Nanda Country Bush Blitz

Native Bees

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Nomenclature and taxonomy used in this report is consistent with:
Australian Faunal Directory (AFD)

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List of contributors

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Abstract

During the Nanda Bush Blitz, 187 species of native bees (701 specimen records) were collected with representatives of all 5 families occurring in Australia. The species were collected in Kalbarri NP and at Eurardy Station. Forty-four (44) species were identified to species level. Of the species identified, 15 had been recorded earlier from the Kalbarri/Eurardy area. At least 42 species are undescribed/unpublished new species, but this number is likely to increase with further identification of the collected specimens.

1. Introduction

An ALA-area search using the approximate boundaries of the Kalbarri-Eurardy area, and restricted to records of specimens in museum collections, resulted in 345 records of identified bee species, containing 77 species in five native bee families, 14 genera and 22 subgenera (*downloaded at: https://biocache.ala.org.au/occurrences/search?&q=qid%3A1740447791157&disableAllQualityFilters=true accessed on 25 February 2025).*

The majority of these recorded species were collected much earlier in the season (August). Therefore, we expected to find a significant number of additional species, in particular species that are adapted to collect pollen and nectar from plant species that flower later in the season.

2. Methods

2.1 Site selection

In selecting sites for collecting native bees, we used the following considerations: (1) we aimed to sample as many different vegetation types and areas with different fire histories as possible; (2) we focussed on sites with abundant flowering plants and attempted to collect on a large variety of flowering plant species. This, because native bees are generally caught while foraging for nectar and pollen to provisioning their brood, and many native bee species have strict relationships with flowering plants.

2.2 Survey techniques

Native bees were mostly collected individually using a hand net, either by targeted catching or by sweep netting of specific plants, in blue vane traps, and in a vehicle net. Plant species on which the bees were collected were recorded.

2.2.1 Methods used at standard survey sites

Methods used for collecