma griffinii* ms, *Acacia formidabilis* and *Verticordia venusta*.



Charles Darwin Reserve, P Taylor



Kadji Kadji

WA Department of Environment and Conservation

Date of purchase

4 September 2003

Area

47,377 ha

Description

Kadji Kadji lies on the boundary between the Avon Wheatbelt and the Yalgoo IBRA Regions, an interzone between the South-west and Eremaean Botanical Provinces. The vegetation associations present on the reserve include nine shrublands, one medium woodland, one succulent steppe with thicket, one hummock grassland and one succulent steppe with woodland and thickets. The northern and eastern boundaries of the reserve adjoin Lochada.

National Reserve System conservation values

Located on an environmental gradient between two botanical provinces, Kadji Kadji has a high diversity of vegetation. The property supports 13 vegetation associations, eight of which are inadequately represented in the existing and proposed reserve system. Two of these have less than 2% of their original area in conservation reserves. The Avon Wheatbelt and the Yalgoo IBRA regions are poorly conserved at present and have been rated as a very high priority and moderate priority respectively for land acquisition.



Kadji Kadji Reserve, A Wheeler & B Glasser





Karara

WA Department of Environment and Conservation

Date of purchase

10 January 2002

Area

109,291 ha

Description

Karara Pastoral Lease adjoins Lochada, lying to the south-east of that property. Twelve vegetation types are found on the property, which was grazed until its purchase, after which it was progressively de-stocked.

National Reserve System conservation values

The purchase of Karara improved the comprehensiveness and consolidation of the National Reserve System within the Avon Wheatbelt and Yalgoo IBRA regions and was important for the implementation of the Gascoyne Murchison Strategy. Two state-listed rare flora species occur on the lease, *Grevillea scabrada* and *Jingymia Mallee (Eucalyptus synandra)*, which is also listed as vulnerable under the EPBC Act. Nine of the vegetation types found on Karara were inadequately represented in the national reserve system before its purchase.

Lochada

WA Department of Environment and Conservation

Date of purchase

26 May 2000

Area

115,000 ha

Description

Lochada lies to the east of Kadji Kadji and contains vegetation types similar to the Kadji Kadji reserve. Fourteen vegetation types are present, as well as a salt lake ecosystem. Five of these vegetation types are not represented in any other reserve and seven are poorly represented throughout the reserve system.

National Reserve System conservation values

Fifty per cent of the Lochada lease contains shrublands of Bowgada (*Acacia ramulosa*), Jam Tree (*A. aff. acuminata*) and *Melaleuca uncinata*, which provide habitat for Malleefowl (*Leipoa ocellata*). Malleefowl are listed as vulnerable under the EPBC Act.





Methods

Collection and observation sites were selected based on land classes, supplemented by identification of suitable microhabitat during the field visit. A number of taxonomic groups were identified as targets for study. Table 1 provides the groups surveyed and the specialists who undertook the field work.



Omoplatica sp. © C Young

Table 1: Groups surveyed and personnel

Group	Common name	Expert	Affiliation
Apoidea	Bees	Remko Leijs	South Australian Museum
Arachnida	Spiders, Scorpions,	Mark Harvey	Western Australian Museum
Myriapoda	Centipedes and Millipedes	Mark Harvey	Western Australian Museum
Coleoptera	Beetles	Geoff Monteith	Queensland Museum
Diptera	Flies	Christine Lambkin	Queensland Museum
Heteroptera	True Bugs	Celia Symonds	University of New South Wales
Lepidoptera	Butterflies and Moths	Dave Britton	Australian Museum
Lepidoptera	Butterflies and Moths	Catherine Young	Tasmanian Museum and Art Gallery
Mollusca	Snails and Slugs	Adnan Moussalli	Museum Victoria
Stygofauna	Aquatic Groundwater Invertebrates	Remko Leijs	South Australian Museum
Herpetofauna	Reptiles	Steve Wilson	Queensland consultant
Herpetofauna	Reptiles and Frogs	Paul Doughty	Western Australian Museum
Vascular Flora	Vascular Flora	Terry Macfarlane	Western Australian Herbarium
Vascular Flora	Vascular Flora	Melinda Trudgen	Western Australian Herbarium



Checking traps at Charles Darwin Reserve © A Cowley





As Charles Darwin Reserve already had substantial survey work conducted on small mammals and birds, these groups were not targeted, however, opportunistic observations were recorded.

Arachnida (spiders) and myriapoda (millipedes and centipedes) were only surveyed at Charles Darwin and Lochada reserves. Incidental collections were also made of cockroaches, fungi, lichens, water bugs, termites and dragonflies.

A standard suite of survey techniques was used:

- + Bees were collected using a hand net or by sweeping flowers. Malaise traps and blue and yellow pan traps were also used.
- + Flies and beetles were collected using Malaise traps, baited pitfalls, hand collecting, bark spraying and sweep netting.
- + Butterflies were collected opportunistically using hand-held butterfly nets.
- + Moths were captured using light traps deployed every night. Beat-sampling of vegetation was used to collect larvae which were then reared to the adult stage on the host plant.
- + True bugs were collected by beat-sampling vegetation, with a few collected on and under bark and leaf litter. Some of the light traps and malaise traps used for other invertebrate species also collected true bugs.
- + Snails were surveyed in two stages. The first stage involved visiting as many sites as possible for a rapid survey to assess broad patterns in shell abundance. The second stage involved revisiting those sites that had yielded high diversity to conduct more thorough hand searches.

- + Spiders, scorpions, centipedes and millipedes were found by hand-searching under rocks and logs, in leaf litter and under bark of trees. Specimens were also removed from traps used to sample reptiles.
- + Reptiles and frogs were collected by active foraging as well as using pitfall trap lines with a drift fence and funnel traps at each end.
- + Vascular flora were collected by hand, pressed and dried.

Conditions for collecting were suboptimal for fauna on both trips. The May trip was suboptimal for all taxa due to cool conditions and low rainfall. Conditions were warm in September, with good rain received during the winter months. However, low cloud cover and seasonal rain did affect some fauna groups, notably bees and flies whose flight is interrupted by rain.

Flora specimens were lodged with the Western Australian Herbarium and fauna specimens were lodged with the Western Australian Museum. Final species lists were compiled using data supplied by the Australian Natural Heritage Assessment Tool, the Western Australian Department of Environment and Conservation, Bush Heritage Australia and the results of this Bush Blitz.



Lesiacantha n. sp. 001 (Tingidae)
© G Cassis & C Symonds



Results

The locational data are available to reserve managers.

Species Lists

Appendix A provides full, updated species lists for each reserve. Names in **bold brown text** are putative new species. Species marked with an asterisk (*) have not been previously recorded for that reserve. Species without an asterisk have been recorded previously and found again during this survey. Species with **blue squares** were not recorded on this survey, but are known from previous records for the reserve. Table 2 provides a summary of the number of new flora and fauna records and putative new species for each reserve. Table 3 provides a summary of the number of new records for each reserve by taxonomic group.

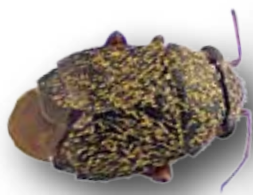


Chris Darwin, Bush Heritage volunteer © A Cowley

Table 2: Summary of new flora and fauna records and putative new species

Reserve	Species new to the reserve	Flora species new to science	Fauna species new to science
Charles Darwin	460	1	20
Kadji Kadji	170	1	1
Lochada	338	3	12
Karara	187	1	14

Damperella n. sp. (Miridae)
© G Cassis & C Symonds



New genus and species of plant bug (Miridae) Mungada Ridge
© G Cassis & C Symonds





Table 3: Number of species newly recorded on this survey for each reserve by group

Group	Common name	Charles Darwin	Kadji Kadji	Karara	Lochada
Vascular Plants	Vascular Plants	61	55	35	81
Aves	Birds	2	4	-	-
Amphibia	Frogs	-	-	-	-
Mammalia	Mammals	-	1	1	-
Reptilia	Reptiles	6	6	5	10
Apoidea	Bees	10	28	9	29
Arachnida	Spiders, Pseudoscorpions, Scorpions	66	2	6	13
Blattodea	Cockroaches	-	-	3	-
Coleoptera	Beetles	18	2	9	26
Diptera	Flies	10	5	13	18
Gastropoda	Snails	7	3	7	3
Heteroptera	True Bugs + Aquatic Bugs	128	41	73	111
Isoptera	Termites	-	-	-	-
Lepidoptera	Butterflies and Moths	147	22	25	44
Myriapoda	Centipedes and Millipedes	5	1	1	3

Rare and Threatened Species

Appendix B includes the listed species known from the reserves. Those marked with an asterisk (*) have not been recorded previously.

Exotic and Pest Species

Appendix C lists exotic pest species known from the reserves. Those marked with an asterisk (*) have not been recorded previously. The seasonal conditions during the initial May trial made the detection of annual weeds problematic. A summary of exotic and pest species recorded for each reserve is provided in Table 4.

Table 4: Total number of exotic and pest species encountered in each reserve

Reserve	Flora Species	Fauna Species
Charles Darwin	9	4
Kadji Kadji	14	1
Lochada	13	3
Karara	27	2



Discussion

A total of 651 species were added to those previously known across the reserves and approximately 35 fauna and four flora putative species new to science were discovered — these await description and publication. A breakdown of the taxonomic groups in which new species occur is given in Table 5.

Table 5: Putative new species by group

Group	Number of possible new species
Vascular Plants	4
Arachnida	4
Diptera	3
Heteroptera	21
Lepidoptera	6
Myriapoda	1



Mulga (*Acacia aneura*), A Wheeler

Rare and Threatened Species

Mason’s Darwinia (*Darwinia masonii*) is listed under the EPBC Act and the WC Act as vulnerable. Both the WA herbarium and ANHAT had records of this plant occurring on Charles Darwin Reserve, but it was not located during this fieldwork. Also listed under the EPBC Act and the WC Act as vulnerable, Jingymia Mallee (*Eucalyptus synandra*) was recorded on Karara and Kadji Kadji. Karara also contains specimens of *Grevillea scabrada*, which is under consideration for declaration as a rare flora in WA. Silky Eremophila (*Eremophila nivea*), listed under the EPBC Act as endangered and declared as critically endangered in WA, was thought to occur at Kadji Kadji but the record was based on old reports and no specimens. It may be present,

but was not found on this trip (T. Macfarlane, pers. comm.). Karara has also been recorded as containing *Acacia woodmaniorum*, another species declared as vulnerable in WA.

The presence of Malleefowl (*Leipoa ocellata*), listed under the EPBC Act as vulnerable, was identified as a key factor influencing lease purchase for Lochada. A number of observations of Malleefowl were made over the course of the surveys on Charles Darwin Reserve, demonstrating the presence of the species in the region. No self-sustaining population of Malleefowl exists on any of the four properties, which is a reflection of the area required to support a minimum viable population of this species.





Pseudomys sp., P Taylor



Ptilotus macrocephalus, A Wheeler

Exotic and Pest Species

The properties showed indirect evidence of goats, which are a recognised management issue in the district. Sheep were observed on Karara, feral cats on Lochada, and foxes, cats, goats and rabbits on Charles Darwin Reserve. The impact of feral species in these reserves is low compared to most of the semi-arid zone of southern Australia. This Bush Blitz constitutes the first snapshot of the invertebrate fauna of these reserves and only one exotic invertebrate pest was identified during the course of the fieldwork. *Apis mellifera*, the European Honey Bee, was found at Lochada. This species may potentially out-compete native birds for nectar or nesting sites such as tree hollows. It may also compete for pollen and nectar with native bees in periods of low flower abundance.

Twenty-six new weed species were identified as present across the four reserves. Given the developing species lists for all the reserves, it is difficult to judge whether these records can be considered as evidence of weedy expansion or a reflection of better knowledge of the reserves. For the most part, observations on weeds were made during a dry season, making it more difficult to detect their presence. Weeds seem to be present in many natural vegetation areas, usually as low-impact scattered annuals. There are dense populations of weeds in disturbed areas (around

the old pastoral facilities such as sheds, yards and bores). There are more weed species on the Karara, Lochada and Kadji Kadji pastoral leases than there are on Charles Darwin Reserve. Examples of typical minor weeds found in these disturbed areas are the small annual Common Mediterranean Grass (*Schismus barbatus*) and the annual Brome Grass (*Bromus rubens*). The introduced herbaceous annual Crane's or Stork's Bills (*Erodium* species), Capeweed (*Arcotheca calendula*) and Paterson's Curse (*Echium plantagineum*) are common to abundant in such sites (T. Macfarlane, pers. comm.).

In more natural sites, such as stream courses and the base of granite outcrops where there is seasonal runoff and sometimes more fertile soil some weed species are abundant. These include the common, but still fairly scattered herbaceous plants Stinking Roger (*Monoculus monstrosus*), Common Bartsia (*Parentucellia latifolia*), Hairy Pink (*Petrorhagia dubia*) and *Silene* spp., and the more densely occurring plants that can be abundant to dominant (along with various native species) in richer sites like granite rock aprons: small *Juncus* spp., the small annual grasses *Vulpia* spp., Golden Top (*Lamarckia aurea*), False Hairgrass (*Pentaschistis airoides*), Flatweed (*Hypochaeris glabra*) and the Spiny-fruited Caltrop (*Tribulus terrestris*). Some of these sites may be quite weedy but still have good native plant values. The weeds therefore may not increase much further unless fires



Hard at work sorting and labelling, Charles Darwin Reserve, P Taylor

provide an opening, though they may encourage and maintain rabbit grazing (T. Macfarlane, pers. comm.).

Saline areas often have weeds over fairly extensive areas. Some of these have been very heavily grazed in the past and have hard compacted or eroded soils where weedy grasses and plants such as the perennial Sea Lavender (*Limonium lobatum*) occur, although not to the exclusion of other plants. In salt marsh habitats there are a few weed species that are well-established, such as the succulents Ice Plant (*Claretum papulosum*) and small Ice Plant (*Mesembryanthemum nodiflorum*), although their impact is unclear. There are also quite dense populations of small annuals such as the grasses *Vulpia* spp. in these habitats. While these are unlikely to significantly affect the perennial saltbushes and samphires, being quite ephemeral in the good season, they may in places exclude small native annuals. Nuisance weeds occurring on the reserve include Spiny Emex (*Emex australis*), whose spiny fruits and dense growth habit can be a problem to humans and animals. Other nuisance weeds are Caltrop (*Tribulus terrestris*) and the Afghan Melon (*Citrullus colocynthis*) (T. Macfarlane, pers. comm.).

Other Points of Interest

Three of the plant species believed new to science were discovered on Lochada. The plants belong to the genera *Abutilon*, *Thysanotus* and *Lomandra*.

The heteropteran (true bug) subfamily Orthotyliinae produced the majority of mirid bug species (plant bugs) across the reserves. Many of these species were associated with particular species of myrtaceous shrubs with a high degree of host specificity observed. One of the new species of Orthotyliinae, *Harveycapsus dimorpha* (Cassis, in prep.), is a remarkable find, in that it is one of only a handful known from anywhere in the world that is ground-dwelling. In fact, these were collected under rocks on Mungada Ridge in Karara Reserve, a previously unheard-of microhabitat for plant bugs.

The general rule, that in dry to semi-arid environments the highest diversity of snails is found in rocky habitats, applied across the reserves. Rocky outcrops and ridges act as major refuges harbouring source populations for the majority of terrestrial snails. In particular, Bioada Hill, Forrests Hill, Mungada Ridge and Greenstone Ridge are examples of environments that should be prioritised when considering snail conservation within the region.

An abundance of flowering, due to the very good conditions at the time of the survey, meant that bees were widely dispersed and difficult to sample. As a result, the bee data presented here is likely to be an extreme underestimation of the true bee biodiversity found on the reserves.

The highly restricted species of skipper butterfly, Laterite Ochre (*Trapezites waterhousei*), was recorded for the first time in Charles Darwin Reserve.





Appendix A: Species Lists

Additional supplements containing the appendices for individual reserves are available to download from:

www.bushblitz.org.au

Nomenclature and taxonomy used in this appendix are consistent with that from the Australian Faunal Directory (AFD), the Australian Plant Name Index (APNI) and the Australian Plant Census (APC).

Current at March 2012



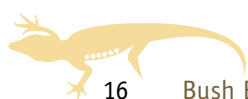
Brown falcon (*Falco berigora*), B Glasser

Fauna

Vertebrates

Birds					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Acanthizidae	<i>Acanthiza robustirostris</i>	■			
	<i>Acanthiza apicalis</i>	■		■	■
	<i>Acanthiza chrysorrhoa chrysorrhoa</i>	■	■	■	■
	<i>Acanthiza uropygialis</i>	■	■	■	■
	<i>Aphelocephala leucopsis castaneiventris</i>	■	■	■	■
	<i>Gerygone fusca</i>			■	
	<i>Gerygone fusca fusca</i>	■			
	<i>Hylacola cautus whitlocki</i>	■			
	<i>Pyrrholaemus brunneus</i>	■		■	■
<i>Smicronis brevirostris</i>	■	■	■	■	
Accipitridae	<i>Accipiter cirrocephalus cirrocephalus</i>	■			
	<i>Accipiter fasciatus</i>	■			■
	<i>Aquila audax audax</i>	×	■	×	■
	<i>Circus assimilis</i>		■		
	<i>Elanus axillaris</i>	■			
	<i>Haliastur sphenurus</i>	■			■
	<i>Hamirostra melanosternon</i>	■			
	<i>Hieraaetus morphnoides morphnoides</i>	■			■
	<i>Lophoictinia isura</i>	■			■
	<i>Milvus migrans affinis</i>	■			
Aegothelidae	<i>Aegotheles cristatus</i>			■	
	<i>Aegotheles cristatus cristatus</i>	■			■
Alcedinidae	<i>Todiramphus pyrrhopygius</i>	■	■		■

Key × = Previously recorded on the reserve and found on this survey ^ = Exotic/Pest
 ×* = New record for this reserve # = EPBC listed ○ = **Putative new species**
 ~ = WC listed ■ = *Previously recorded on the reserve but not found on this survey*





Birds					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Anatidae	<i>Anas gracilis</i>	■			■
	<i>Anas rhynchotis rhynchotis</i>	■			
	<i>Anas superciliosa</i>	■			
	<i>Chenonetta jubata</i>	■			
	<i>Cygnus atratus</i>			■	
	<i>Malacorhynchus membranaceus</i>	■			
	<i>Tadorna tadornoides</i>	■		■	
Ardeidae	<i>Ardea pacifica</i>	×	■		
	<i>Egretta garzetta nigripes</i>	■			
	<i>Egretta novaehollandiae</i>	■			■
Artamidae	<i>Artamus cinereus</i>	■	■	■	
	<i>Artamus cyanopterus perthi</i>	■			
	<i>Artamus minor minor</i>	× *			
	<i>Artamus personatus</i>	■		■	■
	<i>Cracticus nigrogularis picatus</i>	■	■	■	■
	<i>Cracticus tibicen</i>	■	■	■	×
	<i>Cracticus torquatus leucopterus</i>	■	■	■	■
	<i>Strepera versicolor</i>	■			■
Cacatuidae	<i>Cacatua pastinator</i>	×		■	■
	<i>Cacatua sanguinea</i>	■			
	<i>Calyptorhynchus banksii</i>	×		■	×
	<i>Eolophus roseicapillus</i>	×		■	■
	<i>Lophochroa leadbeateri</i>	×	■	■	×
	<i>Nymphicus hollandicus</i>	×		■	
Campephagidae	<i>Coracina maxima</i>	■			
	<i>Coracina novaehollandiae melanops</i>	■	■	■	■
	<i>Lalage sueurii</i>	■		■	■
Caprimulgidae	<i>Eurostopodus argus</i>	■	■		
Casuariidae	<i>Dromaius novaehollandiae</i>	×	× *	■	×
Charadriidae	<i>Charadrius australis</i>	■			
	<i>Euseyornis melanops</i>	×			■
	<i>Erythrogonys cinctus</i>	■			
	<i>Thinornis rubricollis</i>	■			
	<i>Vanellus tricolor</i>	■	■	■	■
Climacteridae	<i>Climacteris rufa</i>	■			
Columbidae	<i>Ocyphaps lophotes</i>	■	■	■	×
	<i>Phaps chalcoptera</i>	■	■	■	■



Birds					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Corvidae	<i>Corvus bennetti</i>	■	■	■	■
	<i>Corvus coronoides perplexus</i>	×	■	■	■
Cuculidae	<i>Cacomantis flabelliformis flabelliformis</i>	■			
	<i>Cacomantis pallidus</i>	■			
	<i>Chalcites basalis</i>	■		■	■
	<i>Chalcites lucidus plagosus</i>	■			
	<i>Chalcites osculans</i>	■		■	■
Estrildidae	<i>Taeniopygia guttata</i>	×			■
Falconidae	<i>Falco berigora</i>	×	■	■	■
	<i>Falco cenchroides</i>	■	■	■	■
	<i>Falco longipennis longipennis</i>	■	■		
	<i>Falco peregrinus macropus</i>	■			■
Hirundinidae	<i>Cheramoeca leucosterna</i>	■			
	<i>Hirundo neoxena</i>	×		■	×
	<i>Petrochelidon ariel</i>	■			
	<i>Petrochelidon nigricans nigricans</i>	■	■	■	■
Maluridae	<i>Malurus lamberti</i>				■
	<i>Malurus leucopterus leuconotus</i>	■		■	
	<i>Malurus splendens splendens</i>	■	■	■	■
Megaluridae	<i>Cincloramphus cruralis</i>	■			
	<i>Cincloramphus mathewsi</i>		■		■
Megapodiidae	<i>Leipoa ocellata</i>	×			
Meliphagidae	<i>Acanthagenys rufogularis</i>	■	■	■	■
	<i>Anthochaera carunculata</i>	■			
	<i>Certhionyx variegates</i>	■	× *	■	■
	<i>Epthianura tricolor</i>		× *		
	<i>Epthianura albifrons</i>	■		■	
	<i>Epthianura aurifrons</i>	■			
	<i>Epthianura tricolor</i>	■			
	<i>Lichenostomus leucotis novaenorciae</i>	■			
	<i>Lichenostomus ornatus</i>	■			
	<i>Lichenostomus plumulus plumulus</i>	■		■	
	<i>Lichenostomus virescens virescens</i>	■	■	■	■
<i>Lichmera indistincta indistincta</i>	■	■		■	

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Birds					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Meliphagidae	<i>Manorina flavigula obscura</i>	■		■	■
	<i>Melithreptus brevirostris leucogenys</i>	■			
	<i>Purnella albifrons</i>	■		■	
	<i>Sugomel niger</i>	■			
Meropidae	<i>Merops ornatus</i>	■			
Monarchidae	<i>Grallina cyanoleuca cyanoleuca</i>	×	■	■	■
Motacillidae	<i>Anthus novaeseelandiae novaeseelandiae</i>	■	■	■	■
Nectariniidae	<i>Dicaeum hirundinaceum hirundinaceum</i>	■			
Neosittidae	<i>Daphoenositta chrysoptera pileata</i>	■			
Otididae	<i>Ardeotis australis</i>	■			
Pachycephalidae	<i>Colluricincla harmonica</i>	■	■	■	■
	<i>Oreoica gutturalis</i>	■	■	■	■
	<i>Pachycephala inornata</i>	■			
	<i>Pachycephala pectoralis fuliginosa</i>	■			■
	<i>Pachycephala rufiventris rufiventris</i>	■	■	■	■
Pardalotidae	<i>Pardalotus striatus</i>	■	■	■	■
Petroicidae	<i>Drymodes brunneopygia</i>	■			
	<i>Eopsaltria griseogularis</i>	■			■
	<i>Melanodryas cucullata westralensis</i>	■			
	<i>Microeca fascinans assimilis</i>	■			
	<i>Petroica goodenovii</i>	■	■	■	■
Podargidae	<i>Podargus strigoides brachypterus</i>	×		■	■
Podicipedidae	<i>Poliocephalus poliocephalus</i>	■			
	<i>Tachybaptus novaehollandiae</i>	■			
Pomatostomidae	<i>Pomatostomus superciliosus</i>	■	■	■	■
	<i>Pomatostomus temporalis</i>			■	
Psittacidae	<i>Barnardius zonarius</i>	×	■	■	■
	<i>Glossopsitta porphyrocephala</i>	■			
	<i>Melopsittacus undulatus</i>	× *			■
	<i>Neopsephotus bourkii</i>	■	■	■	
	<i>Polytelis anthopeplus anthopeplus</i>	×		■	■
	<i>Psephotus varius</i>	■	■	■	■
Psophodidae	<i>Cinclosoma castanotum</i>	■		■	
	<i>Psophodes occidentalis</i>	■			
Ptilonorhynchidae	<i>Ptilonorhynchus guttatus guttatus</i>			×	×
Rallidae	<i>Fulica atra australis</i>	■			
	<i>Tribonyx ventralis</i>	■			



Birds					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Recurvirostridae	<i>Himantopus himantopus leucocephalus</i>	■			
Rhipiduridae	<i>Rhipidura albiscapa</i>	■	■	■	■
	<i>Rhipidura leucophrys</i>	×	×*	■	■
Scolopacidae	<i>Actitis hypoleucos</i>	■			
Strigidae	<i>Ninox novaeseelandiae</i>	■		■	■
Threskiornithidae	<i>Threskiornis molucca</i>	■			
Timaliidae	<i>Zosterops lateralis</i>				■
Tytonidae	<i>Tyto javanica</i>			■	



Tadpole found in Charles Darwin Reserve, B Glasser

Frogs					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Myobatrachidae	<i>Neobatrachus centralis</i>	■			
	<i>Neobatrachus kunapalari</i>	×			
	<i>Neobatrachus pelobatoides</i>				■
	<i>Neobatrachus sutor</i>	■			
	<i>Neobatrachus wilmorei</i>	■			■
	<i>Pseudophryne occidentalis</i>	×		■	■

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Mammals					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Bovidae	<i>Capra hircus</i> ^	×	×	×	×
	<i>Ovis aries</i> ^			×*	
Canidae	<i>Vulpes vulpes</i> ^	×			
Dasyuridae	<i>Antechinomys laniger</i>				■
	<i>Sminthopsis crassicaudata</i>	■		■	■
	<i>Sminthopsis dolichura</i>	■	■		■
	<i>Sminthopsis gilberti</i>	■			■
	<i>Sminthopsis granulipes</i>	■			
Felidae	<i>Felis catus</i> ^	×			×
Leporidae	<i>Oryctolagus cuniculus</i> ^	×			■
Macropodidae	<i>Macropus fuliginosus</i>				×
	<i>Macropus robustus</i>	■			
	<i>Macropus rufus</i>	■	×*	■	×
Molossidae	<i>Tadarida australis</i>	■		■	■
Muridae	<i>Mus musculus</i> ^	■			■
	<i>Notomys alexis</i>				■
	<i>Notomys mitchellii</i>	■			■
	<i>Pseudomys bolami</i>				■
	<i>Pseudomys hermannsburgensis</i>	■			■
Tachyglossidae	<i>Tachyglossus aculeatus</i>	■		■	■
Vespertilionidae	<i>Chalinolobus gouldii</i>	■			■
	<i>Chalinolobus morio</i>	■			
	<i>Nyctophilus geoffroyi</i>	■			
	<i>Nyctophilus gouldi</i>	■			
	<i>Nyctophilus major</i>	■			
	<i>Scotorepens balstoni</i>	■			
	<i>Vespadelus baverstocki</i>	■			■
	<i>Vespadelus finlaysoni</i>			■	■
	<i>Vespadelus regulus</i>	■			■



Reptiles					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Agamidae	<i>Caimanops amphiboluroides</i>			■	
	<i>Ctenophorus cristatus</i>	■			
	<i>Ctenophorus maculatus</i>	■			
	<i>Ctenophorus nuchalis</i>		× *		×
	<i>Ctenophorus ornatus</i>	×			
	<i>Ctenophorus reticulatus</i>	×		×	×
	<i>Ctenophorus salinarum</i>				■
	<i>Ctenophorus scutulatus</i>	×	× *	×	×
	<i>Moloch horridus</i>	■		■	■
	<i>Pogona minor</i>	×		■	■
Diplodactylidae	<i>Crenadactylus ocellatus</i>		■		
	<i>Diplodactylus granariensis</i>	×		×	
	<i>Diplodactylus pulcher</i>	×		×	
	<i>Diplodactylus stenodactylus</i>	×			
	<i>Oedura reticulata</i>	×			
	<i>Rhynchoedura ornata</i>	×			×
	<i>Strophurus assimilis</i>	×			
	<i>Strophurus strophurus</i>	×			
Elapidae	<i>Brachyurophis semifasciatus</i>	■	■		
	<i>Demansia psammophis</i>	■			
	<i>Furina ornata</i>				×
	<i>Neelaps bimaculatus</i>	■			
	<i>Parasuta monachus</i>	■			
	<i>Pseudechis australis</i>	■			
	<i>Pseudechis butleri</i>				■
	<i>Pseudonaja affinis</i>	×			
	<i>Pseudonaja modesta</i>	×			×
	<i>Pseudonaja nuchalis</i>	×		■	■
	<i>Simoselaps bertholdi</i>	×			×
	<i>Suta fasciata</i>			■	
Gekkonidae	<i>Gehyra variegata</i>	×	×	×	×
	<i>Heteronotia binoei</i>	×	×	×	×
	<i>Lucasium maini</i>	×			
	<i>Lucasium squarrosum</i>	×	×		■
	<i>Underwoodisaurus milii</i>	×			

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Reptiles					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Pygopodidae	<i>Delma australis</i>	×		■	
	<i>Delma fraseri</i>	■			
	<i>Lialis burtonis</i>	■			× *
	<i>Pygopus nigriceps</i>	×			■
Scincidae	<i>Cryptoblepharus buchananii</i>	×			× *
	<i>Cryptoblepharus plagiocephalus</i>	×			
	<i>Ctenotus fallens</i>				×
	<i>Ctenotus leonhardii</i>		× *		×
	<i>Ctenotus mimetes</i>	×	■	■	×
	<i>Ctenotus pantherinus</i>	■	■		
	<i>Ctenotus schomburgkii</i>	×			
	<i>Ctenotus uber</i>			■	
	<i>Cyclodomorphus branchialis</i>			■	■
	<i>Egernia depressa</i>	×		■	■
	<i>Egernia stokesii</i>		■	■	
	<i>Egernia stokesii badia</i> #				■
	<i>Eremiascincus richardsonii</i>			■	■
	<i>Lerista gerrardii</i>	×			■



Wheat-belt stone gecko (*Diplodactylus granariensis*), B Glasser



Pseudonaja modesta Lochada Reserve © S Wilson



Reptiles					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Scincidae	<i>Lerista kingi</i>			× *	× *
	<i>Lerista muelleri</i>	×			
	<i>Lerista nichollsi</i>	× *	× *		× *
	<i>Liopholis inornata</i>				■
	<i>Menetia greyii</i>	×	■	×	■
	<i>Morethia butleri</i>	■		■	■
	<i>Morethia obscura</i>	× *			
	<i>Tiliqua occipitalis</i>	×			
	<i>Tiliqua rugosa</i>	■			
Typhlopidae	<i>Ramphotyphlops hamatus</i>	■	■		
Varanidae	<i>Varanus caudolineatus</i>	■	■	■	
	<i>Varanus giganteus</i>	× *		■	
	<i>Varanus gouldii</i>	×			■
	<i>Varanus panoptes rubidus</i>	■		× *	× *
	<i>Varanus tristis</i>	×		× *	× *



Ctenophorus ornatus (male), Charles Darwin Reserve © S Wilson



Collecting true bugs © A Cowley

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Invertebrates

Ants					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Formicidae	<i>Camponotus</i> sp. 1	■			
	<i>Camponotus</i> sp. 2	■			
	<i>Camponotus</i> sp. 3	■			
	<i>Camponotus</i> sp. 4	■			
	<i>Crematogaster</i> sp. 1	■			
	<i>Iridomyrmex</i> sp. 1	■			
	<i>Iridomyrmex</i> sp. 2	■			
	<i>Iridomyrmex</i> sp. 3	■			
	<i>Iridomyrmex</i> sp. 4	■			
	<i>Iridomyrmex</i> sp. 5	■			
	<i>Melophorus</i> sp. 1	■			
	<i>Melophorus</i> sp. 2	■			
	<i>Melophorus</i> sp. 3	■			
	<i>Melophorus</i> sp. 4	■			
	<i>Meranoplus</i> sp. 1	■			
	<i>Monomorium</i> sp. 1	■			
	<i>Pheidole</i> sp. 1	■			
	<i>Polyrhachis macropus</i>	■			
	<i>Rhytidoponera</i> sp. 1	■			
	<i>Rhytidoponera</i> sp. 2	■			
<i>Solenopsis</i> sp. 1	■				

Bees					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Apidae	<i>Apis mellifera</i> ^				× *
Colletidae	<i>Callohesma</i> sp. 1			× *	× *
	<i>Callohesma</i> sp. 2	× *		× *	× *
	<i>Callohesma</i> sp. 3	× *			
	<i>Callohesma</i> sp. 4	× *			
	<i>Euhesma</i> sp. 1		× *		
	<i>Euhesma</i> sp. 2	× *			
	<i>Euhesma</i> sp. 3	× *			× *
	<i>Euhesma</i> sp. 4			× *	
	<i>Euhesma</i> sp. 5				× *
	<i>Hylaeus</i> sp. 1			× *	



Bees

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Colletidae	<i>Hylaeus</i> sp. 2		× *		
	<i>Hylaeus</i> sp. 3			× *	
	<i>Hylaeus</i> sp. 4		× *		
	<i>Hylaeus</i> sp. 5				× *
	<i>Leioproctus</i> (<i>Colletellus</i>) sp. 1				× *
	<i>Leioproctus</i> (<i>Colletellus</i>) sp. 2				× *
	<i>Leioproctus</i> (<i>Euryglossidia</i>) sp. 1			× *	× *
	<i>Leioproctus</i> (<i>Euryglossidia</i>) sp. 2 red				× *
	<i>Leioproctus</i> (<i>Euryglossidia</i>) sp. 3				× *
	<i>Leioproctus</i> (<i>Euryglossidia</i>) sp. 5			× *	
	<i>Leioproctus</i> (<i>Euryglossidia</i>) sp. 6 red			× *	
	<i>Leioproctus</i> (<i>Euryglossidia</i>) sp. 7 red			× *	
	<i>Leioproctus</i> (<i>Euryglossidia</i>) sp. 8			× *	
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 1			× *	
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 2			× *	
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 3			× *	
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 5				× *
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 6			× *	
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 7				× *
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 8				× *
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 9				× *
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 10			× *	× *
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 11				× *
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 12				× *
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 13				× *
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 14				× *
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. 15			× *	
	<i>Leioproctus</i> (<i>Leioproctus</i>) sp. b?			× *	
	<i>Leioproctus</i> (<i>Odontocolletes</i>) sp. 1				× *
	<i>Leioproctus</i> (<i>Odontocolletes</i>) sp. 1				× *
	<i>Leioproctus</i> sp. 3			× *	
	<i>Leioproctus</i> sp. 4		× *	× *	
	<i>Leioproctus</i> sp. 9				× *
	<i>Neopasiphae mirabilis</i>			× *	× *
<i>Trichocolletes rufbasis</i>			× *		
<i>Trichocolletes</i> sp. 2			× *		

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Bees					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Colletidae	<i>Xanthesma</i> sp. 1	×*			
	<i>Xanthesma</i> sp. b	×*			
Halictidae	<i>Homalictus</i> sp. 1		×*		
	<i>Lasioglossum (Chilalictus)</i> sp. 1		×*		×*
	<i>Lasioglossum (Chilalictus)</i> sp. 3		×*		×*
	<i>Lasioglossum (Chilalictus)</i> sp. 4				×*
	<i>Lasioglossum (Chilalictus)</i> sp. 5		×*	×*	×*
	<i>Lasioglossum</i> sp. 2	×*	×*		
	<i>Lipotriches (s.str.)</i> sp. 1				×*
Megachilidae	<i>Megachile</i> sp. 1	×*	×*		×*
	<i>Megachile</i> sp. 2		×*		
	<i>Megachile</i> sp. 3		×*		
	<i>Megachile</i> sp. 4			×*	
Stenotritidae	<i>Ctenocolletes rufescens</i>				×*

Moths and Butterflies					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Anthelidae	<i>Anthela tetrphrica</i>	×*			
	<i>Omphaliodes obscura</i>	×*			
Arctiidae	<i>Thallarcha fusa</i>	×*			
	<i>Utetheisa pulchelloides</i>	×*			
Coleophoridae	<i>Coleophora</i> n. sp.	×*			
Cosmopterigidae	<i>Leptozestis</i> n. sp. 1	×*			
	<i>Leptozestis</i> n. sp. 2	×*			
	<i>Leptozestis</i> n. sp. 3	×*			
	<i>Leptozestis</i> n. sp. 4	×*			
	<i>Limnaecia</i> n. sp.	×*			
	<i>Macrobathra</i> n. sp. 1	×*			
	<i>Macrobathra</i> n. sp. 2	×*			
	<i>Paratheta</i> sp.	×*			
Cossidae	<i>Endoxyla euplecta</i>	×*			
	<i>Endoxyla</i> n. sp.	×*			
Depressariidae	<i>Enchocrates</i> n. sp.	×*			
Ethmiidae	<i>Ethmia eupostica</i>	×*			
Gelechiidae	<i>Aproaerema nr isoscelixantha</i>	×*			
	<i>Ardozyga</i> n. sp.	×*			
	<i>Dorycnopa</i> n. sp.	×*			



Moths and Butterflies

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Geometridae	<i>Idaea inversata</i>	× *	× *		× *
	<i>Lipogya</i> n. sp. 1	× *			
	<i>Lipogya</i> n. sp. 2	× *			
	<i>Lipogya</i> sp. 1		× *	× *	× *
	<i>Lipogya</i> sp. 2		× *		× *
	<i>Lissomma</i> sp.	× *			× *
	<i>Loweria eurypsamma</i>	× *			
	<i>Loweria platydesma</i>	× *			
	<i>Mnesampela arida</i>	× *			
	<i>Nearcha benecristata</i>			× *	
	<i>Nearcha caronia</i>			× *	× *
	<i>Nearcha dasyzona</i>	× *			× *
	<i>Nearcha</i> sp. 1	× *	× *		
	<i>Nearcha</i> sp. 2	× *			
	<i>Neoteristis</i> sp.	× *			
	<i>Notiosterrha</i> sp.			× *	× *
	<i>Oenochroma</i> n. sp. 1	× *			× *
	<i>Oenochroma</i> n. sp. 2	× *			× *
	<i>Oenochroma</i> sp. 1			× *	
	<i>Oenochroma</i> sp. 3	× *		× *	× *
	<i>Oenochroma vinaria</i>	× *			
	<i>Omoplatica</i> sp.	× *			
	<i>Omoplatica</i> sp.				× *
	<i>Pachyplocia</i> sp. 1	× *	× *	× *	
	<i>Pachyplocia</i> sp. 2				× *
	<i>Paramelora</i> sp. 1				× *
	<i>Paramelora</i> sp. 2			× *	
	<i>Paramelora</i> sp. 3				× *
	<i>Phrissogonus laticostata</i>	× *	× *	× *	
	<i>Phrixocomes</i> n. sp.	× *			
<i>Plesiolaeta maritima</i>	× *				
<i>Scioglyptis</i> sp.			× *	× *	



Moths and Butterflies

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Geometridae	<i>Scopula nr episcia</i>	×*	×*	×*	×*
	<i>Stibaroma nr aphronesa</i>	×*			
	<i>Syneora</i> sp.	×*		×*	
	<i>Taxeotis</i> sp. 1	×*	×*	×*	×*
	<i>Taxeotis</i> sp. 2	×*	×*		×*
	<i>Taxeotis xanthogramma</i>	×*	×*	×*	×*
	<i>Thalaina angulosa</i>	×*			
	<i>Thalaina tetracлада</i>	×*			
Hesperiidae	<i>Croitana croites</i>	■			
	<i>Trapezites waterhousei</i>	×*			
Hypertrophidae	<i>Eupselia metabola</i>	×*			
	<i>Eupselia</i> n. sp. 1	×*			
	<i>Eupselia</i> n. sp. 2	×*			
	<i>Eupselia theorella</i>	×*			
	<i>Thudaca</i> n. sp.	×*			
Lasiocampidae	<i>Genduara</i> n. sp.	×*			
	<i>Pernattia chlorophragma</i>	×*			
	<i>Symphyta oxygramma</i>	×*			
Lycaenidae	<i>Candalides cyprotus</i>				×*
	<i>Nacaduba biocellata</i>	■	×*		×*
	<i>Theclinesthes miskini</i>	×*			×*
	<i>Theclinesthes serpentata serpentata</i>				×*
	<i>Zizina labradus</i>	×*			
Lymantriidae	<i>Acyphas pelodes</i>	×*			
Noctuidae	<i>Agrotis munda</i>	×*			
	<i>Aquita tactalis</i>	×*			
	<i>Athetis tenuis</i>	×*			
	<i>Brachycyttara crypsipyrha</i>	×*			
	<i>Buciara</i> n. sp. 1	×*			
	<i>Buciara</i> n. sp. 2	×*			
	<i>Cremnophora angasii</i>	×*			
	<i>Ectopatria mundoides</i>	×*			
	<i>Ectopatria</i> n. sp.	×*			
	<i>Ectopatria nr euglypta</i>	×*			
	<i>Ectopatria xerampelina</i>	×*			
	<i>Epicyrtica</i> n. sp.	×*			

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Moths and Butterflies					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Noctuidae	<i>Eremochroa macropa</i>	×*			
	Gen. n. sp. 1	×*			
	Gen. n. sp. 2	×*			
	<i>Leucania stenographa</i>	×*			
	<i>Madope auferens</i>	×*			
	<i>Prorocopis</i> n. sp.	×*			
	<i>Proteuxoa floescens</i>	×*			
	<i>Proteuxoa heliosema</i>	×*			
	<i>Proteuxoa</i> n. sp. 1	×*			
	<i>Proteuxoa</i> n. sp. 2	×*			
	<i>Proteuxoa</i> nr <i>microspila</i>	×*			
	<i>Proteuxoa nuna</i>	×*			
	<i>Proteuxoa petrodora</i>	×*			
	Nolidae	<i>Earias chlorodes</i>	×*		
<i>Nola monozona</i>		×*			
<i>Nola</i> n. sp.		×*			
<i>Nola</i> nr <i>celaenephes</i>		×*			
Nymphalidae	<i>Danaus chrysippus</i>	■			×*
	<i>Geitoneura minyas</i>	■			×*
	<i>Junonia villida</i>	■			×*
	<i>Vanessa itea</i>	■		×*	
	<i>Vanessa kershawi</i>	×*			
Oecophoridae	<i>Agriophara</i> n. sp.	×*			
	<i>Nemepeira punicea</i>	×*			
	<i>Pachybela</i> n. sp. 1	×*			
	<i>Pachybela</i> n. sp. 2	×*			
	<i>Pachybela</i> n. sp. 3	×*			
	<i>Pachybela</i> n. sp. 4	×*			
	<i>Pachybela</i> n. sp. 5	×*			
	<i>Pachybela</i> n. sp. 6	×*			
	<i>Pachybela</i> n. sp. 7	×*			
	<i>Pachybela</i> n. sp. 8	×*			
	<i>Pachybela</i> n. sp. 9	×*			
	<i>Pachybela tetraspora</i>	×*			
	Oenosandridae	<i>Diceratucha</i> n. sp.	×*		
<i>Oenosandra boisduvalii</i>		×*			
Opostegidae	<i>Opostega</i> n. sp.	×*			
Pieridae	<i>Delias aganippe</i>	■		×*	×*
	<i>Eurema smilax</i>		×*		×*



Moths and Butterflies

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Psychidae	<i>Lomera</i> n. sp.	×*			
Pterophoridae	<i>Stangeia xerodes</i>	×*			
Pyralidae	<i>Achyra affinalis</i>	×*			
	<i>Araeopaschia</i> n. sp.	×*			
	<i>Copamyntis leptocosma</i>	×*			
	<i>Eremographa sebasmia</i>	×*			
	<i>Hednota koojanensis</i>	×*			
	<i>Hednota</i> n. sp.	×*			
	<i>Hellula hydralis</i>	×*			
	<i>Hygraula nitens</i>	×*			
	<i>Nephoterix melanostyla</i>	×*			
	<i>Nomophila corticalis</i>	×*			
	<i>Osiriaca ptousalis</i>	×*			
	<i>Uresiphita ornithopteralis</i>	×*			
Tortricidae	<i>Authomaema pentacosma</i>	×*			
	<i>Clarana</i> GROUP <i>thermaterimma</i>	×*			
	<i>Unplaced cosmopis</i>	×*			



Larrpana bushblitz/adults © G Thompson

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Flies					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Acroceridae	Acroceridae genus, species			× *	
	Acroceridae: unid. genus, sp.				× *
Apioceridae	<i>Apiocera nr australis</i>				× *
	<i>Apiocera nr deserticola</i>			× *	
	<i>Apiocera nr latipennis</i>				× *
	<i>Apiocera nr tonnoiri</i>	× *			
Bombyliidae	<i>Aleucosia maculosa</i>	× *		× *	× *
	<i>Comptosia decedens</i>		× *		× *
	<i>Comptosia lactea</i> group			× *	
	<i>Comptosia microrhynchus</i>	× *			
	<i>Comptosia microrhynchus</i> group		× *		× *
	<i>Comptosia nr kuranda</i>			× *	
	<i>Comptosia nr sp. A</i>				× *
	<i>Docidomyia nicholsoni</i>			× *	
	<i>Docidomyia nr danielsi</i>				× *
	<i>Docidomyia nr parva</i>		× *		
	<i>Kapu corusca</i>			× *	
	<i>Larripa bushblitz</i> Lambkin n. sp.			○ *	
	<i>Meomyia</i> sp.		× *		× *
	<i>Neosardus nr eremae & lepidus</i>			× *	
Cryptochetidae	<i>Cryptochetum</i> sp.				× *
Mydidae	<i>Neorhapiomidas setosa</i>			× *	
Pipunculidae	Pipunculidae: unid. genus, sp.	× *			× *
Scenopinidae	<i>Riekiella</i> sp.	× *			× *
Therevidae	<i>Acraspisa</i> sp. 1				× *
	<i>Agapophytus</i> sp. 1	× *			× *
	<i>Manestella nr tristriata</i>	○ *		○ *	○ *
	<i>Medomega</i> sp. 1				× *
	<i>Parapsilocephala n. sp. 2</i>	○ *			○ *
	<i>Parapsilocephala</i> sp. 1		× *	× *	
	<i>Patanothrix</i> sp. 1	× *			
	<i>Taenogerella</i> sp.			× *	× *
Undescribed gen. M sp. n	× *				



Beetles					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Buprestidae	<i>Astraeus</i> sp.				× *
	<i>Castiarina pallidiventris</i>				× *
	<i>Castiarina pictipennis</i>				× *
	<i>Castiarina recta</i>				× *
	<i>Castiarina rufa</i>				× *
	<i>Castiarina simulata</i>				× *
Carabidae	<i>Agonocheila</i> sp. 1	× *			
	<i>Agonocheila</i> sp. 2	× *			
	<i>Agonocheila</i> sp. 3	× *		× *	× *
	<i>Amblystomus</i> sp. 1	× *			× *
	<i>Anomotarus crudelis</i>	× *			
	<i>Calosoma schayeri</i>				× *
	<i>Carenum</i> sp. 1	× *		× *	× *
	<i>Carenum</i> sp. 2			× *	
	<i>Carenum</i> sp. 3				× *
	<i>Demetrida</i> sp. 1	× *			
	<i>Euryscaphus</i> sp. 1			× *	× *
	<i>Gigadema</i> sp. 1	× *			× *
	Harpalinae: Harpalini indet. genus				× *
	<i>Helluapterus niger</i>			× *	
	<i>Mecyclothorax</i> sp. 1				× *
	<i>Mecyclothorax</i> sp. 2	× *			
	<i>Megacephala blackburni</i>			× *	
	<i>Percosoma</i> sp. 1			× *	
	<i>Philophloeus</i> sp. 1	× *			× *
	<i>Philophloeus</i> sp. 2	× *			× *
	<i>Philophloeus</i> sp. 3				× *
	<i>Philoscaphus</i> sp. 1	× *		× *	× *
	<i>Phorticosomus</i> sp. 1				× *
	<i>Phorticosomus</i> sp. 2				× *
	Pterostichinae: Pterostichini indet. genus			× *	× *
	<i>Sarothrocrepis</i> sp. 1	× *		× *	× *
	<i>Scopodes</i> sp. 1	× *		× *	
	<i>Sphallomorpha hydroporoides</i>	× *			
<i>Trigonothops</i> sp. 1	× *			× *	

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Beetles					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Carabidae	<i>Trigonothops</i> sp. 2	×*			
	<i>Trigonothops</i> sp. 3	×*			×*
Coccinellidae	<i>Micraspis</i> sp.				×*



Megacephala blackburni Fleutiaux © G Thompson



Malaise traps, Charles Darwin Reserve. Flight intercept troughs at base of central panel © TD Macfarlane

Lacewing					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Berothidae	<i>Stenobiella</i> sp.			×	

True Bugs — Terrestrial					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Acanthosomatidae	Acanthosomatidae sp.	×*			
Alydidae	<i>Riptortus</i> sp.			×*	
Aradidae	<i>Aradus</i> n. sp. 1	○*			
	<i>Calisius</i> n. sp. 1	○*			○*
	<i>Calisius</i> n. sp. 2	○*			
	<i>Calisius</i> n. sp. 3			○*	
	<i>Calisius</i> n. sp. 5	○*			
	<i>Calisius</i> sp. 4	×*			
Geocoridae	<i>Germalus</i> sp.		×*		
Hyocephalidae	<i>Maevius</i> n. sp. 215				○*
Lygaeidae	<i>Nysius vinitor</i>	×*		×*	×*
Miridae	<i>Austrocapsus</i> sp. 001	×*			×*
	<i>Austrocapsus</i> sp. 002			×*	



True Bugs — Terrestrial					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Miridae	Mirini sp. 075			× *	× *
	Mirini sp. 112	× *	× *		
	Mirini sp. 182				× *
	Mirini sp. 200	× *			× *
	Mirini sp. 220	× *			
	Mirini sp. 222				× *
	Mirini sp. 223				× *
	Mirini sp. 230	× *			
	Mirini sp. 231	× *			
	Mirini sp. 270	× *			
	Monaloniini sp. 213			× *	× *
	Ommatodema n. sp. 178			○ *	
	Orthotylini sp. 005	× *	× *	× *	× *
	Orthotylini sp. 009	× *		× *	× *
	Orthotylini sp. 016	× *			× *
	Orthotylini sp. 023	× *		× *	× *
	Orthotylini sp. 024	× *			× *
	Orthotylini sp. 025	× *			× *
	Orthotylini sp. 026		× *		
	Orthotylini sp. 033	× *			
	Orthotylini sp. 035	× *			× *
	Orthotylini sp. 037				× *
	Orthotylini sp. 040				× *
	Orthotylini sp. 043			× *	× *
	Orthotylini sp. 044	× *	× *		
	Orthotylini sp. 046	× *			
	Orthotylini sp. 047	× *			× *
	Orthotylini sp. 049	× *			
	Orthotylini sp. 052		× *		
	Orthotylini sp. 054	× *	× *		
	Orthotylini sp. 055	× *		× *	× *
	Orthotylini sp. 056		× *		
	Orthotylini sp. 061		× *		
	Orthotylini sp. 063	× *	× *	× *	× *
	Orthotylini sp. 066	× *		× *	× *
	Orthotylini sp. 070	× *	× *	× *	
	Orthotylini sp. 083	× *		× *	× *
	Orthotylini sp. 084				× *
	Orthotylini sp. 092	× *		× *	× *



Radinacantha darwini (Tingidae)
© G Cassis & C Symonds



Lasiacantha n. sp. 002 (Tingidae)
© G Cassis & C Symonds



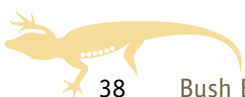
True Bugs — Terrestrial

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Miridae	Orthotylini sp. 095	×*			
	Orthotylini sp. 099	×*		×*	
	Orthotylini sp. 100	×*		×*	
	Orthotylini sp. 101	×*		×*	
	Orthotylini sp. 121		×*		
	Orthotylini sp. 124		×*		
	Orthotylini sp. 125			×*	×*
	Orthotylini sp. 128				×*
	Orthotylini sp. 137	×*	×*	×*	×*
	Orthotylini sp. 146				×*
	Orthotylini sp. 147				×*
	Orthotylini sp. 148			×*	
	Orthotylini sp. 150			×*	
	Orthotylini sp. 152	×*			
	Orthotylini sp. 161			×*	
	Orthotylini sp. 165			×*	×*
	Orthotylini sp. 167	×*		×*	
	Orthotylini sp. 168			×*	
	Orthotylini sp. 169				×*
	Orthotylini sp. 170				×*
	Orthotylini sp. 174	×*			×*
Orthotylini sp. 175			×*		
Orthotylini sp. 180			×*		
Orthotylini sp. 189	×*				
Orthotylini sp. 202	×*				
Orthotylini sp. 208				×*	
Orthotylini sp. 211	×*	×*			

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True Bugs — Terrestrial					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Miridae	Orthotylini sp. 221	× *			
	Orthotylini sp. 224			× *	× *
	Orthotylini sp. 228	× *			
	Orthotylini sp. 229	× *			
	Orthotylini sp. 232	× *			
	Orthotylini sp. 236		× *		
	Orthotylini sp. 239	× *		× *	× *
	Orthotylini sp. 240			× *	
	Orthotylini sp. 241			× *	
	Orthotylini sp. 242			× *	
	Orthotylini sp. 243			× *	
	Orthotylini sp. 244	× *		× *	
	Orthotylini sp. 249	× *			
	Orthotylini sp. 250	× *			
	Orthotylini sp. 252			× *	
	Orthotylini sp. 263	× *			
	Orthotylini sp. 264	× *			
	Orthotylini sp. 268	× *			
	Orthotylini sp. 269	× *			
	Orthotylini sp. 272	× *			
	Orthotylini sp. 276				× *
	Orthotylini sp. 278			× *	× *
	Orthotylini sp. 279				× *
	Orthotylini sp. 283			× *	
	Orthotylini sp. 287	× *			
	Orthotylini sp. 288	× *			
	Orthotylini sp. 289				× *
	Orthotylini sp. 295	× *			
	Orthotylini sp. 300	× *			
	Orthotylini sp. 303	× *			
	Orthotylini sp. 304	× *			
	Orthotylini sp. 306				× *
Orthotylini sp. 316				× *	
Orthotylini sp. 317				× *	
Orthotylini sp. 318			× *		
Orthotylini sp. 319	× *				
Orthotylini sp. 320	× *				
Orthotylini sp. 321			× *		
Orthotylini sp. 322			× *		



True Bugs — Terrestrial

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Miridae	Orthotylini sp. 323			× *	
	<i>Orthotylus</i> n. sp. 194	× *			× *
	<i>Orthotylus</i> n. sp. 195	× *			× *
	<i>Orthotylus</i> n. sp. 198	× *			× *
	<i>Orthotylus</i> n. sp. 219				× *
	<i>Orthotylus</i> n. sp. 234	× *			× *
	Phylini sp. 001	× *			× *
	Phylini sp. 020				× *
	Phylini sp. 021				× *
	Phylini sp. 030	× *			
	Phylini sp. 031	× *			× *
	Phylini sp. 038	× *			× *
	Phylini sp. 051				× *
	Phylini sp. 072	× *		× *	× *
	Phylini sp. 103			× *	
	Phylini sp. 113				× *
	Phylini sp. 120			× *	
	Phylini sp. 127	× *			
	Phylini sp. 129				× *
	Phylini sp. 141	× *			× *
	Phylini sp. 143	× *			
	Phylini sp. 153				× *
	Phylini sp. 159	× *			
	Phylini sp. 187	× *			
	Phylini sp. 188	× *			
	Phylini sp. 193	× *			
	Phylini sp. 196	× *			× *
	Phylini sp. 197	× *			
	Phylini sp. 201	× *			
	Phylini sp. 217	× *			
	Phylini sp. 218	× *			
	Phylini sp. 225				× *
Phylini sp. 235				× *	
Phylini sp. 237	× *				
Phylini sp. 251				× *	
Phylini sp. 260	× *				

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True Bugs — Terrestrial					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Miridae	Phylini sp. 265	× *			
	Phylini sp. 266			× *	
	Phylini sp. 277	× *			
	Phylini sp. 281			× *	
	Phylini sp. 282				× *
	Phylini sp. 301	× *			
	Phylini sp. 302	× *			
	Phylini sp. 305	× *			
	Phylini sp. 310	× *			
	<i>Sejanus albisignatus</i>			× *	
	<i>Sejanus</i> sp.			× *	
	<i>Setocoris</i> n. sp. 261	× *			
	<i>Setocoris russelli</i>				× *
	<i>Sinistropa elongatus</i>			× *	
	<i>Sinistropa northami</i>			× *	× *
	<i>Sinistropa</i> n. sp. 034				○ *
	<i>Sinistropa</i> n. sp. 227	○ *			
	<i>Sinistropa</i> n. sp. 247			○ *	
	<i>Sinistropa</i> n. sp. 248			○ *	
	<i>Wallabicoris ellae</i>	× *			
	<i>Wallabicoris</i> n. sp. 039				○ *
	<i>Wallabicoris</i> n. sp. 090	× *			
	<i>Wallabicoris</i> n. sp. 098			× *	
	<i>Wallabicoris</i> n. sp. 106			× *	
	<i>Wallabicoris</i> n. sp. 90				× *
	<i>Wallabicoris</i> n. sp. 130				× *
	<i>Wallabicoris</i> sp. 001			× *	× *
	Zanchiini sp. 002				× *
	Zanchiini sp. 029	× *	× *		× *
	Zanchiini sp. 096	× *			× *
	Zanchiini sp. 131				× *
	Zanchiini sp. 216				× *
Zanchiini sp. 294				× *	
Oxycarenidae	<i>Oxycarenus</i> sp.	× *			× *
Pentatomidae	<i>Antestiopsis</i> sp. 001		× *		
	<i>Antestiopsis</i> sp. 002		× *		
	<i>Aplerotus maculatus</i>	× *	× *		
	<i>Eribotes</i> sp.		× *		
	Halyini sp. 001		× *		



True Bugs — Terrestrial					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Pentatomidae	Halyini sp. 002		× *		
	Halyini sp. 003		× *		× *
	Halyini sp. 1	× *			
	<i>Oechalia schellenbergii</i>		× *		× *
	Pentatomidae sp. 003			× *	
	Pentatomidae sp. 005		× *		
	Pentatomidae sp. 1	× *			
	Pentatomidae sp. 2	× *			
	Pentatomidae sp. 4	× *			
	<i>Poecilometis</i> sp. 001				× *
	<i>Poecilometis</i> sp. 002			× *	× *
	<i>Poecilotoma</i> sp.			× *	
Reduviidae	Reduviidae sp.				× *
Rhyparochromidae	Myodochini sp.		× *		
	<i>Euander</i> sp.				× *
Scutelleridae	<i>Choerocoris paganus</i>	× *			× *
	<i>Choerocoris variegatus</i>				× *
Thaumastocoridae	<i>Thaumastocoris petilus</i>			× *	
Tingidae	<i>Lasiacantha</i> n. sp. 290	○ *			
	<i>Oncophysa</i> n. sp. 045	○ *			
	Tingidae sp. 173				× *
	Tingidae sp. 190	× *			
	Tingidae sp. 254			× *	
	<i>Tingis</i> sp.				× *

True Bugs — Aquatic					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Corixidae	<i>Agraptocorixa parvipunctata</i>	× *			
	<i>Micronecta</i> sp.	× *			
	<i>Sigara australis</i>	× *			
Notonectidae	<i>Anisops gratus</i>	× *			
	<i>Anisops hyperion</i>	× *			
	<i>Anisops stali</i>	× *			
	<i>Anisops thienemanni</i>	× *			

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Termites					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Rhinotermitidae	<i>Coptotermes acinaciformis</i>	×			
	<i>Coptotermes frenchi</i>	×			
	<i>Heterotermes intermedius</i>	×			
	<i>Schedorhinotermes actuosus</i>	×	■		
	<i>Schedorhinotermes reticulatus</i>	×			
Termitidae	<i>Ahamitermes hillii</i>	×			
	<i>Amitermes capito</i>		■		
	<i>Cristatitermes arenicola</i>		■		
	<i>Drepanotermes perniger</i>		■		
	<i>Ekphysotermes kalgoorliensis</i>	×			
	<i>Nasutitermes exitiosus</i>	×			
	<i>Paracapritermes kraepelinii</i>	×			
	<i>Tumulitermes apiocephalus</i>	×			
	<i>Tumulitermes dalbiensis</i>			■	
	<i>Tumulitermes tumuli</i>	×			

Dragonflies					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Lestidae	<i>Austrolestes aridus</i>	×			



Anamesia polyzona © C Lambkin



Polyzosteria pubescens © N Starick

Cockroaches					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Blattidae	<i>Anamesia polyzona</i>			×	*
	<i>Polyzosteria mitchelli</i>			×	*
	<i>Polyzosteria pubescens</i>			×	*



Centipedes					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Cryptopidae	<i>Cryptops</i> sp.	x*			
Scolopendridae	<i>Scolopendra laeta</i>	x*	x*		x*
	<i>Scolopendra morsitans</i>	x*			x*
Scutigerae	<i>Pilbarascutigera incola</i>	x*		x*	x*

Millipedes					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Paradoxosomatidae	<i>Antichiropus</i> CDR n. sp. 1	○*			
	<i>Antichiropus</i> CDR sp. 2	x*			

Pseudoscorpions					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Chthoniidae	<i>Austrochthonius</i> sp.	x*			
Garypidae	<i>Synsphyronus</i> CDR n. sp.	○*			
	<i>Synsphyronus</i> sp.	x*	x*	x*	x*
Olpiidae	<i>Austrohorus</i> sp.	x*			
	<i>Beierolpium</i> sp.	x*			
	<i>Indolpium</i> sp.	x*			

Spiders					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Actinopodidae	<i>Missulena</i> sp.		x		x
	<i>Missulena</i> sp.				
Araneidae	<i>Argiope protensa</i>				x*
	<i>Austracantha minax</i>				x*
	<i>Eriophora</i> sp.	x*			
	<i>Phonognatha</i> sp.	x*			
Caeculidae	<i>Neocaeculus</i> sp.	x*			
Clubionidae	<i>Cheiracanthium</i> sp.			x*	
Corinnidae	<i>Supunna funerea</i>	x*			

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Spiders					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Cyatholipidae	Matilda n. sp.	○ *			
Desidae	<i>Badumna</i> sp.				× *
	<i>Phryganoporus candidus</i>	× *			
	<i>Phryganoporus</i> sp.	× *			
Dipluridae	<i>Cethegus indet</i>	× *			
Gnaphosidae	<i>Ceryerda</i> sp.				× *
	<i>Ellica</i> CDR sp. 1	× *			
	<i>Encoptarthria</i> CDR sp. 1	× *			
Hersiliidae	<i>Tamopsis</i> CDR sp. 1	× *			
	<i>Tamopsis depressa</i>				× *
	<i>Tamopsis</i> sp.	× *			
Idiopidae	<i>Anidiops</i> sp.	× *			
Lamponidae	<i>Lampona foliifera</i>	× *			
	<i>Lampona quinqueplagiata</i>				× *
	<i>Lamponega</i> CDR sp. 1	× *			
	<i>Lamponicta</i> CDR sp. 1	× *			
	Notsodipus n. sp.			○ *	
Lycosidae	<i>Dingosa simsoni</i>				■
	<i>Hoggicosa forresti</i>	× *			
	<i>Hoggicosa</i> sp.	× *			
	<i>Hogna crispipes</i>		×		■
	<i>Hogna pexa</i>				■
	<i>Lycosa forresti</i>				■
	<i>Lycosa salifodina</i>				■
	<i>Mainosa longipes</i>	× *			■
Miturgidae	<i>Miturga</i> sp.	× *			
Nemesiidae	<i>Teyl</i> sp.	■			
	<i>Teyl</i> sp. 3				■

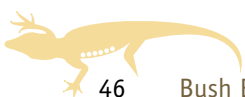


Spiders					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Nephilidae	<i>Nephila edulis</i>	×*			
Oonopidae	<i>Myrmopopaea</i> sp.	×*	×*		
Pholcidae	<i>Trichocyclus balladong</i>	×*			×*
	<i>Trichocyclus</i> sp.	×*			
	<i>Wugigarra kalamai</i>				×*
Prodidomidae	<i>Wesmaldra urawa</i>	×*			
Salticidae	<i>Adoxotoma</i> CDR sp. 1	×*			
	<i>Adoxotoma</i> sp.	×*			×*
	<i>Breda jovialis</i>	×*			
	<i>Clynotis severus</i>	×*			
	<i>Damoetas</i> CDR sp. 1	×*			
	<i>Lycidas chlorophthalmus</i>	×*			
	<i>Lycidas</i> sp.	×*			
	<i>Lycidas</i> sp. 1	×*			
	<i>Paraplatooides</i> sp.	×*			
	<i>Zebraplatys</i> CDR sp. 1	×*			
	<i>Zebraplatys</i> CDR sp. 2	×*			
	<i>Zebraplatys</i> CDR sp. 3	×*			
Sparassidae	<i>Neosparassus</i> sp.	×*			
Theridiidae	<i>Emertonella</i> sp.				×*
	<i>Hadrotarsus</i> sp.	×*			
	<i>Latrodectus hasselti</i>	×*			×*
	<i>Steatoda</i> CDR sp. 1	×*			
	<i>Steatoda</i> CDR sp. 2	×*			
	<i>Steatoda</i> CDR sp. 3	×*			
	<i>Steatoda</i> sp.			×*	×*
Thomsidae	<i>Tharpyna</i> sp.	×*			
Zodariidae	<i>Australutica</i> CDR sp. 1	×*			
	<i>Australutica</i> CDR sp. 2	×*			
	<i>Habronestes</i> CDR sp. 1	×*			
	<i>Habronestes</i> CDR sp. 2	×*			
	<i>Habronestes</i> CDR sp. 3	×*			
	<i>Habronestes</i> CDR sp. 4	×*			
	<i>Habronestes</i> sp.	×*			
	<i>Storena formosa</i>			×*	

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Scorpions					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Buthidae	<i>Lychas adonis</i>	○*			
	<i>Lychas</i> sp.	×*			
	<i>Lychas</i> sp. 1	×*			
	<i>Lychas</i> sp. 2	×*			
	<i>Lychas splendens</i>	×*			
Urodacidae	<i>Urodacus hoplurus</i>	×*			
	<i>Urodacus laverton</i>	×*			
	<i>Urodacus</i> sp.	×*		×*	

Snails					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Camaenidae	<i>Sinumelon</i> cf. <i>kalgum</i>	×*			
	<i>Sinumelon vagente</i>		×*	×*	×*
Placostylidae	<i>Bothriembryon</i> cf. <i>sedgwicki</i>	×*		×*	
	<i>Bothriembryon</i> n. sp. "Northern Wheatbelt"?				×*
Planorbidae	<i>Isidorella newcombi</i>	×*	×*		
Punctidae	<i>Westralaoma</i> cf. <i>aprica</i>	×*		×*	
Pupillidae	<i>Gastrocopta bannertonensis</i>	×*		×*	
	<i>Gastrocopta</i> cf. <i>margaretae</i>			×*	
	<i>Pupoides adelaidae</i>			×*	
	<i>Pupoides myoporinae</i>	×*			
Succineidae	<i>Succinea</i> sp. aff. <i>scalarina</i>	×*	×*	×*	×*



Flora

Flowering Plants					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Aizoaceae	<i>Cleretum papulosum</i> subsp. <i>papulosum</i> ^	× *	× *	×	
	<i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>	■		×	
	<i>Gunniopsis divisa</i>			×	
	<i>Gunniopsis intermedia</i>	■			
	<i>Gunniopsis quadrifida</i>	× *	×		
	<i>Gunniopsis rodwayi</i>	×	×		
	<i>Gunniopsis rubra</i>	×		×	
	<i>Gunniopsis septifraga</i>	× *			
	<i>Mesembryanthemum nodiflorum</i> ^			×	×
	<i>Sarcozona praecox</i>	× *			
	<i>Tetragonia</i> aff. <i>moorei</i>	■		×	
	<i>Tetragonia diptera</i>	■		×	×
	<i>Tetragonia eremaea</i>			×	
Amaranthaceae	<i>Alternanthera nodiflora</i>		×		
	<i>Amaranthus blitum</i>	■			
	<i>Ptilotus chamaecladus</i>				×
	<i>Ptilotus divaricatus</i> var. <i>divaricatus</i>	× *	× *	×	
	<i>Ptilotus drummondii</i>	■		×	
	<i>Ptilotus eriotrichus</i>	×			
	<i>Ptilotus exaltatus</i>	■		×	×
	<i>Ptilotus gaudichaudii</i> var. <i>gaudichaudii</i>	■		×	
	<i>Ptilotus gaudichaudii</i> var. <i>parviflorus</i>	■		×	
	<i>Ptilotus halophilus</i>			×	
	<i>Ptilotus helipteroides</i>	■			
<i>Ptilotus holosericeus</i>	■				

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Flowering Plants					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Amaranthaceae	<i>Ptilotus obovatus</i>	■	×	×	× *
	<i>Ptilotus polystachyus</i>		× *		× *
	<i>Ptilotus polystachyus</i> var. <i>polystachyus</i>	■			
	<i>Ptilotus schwartzii</i>	■			
Anacardiaceae	<i>Schinus molle</i> var. <i>areira</i> ^				×
Apiaceae	<i>Actinotus humilis</i>	■			
	<i>Daucus glochidiatus</i>	■	× *	×	
	<i>Hydrocotyle callicarpa</i>			×	
	<i>Hydrocotyle coorowensis</i> ms		×		
	<i>Hydrocotyle pilifera</i> var. <i>glabrata</i>	× *		×	
	<i>Hydrocotyle rugulosa</i>	■		×	
	<i>Hydrocotyle</i> sp. Warriedar (P.G.Wilson 12267)			×	
	<i>Trachymene cyanopetala</i>	■		×	
	<i>Trachymene ornata</i>	× *	× *	×	
	<i>Trachymene pilosa</i>			×	× *
	<i>Xanthosia bungei</i>	■		×	× *
Apocynaceae	<i>Alyxia buxifolia</i>	■		×	
	<i>Rhyncharrhena linearis</i>			×	
Asparagaceae	<i>Acanthocarpus canaliculatus</i>	■			
	<i>Agave americana</i> ^			×	
	<i>Arthropodium curvipes</i>	■		×	
	<i>Arthropodium dyeri</i>	■		×	× *
	<i>Arthropodium</i> sp. (T.D. Macfarlane 4738)			× *	× *
	<i>Chamaexeros fimbriata</i>	■		× *	× *
	<i>Chamaexeros macranthera</i>	■			
	<i>Dichopogon capillipes</i>		×		
	<i>Lomandra effusa</i>	■		× *	× *
	<i>Lomandra</i> sp. Lochada (T.D. Macfarlane 4833)			○ *	○ *
	<i>Thysanotus manglesianus</i>	×		×	×
	<i>Thysanotus patersonii</i>	■		×	
	<i>Thysanotus pyramidalis</i>	× *		× *	× *
	<i>Thysanotus rectantherus</i>	■		× *	
	<i>Thysanotus</i> sp. Lochada (T.D. Macfarlane 4860)				○ *
<i>Xerolirion divaricata</i>	■		×		



Lomandra sp. (T.D. Macfarlane 4833) © TD Macfarlane



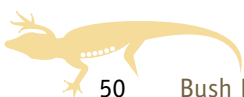
Thysanotus sp. Lochada (T.D. Macfarlane 4860) © TD Macfarlane

Flowering Plants						
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada	
Asphodelaceae	<i>Bulbine semibarbata</i>	× *		×		
Asteraceae	<i>Actinobole uliginosum</i>	■		×		
	<i>Angianthus tomentosus</i>	■	×	×		
	<i>Arctotheca calendula</i> ^	■		×		
	<i>Bellida graminea</i>	■		×		
	<i>Blennospora drummondii</i>	■		×		
	<i>Brachyscome cheilocarpa</i>			×		
	<i>Brachyscome ciliaris</i>	■		×		
	<i>Brachyscome ciliocarpa</i>		×	×		
	<i>Brachyscome iberidifolia</i>			×		
	<i>Brachyscome lineariloba</i>				×	
	<i>Brachyscome oncocarpa</i>		×			
	<i>Brachyscome perpusilla</i>		×	×		
	<i>Brachyscome pusilla</i>	■				
	<i>Calocephalus francisii</i>			×		
	<i>Calocephalus multiflorus</i>			×		
	<i>Calotis hispidula</i>		× *	×	×	
	<i>Calotis multicaulis</i>		× *	×	×	
	<i>Calotis</i> sp. Perrinvale Station (R.J.Cranfield 7096)				×	
	<i>Carthamus lanatus</i> ^	■				
	<i>Cephalipterum drummondii</i>	■		× *	×	× *
	<i>Ceratogyne obionoides</i>	■			×	
	<i>Chamaexeros fimbriata</i>				× *	
	<i>Chthonocephalus pseudevax</i>	■			×	
<i>Cotula australis</i>				×		

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Flowering Plants					
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Asteraceae	<i>Cotula bipinnata</i>	■			
	<i>Cotula cotuloides</i>		×		
	<i>Dithyrostegia amplexicaulis</i>		×		
	<i>Erymophyllum glossanthus</i>	■		×	
	<i>Erymophyllum ramosum</i> subsp. <i>involutum</i>	■			
	<i>Erymophyllum tenellum</i>	■		×	
	<i>Feldstonia nitens</i>	×*	×	×	
	<i>Fitzwillia axilliflora</i>		×		
	<i>Gilberta tenuifolia</i>	■		×	
	<i>Gilruthia osbornii</i>	■		×	
	<i>Gnephosis acicularis</i>		×	×	
	<i>Gnephosis angianthoides</i>		×	×	
	<i>Gnephosis setifera</i>		×	×	
	<i>Gnephosis tenuissima</i>	■	×	×	
	<i>Gnephosis trifida</i>	×*	×		
	<i>Hedypnois rhagadioloides</i> subsp. <i>cretica</i> ^	■		×	
	<i>Hyalochlamys globifera</i>	■		×	
	<i>Hyalosperma demissum</i>	■		×	
	<i>Hyalosperma glutinosum</i> subsp. <i>glutinosum</i>	■		×	
	<i>Hyalosperma glutinosum</i> subsp. <i>venustum</i>	■		×	
	<i>Hyalosperma zacchaeus</i>	■			
	<i>Hypochaeris glabra</i> ^	■		×	×
	<i>Isoetopsis graminifolia</i>	×*		×	
	<i>Lawrencella davenportii</i>	■		×	
	<i>Lawrencella rosea</i>	■		×	
	<i>Lemooria burkittii</i>			×	
	<i>Millotia dimorpha</i>			×	
	<i>Millotia myosotidifolia</i>	×*		×	
	<i>Monoculus monstrosus</i> ^			×*	
	<i>Myriocephalus guerinae</i>			×	×*
	<i>Myriocephalus pygmaeus</i>	■		×*	
	<i>Olearia dampieri</i> ms	■			
	<i>Olearia humilis</i>	■		×	
<i>Olearia pimeleoides</i>	■		×	×	
<i>Podolepis canescens</i>	×		×		



Flowering Plants

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Asteraceae	<i>Podolepis capillaris</i>	■	×	×	
	<i>Podolepis lessonii</i>	■	×*	×	
	<i>Podotheca gnaphalioides</i>	×*	×*	×	×
	<i>Pogonolepis stricta</i>	■	×*	×	
	<i>Rhodanthe battii</i>			×	
	<i>Rhodanthe chlorocephala</i> subsp. <i>rosea</i>	■	×*	×	
	<i>Rhodanthe chlorocephala</i> subsp. <i>splendida</i>	■	×	×	
	<i>Rhodanthe citrina</i>			×	
	<i>Rhodanthe collina</i>	×*	×	×	×
	<i>Rhodanthe forrestii</i>		×		
	<i>Rhodanthe laevis</i>	×		×	
	<i>Rhodanthe manglesii</i>			×	
	<i>Rhodanthe maryonii</i>	×*	×	×	
	<i>Rhodanthe oppositifolia</i> subsp. <i>oppositifolia</i>			×	
	<i>Rhodanthe polycephala</i>	×*		×	
	<i>Rhodanthe pygmaea</i>	■			
	<i>Rhodanthe spicata</i>	■	×	×	×
	<i>Rhodanthe stricta</i>			×	×
	<i>Schoenia cassiniana</i>	■	×*	×	×*
	<i>Senecio glossanthus</i>	×	×	×	
	<i>Senecio lacustrinus</i>			×	
	<i>Senecio pinnatifolius</i>			×	
	<i>Senecio spanomerus</i>			×	
	<i>Sonchus oleraceus</i> ^	■			
	<i>Sondottia connata</i>			×*	
	<i>Stenopetalum salicola</i>			×	
	<i>Trichanthodium exile</i>			×	
	<i>Trichanthodium skirrophorum</i>				×
	<i>Urospermum picroides</i>	■			
	<i>Ursinia anthemoides</i> ^	■			×
	<i>Vittadinia humerata</i>	■			
<i>Waitzia acuminata</i> var. <i>acuminata</i>	■		×*	×	
<i>Waitzia nitida</i>				×	

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Flowering Plants					
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Boraginaceae	<i>Cynoglossum</i> sp. Inland Ranges (C.A.Gardner 14499)			×	
	<i>Echium plantagineum</i> ^	■		×	
	<i>Halgania anagalloides</i>			×	
	<i>Halgania cyanea</i> var. Allambi Station (B.W.Strong 676)	■			
	<i>Halgania gustafsenii</i> var. Mid West (G. Perry 370)	■		×	
	<i>Halgania integerrima</i>	■		×*	×*
	<i>Omphalolappula concava</i>			×	
Boryaceae	<i>Borya constricta</i>	■		×*	×*
	<i>Borya nitida</i>	■			
	<i>Borya sphaerocephala</i>	■		×	×
Brassicaceae	<i>Brassica</i> × <i>juncea</i> ^	■			
	<i>Brassica</i> × <i>napus</i> ^	■			
	<i>Brassica barrelieri</i> ^	■			
	<i>Brassica rapa</i> ^	■			
	<i>Brassica tournefortii</i> ^	■			
	<i>Lepidium oxytrichum</i>	■		×	
	<i>Menkea australis</i>		×*		
	<i>Phlegmatospermum drummondii</i>	■			
	<i>Raphanus raphanistrum</i> ^	■			
	<i>Sisymbrium irio</i>	■			
	<i>Sisymbrium orientale</i> ^				×
	<i>Sisymbrium runcinatum</i> ^			×	
	<i>Stenopetalum anfractum</i>			×	
	<i>Stenopetalum filifolium</i>	■		×	
	<i>Stenopetalum lineare</i> var. <i>lineare</i>			×	
<i>Stenopetalum pedicellare</i>			×		
<i>Stenopetalum salicola</i>				×	
<i>Stenopetalum sphaerocarpum</i>			×		
Campanulaceae	<i>Isotoma hypocrateriformis</i>	■			
	<i>Isotoma petraea</i>			×	×
	<i>Lobelia rarifolia</i>	■			
	<i>Lobelia rhytidosperra</i>			×	
	<i>Lobelia winfridae</i>			×	
	<i>Wahlenbergia gracilentia</i>	■		×	
	<i>Wahlenbergia tumidifructa</i>			×	
Caryophyllaceae	<i>Gypsophila tubulosa</i>	■			
	<i>Petrorhagia dubia</i> ^	■	×	×*	



Flowering Plants

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Caryophyllaceae	<i>Polycarpon tetraphyllum</i> ^	× *	× *		
	<i>Silene gallica</i> ^			×	
	<i>Silene nocturna</i> ^	■	× *	×	×
	<i>Spergula pentandra</i> ^			×	
	<i>Stellaria filiformis</i>	■		×	
Casuarinaceae	<i>Allocasuarina acutivalvis</i> subsp. <i>acutivalvis</i>	■		×	
	<i>Allocasuarina acutivalvis</i> subsp. <i>prinsepiana</i>	■		×	
	<i>Allocasuarina campestris</i>	■		×	
	<i>Allocasuarina dielsiana</i>	■		×	
	<i>Allocasuarina tessellata</i>	■			
	<i>Casuarina pauper</i>			×	
Celastraceae	<i>Psammomoya choretroides</i> ^	■			
	<i>Psammomoya implexa</i>			×	
	<i>Stackhousia monogyna</i>	■		×	× *
	<i>Stackhousia muricata</i>			×	
	<i>Tripterococcus brunonis</i>	■			
Centrolepidaceae	<i>Centrolepis aristata</i>			×	
	<i>Centrolepis humillima</i>	■			
Chenopodiaceae	<i>Atriplex bunburyana</i>	■	× *	×	
	<i>Atriplex codonocarpa</i>		×		
	<i>Atriplex hymenotheca</i>		×		
	<i>Atriplex lindleyi</i>		×		
	<i>Atriplex paludosa</i> subsp. <i>baudinii</i>		×		
	<i>Atriplex semilunaris</i>		×		
	<i>Atriplex stipitata</i>	■			
	<i>Atriplex vesicaria</i>	■	×		
	<i>Chenopodium glaucum</i>	■			
	<i>Chenopodium murale</i> ^	■		×	×
	<i>Didymanthus roei</i>		× *	×	
	<i>Dysphania melanocarpa</i> f. <i>melanocarpa</i>				×
	<i>Einadia nutans</i> subsp. <i>eremaea</i>			×	
<i>Enchylaena lanata</i>	■		×	×	

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Flowering Plants						
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada	
Chenopodiaceae	<i>Enchylaena tomentosa</i>		×			
	<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>			×		
	<i>Eriochiton sclerolaenoides</i>	× *				
	<i>Maireana amoena</i>	× *	×			
	<i>Maireana atkinsiana</i>		× *			
	<i>Maireana brevifolia</i>	■				
	<i>Maireana carnosa</i>	■	×	×		
	<i>Maireana diffusa</i>	■				
	<i>Maireana georgei</i>	■			×	
	<i>Maireana marginata</i>	× *			×	
	<i>Maireana planifolia</i>	■			×	
	<i>Maireana pyramidata</i>			×		
	<i>Maireana thesioides</i>	■			×	
	<i>Maireana tomentosa</i>	■		×		
	<i>Maireana trichoptera</i>	■			×	
	<i>Rhagodia drummondii</i>	■		× *		
	<i>Rhagodia eremaea</i>	■			×	
	<i>Sclerolaena densiflora</i>			×		
	<i>Sclerolaena diacantha</i>	■		× *	×	
	<i>Sclerolaena drummondii</i>	■				
	<i>Sclerolaena eurotioides</i>	× *		× *	×	
	<i>Sclerolaena fusiformis</i>	× *			×	
	<i>Sclerolaena gardneri</i>				×	
	<i>Sclerolaena microcarpa</i>				×	
	<i>Tecticornia</i> aff. <i>halocnemoides</i>	■				
	<i>Tecticornia disarticulata</i>	■		×	×	
	<i>Tecticornia doleiformis</i>			×		×
	<i>Tecticornia fimbriata</i>			×		
	<i>Tecticornia halocnemoides</i>			×	×	
	<i>Tecticornia indica</i> subsp. <i>bidens</i>			×		
	<i>Tecticornia loriae</i>					×
	<i>Tecticornia peltata</i>			×		
	<i>Tecticornia pruinosa</i>			×		
<i>Tecticornia</i> sp. Dennys Crossing (K.A. Shepherd & J. English KS 552)	■				×	
<i>Threlkeldia diffusa</i>			×			

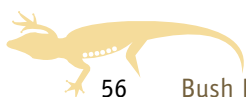


Flowering Plants					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Colchicaceae	<i>Wurmbea</i> sp. Paynes Find (C.J. French 1237)		×		
	<i>Wurmbea densiflora</i>	■		×	×
	<i>Wurmbea inframediana</i>				×
	<i>Wurmbea murchisoniana</i>			×	
	<i>Wurmbea</i> sp. Paynes Find (C.J. French 1237)	■		×	
	<i>Wurmbea</i> sp. Wanarra (T.D. Macfarlane <i>et al.</i> TDM 4348)	■			
	<i>Wurmbea</i> sp. White Wells (T.D. Macfarlane <i>et al.</i> TDM 4345)	■			
Convolvulaceae	<i>Cuscuta planiflora</i> ^	× *		×	
	<i>Duperreya sericea</i>	× *			× *
Crassulaceae	<i>Crassula closiana</i>	■		×	
	<i>Crassula colorata</i> var. <i>acuminata</i>	■		×	
	<i>Crassula colorata</i> var. <i>colorata</i>	■		×	
	<i>Crassula decumbens</i>			× *	
	<i>Crassula exserta</i>				× *
	<i>Crassula extrorsa</i>	■		×	
	<i>Crassula tetramera</i>	■		×	
Cucurbitaceae	<i>Citrullus colocynthis</i> ^				×
	<i>Citrullus lanatus</i> ^	■			
	<i>Cucumis myriocarpus</i> ^	■			
Cyperaceae	<i>Chrysitrix distigmatosa</i>	× *		× *	× *
	<i>Cyperus rigidellus</i>	■	×		
	<i>Cyperus tenellus</i> ^	■	×	× *	× *
	<i>Gahnia drummondii</i>	■			
	<i>Isolepis cernua</i> var. <i>setiformis</i>	■			
	<i>Isolepis congrua</i>	■	×	×	× *
	<i>Lepidosperma costale</i>	■			
	<i>Lepidosperma gibsonii</i>	■			
	<i>Lepidosperma</i> sp. Blue Hills (A. Markey & S. Dillon 3468)	■		×	
	<i>Lepidosperma</i> sp. Wolga Rock (S.D. Hopper 6513)	■			
	<i>Schoenus humilis</i>	× *	×		× *

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Chrysitrix distigmata © TD Macfarlane



"The Field Lab" at Lochada Reserve, A Wheeler & B Glasser

Flowering Plants					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Cyperaceae	<i>Schoenus nanus</i>	■		×	
	<i>Schoenus subaphyllus</i>	■			
	<i>Schoenus variicellae</i>	× *			
Dilleniaceae	<i>Hibbertia arcuata</i>	■		×	× *
	<i>Hibbertia glomerosa</i> var. <i>glomerosa</i>	■		×	
	<i>Hibbertia stenophylla</i>	■		×	
Droseraceae	<i>Drosera glanduligera</i>			× *	× *
	<i>Drosera macrantha</i>			×	
	<i>Drosera macrantha</i> subsp. <i>macrantha</i>	■			
	<i>Drosera</i> sp. (T.D. Macfarlane 4733)				× *
Ecdeiocoleaceae	<i>Ecdeiocolea monostachya</i>	■		× *	× *
Elatinaceae	<i>Bergia perennis</i> subsp. <i>exigua</i>		×		
Ericaceae	<i>Astroloma serratifolium</i>	■		×	
	<i>Leucopogon hamulosus</i>	■			
	<i>Leucopogon</i> sp. Clyde Hill (M.A. Burgman 1207)	■		×	×
Euphorbiaceae	<i>Calycopeplus paucifolius</i>	■		×	×
	<i>Euphorbia boophthona</i>	× *			
	<i>Euphorbia drummondii</i>	× *	×	×	
	<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	× *			
	<i>Monotaxis bracteata</i>	■			
	<i>Poranthera microphylla</i>			×	
	<i>Ricinocarpos velutinus</i>	■		×	×
	<i>Stachystemon intricatus</i>	■		×	
Fabaceae	<i>Acacia acanthoclada</i> subsp. <i>glaucescens</i>	■	×		×
	<i>Acacia acuaria</i>	■		×	



Flowering Plants

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada	
Fabaceae	<i>Acacia acuminata</i>	■		×	×	
	<i>Acacia</i> aff. <i>coolgardiensis</i>				×	
	<i>Acacia alata</i> var. <i>biglandulosa</i>			×		
	<i>Acacia andrewsii</i>	■	× *	×		
	<i>Acacia aneura</i>	■		×	×	
	<i>Acacia aneura</i> var. cf. <i>aneura</i>			×		
	<i>Acacia aneura</i> var. cf. <i>argentea</i>			×		
	<i>Acacia aneura</i> var. <i>microcarpa</i>			×		
	<i>Acacia anthochaera</i>	■	×	×	×	
	<i>Acacia assimilis</i> subsp. <i>assimilis</i>	■		×	× *	
	<i>Acacia aulacophylla</i>	■		×		
	<i>Acacia beauverdiana</i>			×		
	<i>Acacia brumalis</i>			×		
	<i>Acacia burkittii</i>	■		×	× *	
	<i>Acacia cerastes</i>	■				
	<i>Acacia colletioides</i>	■			×	× *
	<i>Acacia coolgardiensis</i>	■			×	×
	<i>Acacia diallaga</i>				×	
	<i>Acacia dielsii</i>	■				
	<i>Acacia duriuscula</i>	■			× *	
	<i>Acacia effusifolia</i>	■			×	
	<i>Acacia enervia</i> subsp. <i>explicata</i>	■				
	<i>Acacia eremaea</i>	■		×	×	×
	<i>Acacia erinacea</i>	×				
	<i>Acacia exocarpoides</i>	■			×	×
	<i>Acacia formidabilis</i>	■				
	<i>Acacia hemiteles</i>	■			×	
	<i>Acacia inceana</i> subsp. <i>conformis</i>	×				
	<i>Acacia incognita</i>				×	×
	<i>Acacia jennerae</i>	■				
	<i>Acacia jibberdingensis</i>	■			×	×
	<i>Acacia kalgoorliensis</i>	■				
<i>Acacia karina</i>				×		
<i>Acacia kochii</i>	■			×		
<i>Acacia latior</i>	■			×		
<i>Acacia ligulata</i>			×			

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Flowering Plants						
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada	
Fabaceae	<i>Acacia ligustrina</i>	■	×			
	<i>Acacia lineolata</i> subsp. <i>lineolata</i>	■				
	<i>Acacia longiphylloidea</i>	■				
	<i>Acacia longispinea</i>	■		×	× *	
	<i>Acacia masliniana</i>		×	×	×	
	<i>Acacia minyura</i>			×		
	<i>Acacia multispicata</i>				×	
	<i>Acacia murrayana</i>	■		×	×	
	<i>Acacia nigripilosa</i> subsp. <i>latifolia</i>	■				
	<i>Acacia nigripilosa</i> subsp. <i>nigripilosa</i>	■		×	×	
	<i>Acacia obtecta</i>		×			
	<i>Acacia prainii</i>	■			×	
	<i>Acacia puncticulata</i>				×	
	<i>Acacia quadrimarginea</i>	■			×	×
	<i>Acacia ramulosa</i> var. <i>linophylla</i>	■				
	<i>Acacia ramulosa</i> var. <i>ramulosa</i>	■		×	×	×
	<i>Acacia resinimarginea</i>	■			×	
	<i>Acacia resinosa</i>	■				
	<i>Acacia restiacea</i>	■				
	<i>Acacia rhodophloia</i>					×
	<i>Acacia rigens</i>				×	
	<i>Acacia scleroclada</i>	■				×
	<i>Acacia sibina</i>	■			×	×
	<i>Acacia sibirica</i>			×		
	<i>Acacia</i> sp. Goodlands (B.R.Maslin 7761)	■				
	<i>Acacia</i> sp. Jemberlana Hill (K.R.Newbey 6751)				×	
	<i>Acacia</i> sp. Kalannie North East (B.R.Maslin 7571)	■				
	<i>Acacia</i> sp. Mullewa (B.R.Maslin 4269)			×		
	<i>Acacia</i> sp. narrow phyllode (B.R. Maslin 7831)	■		×		×
	<i>Acacia</i> sp. Wubin (B.R.Maslin 4131)				×	
	<i>Acacia steedmanii</i> subsp. <i>steedmanii</i>	■				
	<i>Acacia stereophylla</i> var. <i>stereophylla</i>	■				
	<i>Acacia tetragonophylla</i>	■		×	×	×
<i>Acacia tysonii</i>	■		×		×	
<i>Acacia umbraculiformis</i>	■			×	×	



Flowering Plants

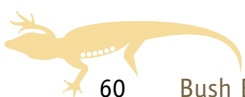
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada	
Fabaceae	<i>Acacia woodmaniorum</i> ~			×		
	<i>Acacia yorkkrakinensis</i> subsp. <i>acrita</i>	■				
	<i>Bossiaea</i> sp. Jackson Range (G. Cockerton & S. McNee LCS 13614)	■				
	<i>Bossiaea walkeri</i>	×				
	<i>Chorizema genistoides</i>	■				
	<i>Daviesia grahamii</i>	■				
	<i>Daviesia hakeoides</i> subsp. <i>hakeoides</i>			×		
	<i>Gastrolobium laytonii</i>	■		×		
	<i>Glycine canescens</i>				×	
	<i>Indigofera occidentalis</i> ms	■				
	<i>Isotropis forrestii</i>				×	
	<i>Jacksonia arenicola</i>				× *	
	<i>Jacksonia arida</i>			×		
	<i>Jacksonia rhadinoclada</i>	■				
	<i>Leptosema aphyllum</i>	■		×		
	<i>Leptosema daviesioides</i>	■				
	<i>Lupinus cosentinii</i> ^	■				
	<i>Medicago minima</i> ^		× *		×	
	<i>Mirbelia bursarioides</i> ms	■			×	
	<i>Mirbelia depressa</i>			× *		
	<i>Mirbelia longifolia</i>	■				
	<i>Mirbelia microphylla</i>	■		×		
	<i>Mirbelia ramulosa</i>	■		× *	× *	
	<i>Mirbelia rhagodioides</i>	■		× *		
	<i>Petalostylis cassioides</i>	■				
	<i>Senna artemisioides</i> subsp. × <i>petiolaris</i>	■			×	
	<i>Senna artemisioides</i> subsp. <i>filifolia</i>	■		× *	×	
	<i>Senna charlesiana</i>			× *	×	×
	<i>Senna flexuosa</i>	■				
	<i>Senna glutinosa</i> subsp. <i>chatelainiana</i>	■			×	
	<i>Senna pleurocarpa</i>	■				
	<i>Senna</i> sp. Austin (A.Strid 20210)	■			×	

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Flowering Plants					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Fabaceae	<i>Senna stowardii</i>	■			
	<i>Swainsona elegans</i>		×		
	<i>Swainsona gracilis</i>				× *
Frankeniaceae	<i>Frankenia aff. cinerea</i> (M.Trudgen 282)	○ *	○ *		
	<i>Frankenia fecunda</i>		×		
	<i>Frankenia laxiflora</i>	■			
	<i>Frankenia pauciflora</i>		×		
	<i>Frankenia</i> sp.			×	
Geraniaceae	<i>Erodium aureum</i> ^		× *		
	<i>Erodium botrys</i> ^	■			
	<i>Erodium cicutarium</i> ^		× *		
	<i>Erodium cygnorum</i>	■	× *	×	
Goodeniaceae	<i>Brunonia australis</i>	■		×	
	<i>Dampiera eriocephala</i>	■			
	<i>Dampiera incana</i> var. <i>fuscescens</i>	■			
	<i>Dampiera lavandulacea</i>				×
	<i>Dampiera luteiflora</i>	■			
	<i>Dampiera salahae</i>		×		
	<i>Dampiera wellsiana</i>	■		×	
	<i>Goodenia berardiana</i>	■		×	
	<i>Goodenia havilandii</i>	× *	× *		
	<i>Goodenia mimuloides</i>	× *	× *		
	<i>Goodenia occidentalis</i>	× *		×	
	<i>Goodenia perryi</i>	■			
	<i>Goodenia pinnatifida</i>	■		×	
	<i>Goodenia pusilliflora</i>			×	
	<i>Lechenaultia macrantha</i>	■		×	
	<i>Scaevola hamiltonii</i>	■			
	<i>Scaevola restiacea</i> subsp. <i>restiacea</i>	■			
	<i>Scaevola spinescens</i>	■	×	×	
	<i>Velleia cynopotamica</i>			×	
	<i>Velleia discophora</i>	■			
<i>Velleia hispida</i>			×		
<i>Velleia rosea</i>	■	× *	×	× *	
Gyrostemonaceae	<i>Codonocarpus cotinifolius</i>	■		×	
	<i>Glischrocaryon angustifolium</i>	■			
	<i>Glischrocaryon aureum</i>				×
	<i>Glischrocaryon flavescens</i>	■			
	<i>Gyrostemon racemiger</i>	■			



Flowering Plants					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Lamiaceae	<i>Hemigenia ciliata</i>	■			
	<i>Hemigenia</i> sp. Yuna (A.C. Burns 95)	■			×
	<i>Hemigenia tomentosa</i>	■			
	<i>Hemiphora elderi</i>			×	
	<i>Lachnostachys verbascifolia</i> var. <i>verbascifolia</i>	■		×	
	<i>Microcorys</i> sp. Mt Gibson (S. Patrick 2098)	■			
	<i>Pityrodia terminalis</i>	■			
	<i>Prostanthera</i> aff. <i>serpyllifolia</i> subsp. <i>microphylla</i>	■			
	<i>Prostanthera althoferi</i> subsp. <i>althoferi</i>			×	
	<i>Prostanthera campbellii</i>			×	
	<i>Prostanthera eckersleyana</i>	■		×	× *
	<i>Prostanthera magnifica</i>		× *	×	
	<i>Prostanthera patens</i>	■		×	
	<i>Prostanthera</i> sp. Karara (D.Coultas & K.Greenacre Opp 8)			×	×
	<i>Spartothamnella puberula</i>			×	
	<i>Spartothamnella</i> sp. Helena & Aurora Range (P.G.Armstrong 155-109)			×	
<i>Westringia cephalantha</i>	■				
<i>Wrixonia prostantheroides</i>	■		×	× *	
Lauraceae	<i>Cassytha nodiflora</i>	■			



Hemiphora elderi (Lamiaceae), a mixed population of the common red form growing with the unusual yellow form, Karara Reserve © TD Macfarlane



Flowering Plants

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Loganiaceae	<i>Phyllangium sulcatum</i>	× *		×	
Loranthaceae	<i>Amyema fitzgeraldii</i>				× *
	<i>Amyema gibberula</i> var. <i>tatei</i>			×	
	<i>Amyema miquelii</i>				×
	<i>Amyema nestor</i>	■			×
	<i>Amyema preissii</i>	■		×	
	<i>Lysiana casuarinae</i>			×	
	<i>Lysiana murrayi</i>	■			
Malvaceae	<i>Abutilon cryptopetalum</i>	×			
	<i>Abutilon oxycarpum</i> subsp. <i>prostratum</i> ms		× *		
	<i>Abutilon</i> sp. (M.S. Trudgen 80)				○ *
	<i>Alyogyne hakeifolia</i>	■		×	
	<i>Alyogyne pinoniana</i>	■	×		
	<i>Brachychiton gregorii</i>	■		×	×
	<i>Commersonia gaudichaudii</i>	■			
	<i>Commersonia stowardii</i>	■			
	<i>Hannafordia bissillii</i> subsp. <i>latifolia</i>	■			
	<i>Keraudrenia integrifolia</i>	■			
	<i>Keraudrenia velutina</i> subsp. <i>velutina</i>	■		×	× *
	<i>Lawrencia glomerata</i>		×		
	<i>Lawrencia squamata</i>	■	×		×
<i>Malva parviflora</i> ^	■				

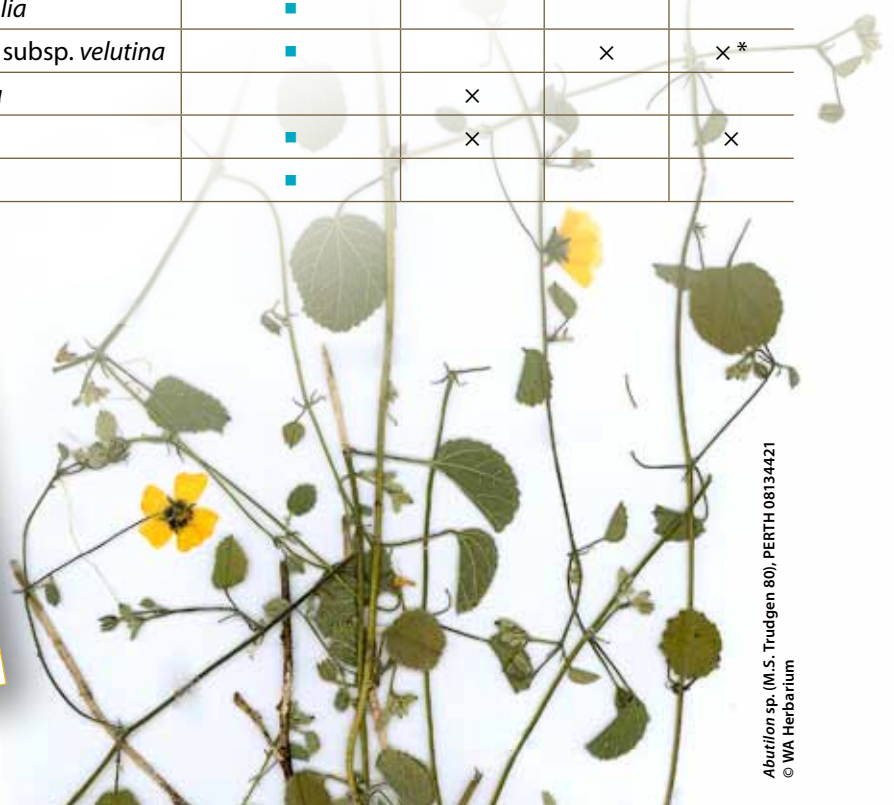
WESTERN AUSTRALIAN HERBARIUM, PERTH
Flora of Western Australia

Abutilon sp.
Malvaceae
Semi prostrate shrub, yellow flowers, rounded leaf.
Hill on plain. With *Acacia umbraculiformis*.

Loc.: Granite outcrop directly N of Boiada Camp, Lochada
Station, ca 50 km E of Morawa WA

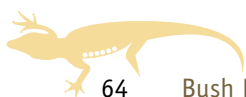
Lat. 29°11'45.500"S Long. 116°30'52.300"E GDA94
Coll. M.S. Trudgen MST 80 Date: 19/09/2009

Voucher: Outback Blitz.
Dups. to
PERTH 08134421



Abutilon sp. (M.S. Trudgen 80), PERTH 08134421
© WA Herbarium

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Flowering Plants					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Malvaceae	<i>Rulingia kempeana</i>	■		×	×
	<i>Rulingia luteiflora</i>	■		×	×
	<i>Sida calyxhymenia</i>	×	× *		× *
	<i>Sida</i> sp. dark green fruits (S. van Leeuwen 2260)	■	×	×	
	<i>Sida</i> sp. excedentifolia (J.L.Egan 1925)			×	
	<i>Thomasia tremandroides</i>	■			
Myrtaceae	<i>Aluta aspera</i> subsp. <i>hesperia</i>	■		×	× *
	<i>Babingtonia behrii</i>	■		×	
	<i>Baeckea elderiana</i>	■			
	<i>Baeckea</i> sp. Bencubbin-Koorda (M.E. Trudgen 5421)	■			
	<i>Baeckea</i> sp. Dudawa (M.E. Trudgen MET 5369)	■			
	<i>Baeckea</i> sp. Perenjori (J.W. Green 1516)	■			
	<i>Baeckea</i> sp. Wanarra (M.E. Trudgen MET 5376)	■		×	×
	<i>Balaustion pulcherrimum</i>	■			
	<i>Calothamnus aridus</i>	■			
	<i>Calothamnus gilesii</i>	■		×	
	<i>Calytrix glutinosa</i>	■			
	<i>Calytrix leschenaultii</i>	■		× *	×
	<i>Calytrix plumulosa</i>	■			
	<i>Calytrix</i> sp. Paynes Find (F. & J. Hort 1188)	■		×	×
	<i>Calytrix strigosa</i>	■		×	
	<i>Chamelaucium brevifolium</i>			×	
	<i>Chamelaucium micranthum</i>	■		×	
	<i>Chamelaucium pauciflorum</i> subsp. <i>Perenjori</i> (B.J. Conn 2181)	■		×	
	<i>Chamelaucium</i> sp. Warriedar (A.P.Brown & S.Patrick APB 1100)			×	
	<i>Chamelaucium</i> sp. Yalgoo (Y.Chadwick 1816)			×	
	<i>Cheyniana microphylla</i>			×	
<i>Darwinia capitellata</i>	■		×	× *	
<i>Darwinia masonii</i> # ~	■				



Flowering Plants

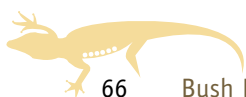
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada	
Myrtaceae	<i>Enekbatus sessilis</i>	■				
	<i>Enekbatus stowardii</i>	■	×	×		
	<i>Eucalyptus brachycorys</i>	■		×		
	<i>Eucalyptus celastroides</i> subsp. <i>virella</i>	■				
	<i>Eucalyptus clelandii</i>	■		×		
	<i>Eucalyptus erythronema</i> var. <i>marginata</i>	■				
	<i>Eucalyptus ewartiana</i>	■	×	×	×	
	<i>Eucalyptus ewartiana</i> × <i>leptopoda</i>			×		
	<i>Eucalyptus horistes</i>	■			×	
	<i>Eucalyptus jutsonii</i> subsp. <i>kobela</i>			×	×	
	<i>Eucalyptus kochii</i> subsp. <i>amaryssia</i>	■		×	×	
	<i>Eucalyptus kochii</i> subsp. <i>borealis</i>		×			
	<i>Eucalyptus kochii</i> subsp. <i>plenissima</i>	■		×	×	
	<i>Eucalyptus leptophylla</i>	■				
	<i>Eucalyptus leptopoda</i> subsp. <i>arctata</i>	■	×	×	× *	
	<i>Eucalyptus loxophleba</i> subsp. <i>lissophloia</i>	■		×		
	<i>Eucalyptus loxophleba</i> subsp. <i>supralaevis</i>	■	× *	×	×	
	<i>Eucalyptus moderata</i>	■				
	<i>Eucalyptus oldfieldii</i>	■		×		
	<i>Eucalyptus petraea</i>	■		×		
	<i>Eucalyptus rigidula</i>			×		
	<i>Eucalyptus salmonophloia</i>	■				
	<i>Eucalyptus salubris</i>	■		×		
	<i>Eucalyptus sheathiana</i>			×		
	<i>Eucalyptus stowardii</i>	■				
	<i>Eucalyptus subangusta</i> subsp. <i>pusilla</i>	■				
	<i>Eucalyptus subangusta</i> subsp. <i>subangusta</i>	■				
	<i>Eucalyptus synandra</i> # ~			×	×	×
	<i>Eucalyptus transcidentalis</i>	■				
	<i>Euryomyrtus recurva</i>	■				
<i>Homalocalyx aureus</i>	■			× *		
<i>Homalocalyx thryptomenoides</i>	■			×	× *	

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Flowering Plants						
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada	
Myrtaceae	<i>Kunzea pulchella</i>	■				
	<i>Malleostemon roseus</i>	■		×		
	<i>Malleostemon tuberculatus</i>	■		×	×	
	<i>Melaleuca acutifolia</i>	■				
	<i>Melaleuca atroviridis</i>	■		×	×	
	<i>Melaleuca barlowii</i>			×		
	<i>Melaleuca calyptroides</i>	■				
	<i>Melaleuca cf. concreta</i>			×		
	<i>Melaleuca conothamnoides</i>	■		×		
	<i>Melaleuca cordata</i>	■		×		
	<i>Melaleuca eleuterostachya</i>	■				
	<i>Melaleuca fabri</i>	■				
	<i>Melaleuca filifolia</i>	■		×		
	<i>Melaleuca fulgens</i>	■				
	<i>Melaleuca hamata</i>	■		×	×	×
	<i>Melaleuca hamulosa</i>	■				
	<i>Melaleuca lateriflora</i>			×		×
	<i>Melaleuca lateriflora</i> subsp. <i>acutifolia</i>				×	
	<i>Melaleuca laxiflora</i>			× *	×	
	<i>Melaleuca leiocarpa</i>	■		×	×	× *
	<i>Melaleuca longistaminea</i>	■				
	<i>Melaleuca nematophylla</i>	■			×	
	<i>Melaleuca oldfieldii</i>				×	
	<i>Melaleuca radula</i>	■			×	
	<i>Melaleuca stereophloia</i>	■			×	×
	<i>Melaleuca thyoides</i>	■			×	×
	<i>Melaleuca uncinata</i>				×	×
	<i>Melaleuca vinnula</i>	■				
	<i>Micromyrtus acuta</i>	■			×	
	<i>Micromyrtus clavata</i>	■				
	<i>Micromyrtus racemosa</i>	■				×
	<i>Micromyrtus sulphurea</i>					×
	<i>Micromyrtus trudgenii</i>	■			×	
	<i>Scholtzia leptantha</i>	■				
<i>Thryptomene costata</i>	■			×	× *	
<i>Thryptomene cuspidata</i>	■					

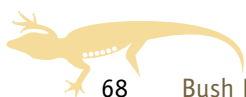


Flowering Plants					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Myrtaceae	<i>Verticordia eriocephala</i>	■			
	<i>Verticordia interioris</i>	■			
	<i>Verticordia rennieana</i>	■			
	<i>Verticordia venusta</i>	■			
Nyctaginaceae	<i>Boerhavia coccinea</i>			×	
Orchidaceae	<i>Caladenia doutchiai</i>	■		×	
	<i>Caladenia drummondii</i>				×
	<i>Caladenia exilis</i> × <i>roei</i>			×	
	<i>Caladenia exilis</i> subsp. <i>exilis</i>			×	
	<i>Caladenia hirta</i>				×
	<i>Caladenia hirta</i> subsp. <i>rosea</i>		×	×	
	<i>Caladenia incensa</i>			×	
	<i>Caladenia incrassata</i>	■			×
	<i>Caladenia mesocera</i>			×	×
	<i>Caladenia petrensis</i>		×	×	
	<i>Caladenia remota</i> subsp. <i>remota</i>			×	
	<i>Caladenia roei</i>	■		×	×
	<i>Caladenia vulgata</i>	■		×	×
	<i>Cyanicula amplexans</i>	■		×	
	<i>Cyanicula fragrans</i>	×			×
	<i>Diuris corymbosa</i>			×	
	<i>Diuris</i> sp.			×	
	<i>Ericksonella saccharata</i>			×	
	<i>Microtis granitica</i>	■			×
	<i>Prasophyllum gracile</i>	■		×	×
	<i>Pterostylis</i> sp. inland (A.C.Beaglehole 11880)			×	
	<i>Pterostylis</i> sp. scooped sepals (G.Brockman GBB386)			×	
	<i>Pterostylis spathulata</i>			×	×
	<i>Thelymitra antennifera</i>				×
<i>Thelymitra petrophila</i> ms	■				
Orobanchaceae	<i>Parentucellia latifolia</i> ^	×		×	
Phrymaceae	<i>Peplidium</i> sp. C Evol. Fl. Fauna Arid Aust. (N.T. Burbidge & A. Kanis 8158)		×		×

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Lochada Reserve, A Wheeler & B Glasser



Lechenaultia macrantha, Karara Reserve, A Wheeler & B Glasser

Flowering Plants

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Pittosporaceae	<i>Bursaria occidentalis</i>	■		×	
	<i>Cheiranthra filifolia</i>	■			
	<i>Cheiranthra simplicifolia</i>	■			
	<i>Pittosporum angustifolium</i>	■			
Plantaginaceae	<i>Plantago coronopus</i> ^	■			
	<i>Plantago debilis</i>	× *		×	
	<i>Plantago drummondii</i>		×		
Plumbaginaceae	<i>Limonium lobatum</i> ^		× *		×
Poaceae	<i>Amphibromus nervosus</i>		×		× *
	<i>Amhipogon caricinus</i> var. <i>caricinus</i>	■		×	
	<i>Amhipogon strictus</i>	■		×	
	<i>Aristida contorta</i>	■	×	×	
	<i>Austrodanthonia acerosa</i>	× *			
	<i>Austrodanthonia caespitosa</i>			× *	× *
	<i>Austrodanthonia setacea</i>			×	
	<i>Austrodanthonia</i> sp. Goomalling (A.G.Gunness et al. OAKP 10/63)			×	
	<i>Austrostipa blackii</i>			×	
	<i>Austrostipa elegantissima</i>	■	× *	×	× *
	<i>Austrostipa eremophila</i>			×	
	<i>Austrostipa hemipogon</i>			×	
	<i>Austrostipa nitida</i>			×	
	<i>Austrostipa puberula</i>			×	
	<i>Austrostipa scabra</i>	■		×	
	<i>Austrostipa trichophylla</i>	■	× *	×	
	<i>Briza maxima</i> ^	× *			
	<i>Briza minor</i> ^	× *			
<i>Bromus arenarius</i>	■		×		
<i>Bromus rubens</i> ^	■	× *	×		



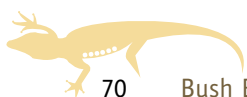
Flowering Plants

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada	
Poaceae	<i>Cymbopogon ambiguus</i>			×		
	<i>Ehrharta longiflora</i> ^			×		
	<i>Elymus scaber</i>			×		
	<i>Eragrostis dielsii</i>	×	×*		×*	
	<i>Eragrostis parviflora</i>			×		
	<i>Eragrostis pergracilis</i>		×			
	<i>Eriachne ovata</i>	■	×	×	×*	
	<i>Eriachne pulchella</i>	■				
	<i>Eriachne pulchella</i> subsp. <i>pulchella</i>			×	×*	
	<i>Hordeum glaucum</i> ^	■				
	<i>Lachnagrostis filiformis</i>			×*		
	<i>Lachnagrostis plebeia</i>	■		×		
	<i>Lachnagrostis preissii</i>	×*				
	<i>Lamarckia aurea</i> ^	■		×	×*	
	<i>Lolium rigidum</i> ^	■				
	<i>Monachather paradoxus</i>	■		×*	×	
	<i>Paspalidium basicladum</i>			×		
	<i>Paspalum dilatatum</i> ^	■				
	<i>Pentaschistis airoides</i> subsp. <i>airoides</i> ^			×	×	×*
	<i>Rostraria cristata</i> ^			×		
	<i>Rostraria pumila</i> ^	■		×*	×	
	<i>Schismus barbatus</i> ^					×*
	<i>Triodia basedowii</i>	■				
	<i>Triodia rigidissima</i>	×				
	<i>Triodia tomentosa</i>				×*	×*
	<i>Tripogon loliiformis</i>	■			×	
	<i>Vulpia muralis</i> ^				×	
	<i>Vulpia myuros</i> f. <i>myuros</i> ^				×	
Polygalaceae	<i>Comesperma griffinii</i>	■				
	<i>Comesperma integerrimum</i>	■	×*	×	×*	
	<i>Comesperma volubile</i>	■				
Polygonaceae	<i>Acetosa vesicaria</i> ^	■				
	<i>Emex australis</i> ^	■			×	
	<i>Muehlenbeckia adpressa</i>	■				
Pontederiaceae	<i>Eichhornia crassipes</i> ^	■				

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Portulacaceae	<i>Calandrinia calyptрата</i>	■		×	
	<i>Calandrinia disperma</i>		×		
	<i>Calandrinia eremaea</i>	■	×		
	<i>Calandrinia granulifera</i>	× *	× *	×	× *
	<i>Calandrinia lehmannii</i>	■			
	<i>Calandrinia polyandra</i>			×	
	<i>Calandrinia primuliflora</i>		×	×	
	<i>Calandrinia ptychosperma</i>		×		
	<i>Calandrinia remota</i>			×	
	<i>Calandrinia</i> sp. Blackberry (D.M.Porter 171)	■		×	
	<i>Calandrinia</i> sp. Bullardoo (F.Obbens & F.Hort FO 57/04)				×
	<i>Calandrinia</i> sp. Bungalbin (G.J.Keighery & N. Gibson 1656)	■		×	
	<i>Calandrinia</i> sp. Murchison-Gascoyne (F.Obbens & F.Hort FO 49/04)			×	
	<i>Calandrinia</i> sp. ridged papillate (M. Hislop & E. Hudson MH161)	■			
	<i>Calandrinia</i> sp. truncate capsules (A. Markey & S. Dillon 3474)	×		×	
<i>Calandrinia translucens</i>	■				
Primulaceae	<i>Lysimachia arvensis</i> ^	× *		×	
Proteaceae	<i>Banksia benthamiana</i>				×
	<i>Banksia fraseri</i> var. <i>ashbyi</i>			×	
	<i>Banksia purdieana</i>				×
	<i>Grevillea acacioides</i>	■			
	<i>Grevillea asparagoides</i>	■			
	<i>Grevillea biformis</i> subsp. <i>biformis</i>	■			
	<i>Grevillea deflexa</i>		×		
	<i>Grevillea didymobotrya</i> subsp. <i>Didymobotrya</i>	×	*		
	<i>Grevillea eriostachya</i>	■			
	<i>Grevillea extorris</i>	■	×	×	
	<i>Grevillea globosa</i>			×	
	<i>Grevillea granulosa</i>			×	
	<i>Grevillea hakeoides</i> subsp. <i>stenophylla</i>	■		×	×
	<i>Grevillea juncifolia</i> subsp. <i>temulenta</i>	■			



Flowering Plants

Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Proteaceae	<i>Grevillea levis</i>	■		×	×
	<i>Grevillea nana</i> subsp. <i>abbreviata</i>	■			
	<i>Grevillea nematophylla</i>	■			×
	<i>Grevillea obliquistigma</i> subsp. <i>cullenii</i>	■			
	<i>Grevillea obliquistigma</i> subsp. <i>obliquistigma</i>	■		×	× *
	<i>Grevillea paradoxa</i>	■		×	
	<i>Grevillea pinaster</i>			×	
	<i>Grevillea pityophylla</i>	■		×	
	<i>Grevillea pterosperma</i>	■			
	<i>Grevillea sarissa</i> subsp. <i>sarissa</i>				×
	<i>Grevillea scabrida</i>	■		×	
	<i>Grevillea subtiliflora</i>	■			
	<i>Grevillea tenuiloba</i>	■			
	<i>Grevillea teretifolia</i>	■			
	<i>Grevillea yorkrakinensis</i>	■			
	<i>Grevillea zygoloba</i>			×	
	<i>Hakea circumalata</i>				×
	<i>Hakea francisiana</i>	■			
	<i>Hakea invaginata</i>	■		×	×
	<i>Hakea minyma</i>	■			
	<i>Hakea preissii</i>			×	×
	<i>Hakea recurva</i> subsp. <i>arida</i>	■			
	<i>Hakea recurva</i> subsp. <i>recurva</i>	■			×
	<i>Persoonia hexagona</i>				×
	<i>Persoonia kararae</i>				×
	<i>Persoonia manotricha</i>	■		×	×
	<i>Persoonia pentasticha</i>	■			×
<i>Petrophile incurvata</i>	■			×	
<i>Petrophile pauciflora</i>				×	
<i>Petrophile seminuda</i>	■				
<i>Petrophile shuttleworthiana</i>	■			×	
Ranunculaceae	<i>Ranunculus pumilio</i>		×		
	<i>Ranunculus sessiliflorus</i> var. <i>sessiliflorus</i>			×	
Restionaceae	<i>Lepidobolus densus</i> ms			×	×

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Flowering Plants					
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Rhamnaceae	<i>Cryptandra apetala</i> var. <i>apetala</i>	■		× *	× *
	<i>Cryptandra imbricata</i>	■		×	
	<i>Cryptandra micrantha</i>	■		×	
	<i>Polianthion collinum</i>			×	
	<i>Stenanthemum poicilum</i>	■		×	
Rubiaceae	<i>Galium aparine</i> ^			×	
	<i>Opercularia vaginata</i>	■		×	
Rutaceae	<i>Boronia coerulescens</i>	■			
	<i>Drummondita</i> aff. <i>microphylla</i>			×	
	<i>Drummondita fulva</i>			×	×
	<i>Phebalium canaliculatum</i>	■			
	<i>Phebalium megaphyllum</i>	■			
	<i>Phebalium tuberosum</i>	■			
	<i>Philotheca brucei</i> subsp. <i>brucei</i>	■		×	×
	<i>Philotheca deserti</i> subsp. <i>deserti</i>	■		×	× *
	<i>Philotheca glabra</i>	■			× *
	<i>Philotheca nutans</i>	■			
	<i>Philotheca sericea</i>	■		×	
	<i>Philotheca thryptomenoides</i>	■			
<i>Philotheca tomentella</i>	■			×	
Santalaceae	<i>Exocarpos aphyllus</i>	■			
	<i>Korthalsella leucothrix</i>	■			
	<i>Santalum acuminatum</i>	■			×
	<i>Santalum spicatum</i>	■		×	
Sapindaceae	<i>Dodonaea adenophora</i>	■			
	<i>Dodonaea inaequifolia</i>	■		×	
	<i>Dodonaea lobulata</i>			×	
	<i>Dodonaea petiolaris</i>			×	
	<i>Dodonaea viscosa</i> subsp. <i>angustissima</i>	■		×	
	<i>Dodonaea viscosa</i> subsp. <i>mucronata</i>			×	
Scrophulariaceae	<i>Eremophila eriocalyx</i>		×		
	<i>Eremophila clarkei</i>			×	× *
	<i>Eremophila decipiens</i> subsp. <i>decipiens</i>	■		×	
	<i>Eremophila eriocalyx</i>	■		×	
	<i>Eremophila forrestii</i> subsp. <i>forrestii</i>	■		×	× *
	<i>Eremophila glabra</i> subsp. <i>elegans</i>	■		×	
	<i>Eremophila glutinosa</i>	■		×	



Flowering Plants					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Scrophulariaceae	<i>Eremophila latrobei</i> subsp. <i>latrobei</i>	■		×	×
	<i>Eremophila miniata</i>	■	× *		×
	<i>Eremophila nivea</i> # ~		×		
	<i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i>	■		×	
	<i>Eremophila oldfieldii</i> subsp. <i>oldfieldii</i>	■	×		
	<i>Eremophila oppositifolia</i> subsp. <i>angustifolia</i>	■		× *	
	<i>Eremophila pantonii</i>	×	*		
	<i>Eremophila sargentii</i>	■			
	<i>Eremophila serrulata</i>	■		×	
	<i>Eremophila shonae</i> subsp. <i>shonae</i>	■			
	<i>Zaluzianskya divaricata</i> ^	×	*		
Solanaceae	<i>Anthotroche pannosa</i>	■			
	<i>Crenidium spinescens</i>	■			
	<i>Duboisia hopwoodii</i>	■		×	
	<i>Nicotiana cavicola</i>				×
	<i>Nicotiana occidentalis</i>		×		
	<i>Nicotiana rosulata</i> subsp. <i>rosulata</i>			×	
	<i>Nicotiana rotundifolia</i>	■		× *	
	<i>Solanum coactiliferum</i>	■			
	<i>Solanum ellipticum</i>			×	× *
	<i>Solanum hoplopetalum</i>	■			
	<i>Solanum lasiophyllum</i>	■		×	× *
	<i>Solanum nigrum</i> ^	■		×	
	<i>Solanum nummularium</i>	■	×	*	×
	<i>Solanum oldfieldii</i>	■			
<i>Solanum</i> sp. aff. <i>lasiophyllum</i> (T.D. Macfarlane 4874)				× *	
Stylidiaceae	<i>Levenhookia leptantha</i>	■	×	*	×
	<i>Levenhookia stipitata</i>	■	×	*	
	<i>Stylidium confluens</i>			×	
	<i>Stylidium diuroides</i> subsp. <i>paucifoliatum</i>	■			
	<i>Stylidium limbatum</i>	■			
	<i>Stylidium perpusillum</i>			×	

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 ~ = WC listed ■ = *Previously recorded on the reserve but not found on this survey*





Flowering Plants					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Stylidiaceae	<i>Stylidium</i> sp. Yalgoo (D.Coultas et al. Opp 01) ~			×	
	<i>Stylidium warriedarens</i>	×	*	×	
	<i>Stylidium yilgarnense</i>	■			
Thymelaeaceae	<i>Pimelea aeruginosa</i>	■			
	<i>Pimelea angustifolia</i>	■			
	<i>Pimelea avonensis</i>	■		×	×
	<i>Pimelea forrestiana</i>	■			
	<i>Pimelea microcephala</i>			×	
	<i>Pimelea microcephala</i> subsp. <i>microcephala</i>				×
Urticaceae	<i>Parietaria cardiostegia</i>	■	×	×	
	<i>Urtica urens</i> ^	■			
Violaceae	<i>Hybanthus floribundus</i> subsp. <i>curvifolius</i>	■		×	
Zygophyllaceae	<i>Tribulus terrestris</i> ^			×	
	<i>Zygophyllum eremaeum</i>	■		×	
	<i>Zygophyllum fruticosum</i>	■	×		
	<i>Zygophyllum ovatum</i>	×	*	×	
	<i>Zygophyllum reticulatum</i>			×	
	<i>Zygophyllum tesquorum</i>	×	*		



View of plain with varied vegetation associations mainly dominated by *Acacia*. View from Mungada Ridge © TD Macfarlane



Lichens					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Acarosporaceae	<i>Acarospora citrina</i>	■			
	<i>Acarospora nodulosa</i>	■			
	<i>Acarospora</i> sp.	■			
Chrysothricaceae	<i>Chrysothrix candelaris</i>	■			
Cladoniaceae	<i>Cladia corallaizon</i>	■			
	<i>Heterodea muelleri</i>	■			
Graphidaceae	<i>Diploschistes ocellatus</i>	■			
	<i>Diploschistes</i> sp.	■			
Haematommataceae	<i>Haematomma eremaeum</i>	■			
Heppiaceae	<i>Heppia lutosa</i>	■			
Icmadophilaceae	<i>Siphula coriacea</i>	■			
Lecideaceae	<i>Lecidea</i> sp.	■			
Ochrolechiaceae	<i>Ochrolechia</i> sp.	■			
Pannariaceae	<i>Fuscopannaria decipiens</i>	■			
Parmeliaceae	<i>Parmelia</i> sp.			×	
	<i>Xanthoparmelia alternata</i>	■			
	<i>Xanthoparmelia convolutoides</i>	■			
	<i>Xanthoparmelia cranfieldii</i>	■			
	<i>Xanthoparmelia eilifi</i>	■			
	<i>Xanthoparmelia fangii</i>	■			
	<i>Xanthoparmelia flavescensireagens</i>	■			
	<i>Xanthoparmelia glareosa</i>	■			
	<i>Xanthoparmelia gongyloides</i>	■			
	<i>Xanthoparmelia incantata</i>	■			
	<i>Xanthoparmelia reptans</i>	■		×	
	<i>Xanthoparmelia scabrosa</i>	■			
	<i>Xanthoparmelia semiviridis</i>	■			
	<i>Xanthoparmelia</i> sp.	■		×	
	<i>Xanthoparmelia verrucella</i>	■		×	
	<i>Xanthoparmelia versicolor</i>	■			
<i>Xanthoparmelia willisii</i>	■				
Pertusariaceae	<i>Pertusaria pertractata</i>	■			
Physciaceae	<i>Buellia</i> sp.	■			
Psoraceae	<i>Psora crystallifera</i>	■			
	<i>Psora decipiens</i>	■			
	<i>Psora</i> sp.	■			
Teloschistaceae	<i>Fulgensia</i> sp.	■			
Verrucariaceae	<i>Placidium</i> sp.	■			



Fungi					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Agaricaeae	<i>Podaxis pistillaris</i>	■			
Bolbitiaceae	<i>Panaeolus</i> sp.	■			
Gastraceae	<i>Gastrum campestre</i>	■			
	<i>Gastrum minimum</i>	■			
Hymenochaetaceae	<i>Phellinus rimosus</i>	■			
	<i>Phellinus</i> sp.	■			
Lycoperdaceae	<i>Calvatia lilacina</i>	■			
	<i>Disciseda cervina</i>	■			
Polyporaceae	<i>Hexagonia apiaria</i>	■			
	<i>Pycnoporus coccineus</i>	■			
Tulostomataceae	<i>Acarospora citrina</i>			×	
	<i>Battarrea stevenii</i>	■			
	<i>Diploschistes</i> sp.			×	
	<i>Lecidea</i> sp.			×	
	<i>Tulostoma album</i>	■			
	<i>Tulostoma australianum</i>	■			
	<i>Tulostoma obesum</i>	■			

Slime Moulds					
Family	Species	Charles Darwin	Kadji Kadji	Karara	Lochada
Echinosteliaceae	<i>Echinostelium</i> sp.	■			
Physaraceae	<i>Fuligo cinerea</i>	■			
	<i>Fuligo megaspora</i>	■			
	<i>Physarum</i> sp.	■			
Stemonitidaceae	<i>Paradiacheopsis fimbriata</i>	■			

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 - = **Putative new species**
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Appendix B: Rare and Threatened Species

Additional supplements containing the appendices for individual reserves are available to download from:

www.bushblitz.org.au

Nomenclature and taxonomy used in this appendix are consistent with that from the Australian Faunal Directory (AFD), the Australian Plant Name Index (APNI) and the Australian Plant Census (APC).

Current at March 2012



Fauna

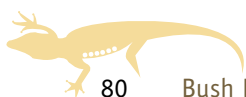
Species	Reserve	Status
<i>Egernia stokesii badia</i>	Lochada	EPBC — Endangered, WCA — Vulnerable
<i>Leipoa ocellata</i>	Charles Darwin	EPBC — Vulnerable, WCA — Vulnerable

EPBC = Refers to the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)

WCA = Refers to the *Wildlife Conservation Act 1950* (Western Australia)



Sorted pinned and labelled flies from the reserves © G Thompson





Flora

Species	Status	Charles Darwin	Kadji Kadji	Karara	Lochada
<i>Acacia cerastes</i>	P1	■			
<i>Acacia diallaga</i>	P2			×	
<i>Acacia formidabilis</i>	P3	■			
<i>Acacia karina</i>	P2			×	
<i>Acacia</i> sp. Goodlands (B.R. Maslin 7761)	P1	■			
<i>Acacia</i> sp. Kalannie North East (B.R. Maslin 7519)	P1	■			
<i>Acacia woodmaniorum</i>	WCA — Vulnerable			×	
<i>Allocasuarina tessellata</i>	P1	■			
<i>Austrostipa blackii</i>	P3			×	
<i>Banksia benthamiana</i>	P4				×
<i>Bossiaea</i> sp. Jackson Range (G. Cockerton & S. McNee LCS 13614)	P1	■			
<i>Calotis</i> sp. Perrinvale Station (R.J. Cranfield 7096)	P3			×	
<i>Chamelaucium</i> sp. Warriedar (A.P. Brown & S. Patrick APB 1100)	P1			×	
<i>Comesperma griffinii</i>	P2	■			
<i>Cyanicula fragrans</i>	P3	× *			
<i>Darwinia masonii</i>	EPBC — Vulnerable WCA — Vulnerable	■			
<i>Drummondita fulva</i>	P3			×	×

EPBC = Refers to the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)

WCA = Refers to the *Wildlife Conservation Act 1950* (Western Australia)

P1–P4 Are priority taxa within WA.

P1–P3 Are poorly known, do not meet adequacy of survey requirements for listing as threatened taxa, but appear under threat, or could be affected by known threatening processes.

P4 Are well surveyed and not threatened but rare.

For more information see: <http://florabase.dec.wa.gov.au/conservationtaxa>

× = Previously recorded on the reserve and found on this survey

× * = New record for this reserve

■ = Previously recorded on the reserve but not found on this survey



Species	Status	Charles Darwin	Kadji Kadji	Karara	Lochada
<i>Eremophila nivea</i>	EPBC — Endangered WCA — Critically Endangered		■		
<i>Eucalyptus jutsonii</i> subsp. <i>kobela</i>	P1			×	×
<i>Eucalyptus synandra</i>	EPBC — Vulnerable WCA — Vulnerable		×	×	×
<i>Euryomyrtus recurva</i>	P3	■			
<i>Fitzwillia axilliflora</i>	P2		×		
<i>Gnephosis setifera</i>	P1		×	×	
<i>Goodenia perryi</i>	P3	■			
<i>Grevillea globosa</i>	P3			×	
<i>Grevillea granulosa</i>	P3			×	
<i>Grevillea scabrada</i>	P3	■		×	
<i>Grevillea subtiliflora</i>	P3	■			
<i>Gunniopsis divisa</i>	P1			×	
<i>Gunniopsis rubra</i>	P3	×		×	
<i>Hydrocotyle coorowensis</i> ms	P2		×		
<i>Lepidobolus densus</i> ms	P3			×	× *
<i>Lepidosperma</i> sp. Blue Hills (A. Markey & S. Dillon 3468)	P1	■		×	
<i>Melaleuca barlowii</i>	P3			×	
<i>Micromyrtus acuta</i>	P3	■		×	
<i>Micromyrtus trudgenii</i>	P3	■		×	
<i>Millotia dimorpha</i>	P1			×	
<i>Persoonia kararae</i>	P2			×	
<i>Persoonia pentasticha</i>	P3	■		×	
<i>Petrophile pauciflora</i>	P3			×	×
<i>Philothea nutans</i>	P1	■			
<i>Polianthion collinum</i>	P3			×	
<i>Psammomoya implexa</i>	P3			×	
<i>Ptilotus halophilus</i>	P4		×		
<i>Rhodanthe collina</i>	P1	× *	×	×	×
<i>Spartothamnella</i> sp. Helena & Aurora Range (P.G. Armstrong 155-109)	P3			×	
<i>Stenanthemum poicilum</i>	P2	■		×	
<i>Stylidium</i> sp. Yalgoo (D. Coultas et al. Opp 01)	P1			×	
<i>Tecticornia fimbriata</i>	P3		×		
<i>Tricoryne</i> sp. Morawa (G.J. Keighery & N. Gibson 6759)	P1			× *	
<i>Wurmbea murchisoniana</i>	P4			×	





Appendix C: Exotic and Pest Species

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Nomenclature and taxonomy used in this appendix are consistent with that from the Australian Faunal Directory (AFD), the Australian Plant Name Index (APNI) and the Australian Plant Census (APC).

Current at March 2012



Dr Dave Britton pinning specimens © A Cowley



Limonium lobatum, a newly recorded weed of moderately saline habitats on Karara and Kadji Kadji © TD Macfarlane

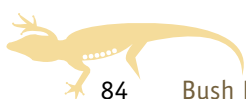
Fauna

Species	Common name	Charles Darwin	Kadji Kadji	Karara	Lochada
<i>Apis mellifera</i>	European Honey Bee				× *
<i>Capra hircus</i>	Goat	×	×	×	× *
<i>Felis catus</i>	Cat	×			×
<i>Mus musculus</i>	Mouse				■
<i>Oryctolagus cuniculus</i>	Rabbit	×			■
<i>Ovis aries</i>	Sheep			× *	
<i>Vulpes vulpes</i>	Fox	×			

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×* = New record for this reserve

■ = Previously recorded on the reserve but not found on this survey





Flora

Species	Common name	Charles Darwin	Kadji Kadji	Karara	Lochada
<i>Agave americana</i>	Century Plant			×	
<i>Anagallis arvensis</i> var. <i>caerulea</i>	Blue Pimpernel	× *			
<i>Arctotheca calendula</i>	Capeweed	■		×	
<i>Briza maxima</i>	Blowfly Grass	× *			
<i>Briza minor</i>	Shivery Grass	× *			
<i>Bromus rubens</i>	Brome Grass	■	× *	×	
<i>Chenopodium murale</i>	Nettle-leaf Goosefoot			×	×
<i>Citrullus colocynthis</i>	Afghan Melon				×
<i>Cleretrum papulosum</i> subsp. <i>papulosum</i>	–	× *	× *	×	
<i>Cuscuta planiflora</i>	Red Dodder	× *		×	
<i>Cyperus tenellus</i>	Tiny Flatsedge	■	×	× *	× *
<i>Echium plantagineum</i>	Paterson's Curse			×	
<i>Ehrharta longiflora</i>	Annual Veldt Grass			×	
<i>Emex australis</i>	Doublegee	■			×
<i>Erodium aureum</i>	Heron's Bill		× *		
<i>Erodium cicutarium</i>	Crane's or Stork's Bills		× *		
<i>Galium aparine</i>	Goose Grass			×	
<i>Hedypnois rhagadioloides</i> subsp. <i>cretica</i>	Smooth Cretanweed	■		×	
<i>Hypochaeris glabra</i>	Flatweed	■		×	×
<i>Juncus bufonius</i>	Toad Rush				× *
<i>Juncus capitatus</i>	Capitate Rush				× *
<i>Lamarckia aurea</i>	Goldentop	■		×	× *
<i>Limonium lobatum</i>	Sea Lavender		× *		× *
<i>Medicago minima</i>	Little Medic, Woolly Burr Medic	× *		×	
<i>Mesembryanthemum nodiflorum</i>	Slender Ice Plant		×	×	
<i>Monoculus monstrosus</i>	–		× *		
<i>Parentucellia latifolia</i>	Common Bartsia	× *		× *	

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Species	Common name	Charles Darwin	Kadji Kadji	Karara	Lochada
<i>Pentaschistis airoides</i> subsp. <i>airoides</i>	False Hairgrass		×	×	× *
<i>Petrorrhagia dubia</i>	Hairy Pink		×	× *	
<i>Polycarpon tetraphyllum</i>	Fourleaf Allseed	× *	× *		
<i>Rostraria cristata</i>	Mediterranean Hairgrass		×		
<i>Rostraria pumila</i>	Roughtail	■	× *	×	
<i>Schinus molle</i> var. <i>areira</i>	Pepper Tree				×
<i>Schismus barbatus</i>	Common Mediterranean Grass				× *
<i>Silene gallica</i>	French Catchfly			×	
<i>Silene nocturna</i>	Mediterranean Catchfly	■	× *	×	×
<i>Sisymbrium orientale</i>	Indian Hedge Mustard				×
<i>Sisymbrium runciatum</i>	–			×	
<i>Solanum nigrum</i>	Black Berry Nightshade	■		×	
<i>Spergula pentandra</i>	Five Anther Spurry			×	
<i>Tribulus terrestris</i>	Caltrop, Bindii			×	
<i>Ursinia anthemoides</i>	–	■		×	
<i>Vulpia muralis</i>	Silvergrass			×	
<i>Vulpia myuros</i> f. <i>myruos</i>	Rattail Sixweeks Grass			×	
<i>Zaluzianskya divaricata</i>	Spreading Night Phlox	× *			

× = Previously recorded on the reserve and found on this survey

×* = New record for this reserve

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Kadji Kadji Breakaway © B Glasser



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ISBN 978 0 642 56865 6

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PUBLISHER ABRS, Canberra
EDITOR ABRS
DESIGNER B Kuchlmayr (ABRS)
PRINTER Blue Star Print Group Pty

All publications are available online at:

www.bushblitz.org.au

Additional supplements available for this publication:

- + Charles Darwin Reserve
- + Kadji Kadji Reserve
- + Karara Reserve
- + Lochada Reserve

Contributors

Bush Blitz is coordinated by the Australian Biological Resources Study (ABRS), which is part of the Australian Government Department of Sustainability, Environment, Water, Population and Communities. The program is a partnership between the Australian Government, BHP Billiton and Earthwatch Australia.

Research agencies involved in the Charles Darwin, Kadji Kadji, Karara and Lochada Bush Blitz were the Australian Museum, Museum Victoria, Queensland Museum, South Australian Museum, Tasmanian Museum and Art Gallery, University of New South Wales, Western Australian Museum and the Western Australian Herbarium.

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FRONT COVER Goldfield's Spiny-tailed Gecko (*Strophurus assimilis*), Charles Darwin Reserve © S Wilson



Bush Blitz survey report

Western Australia + 2009



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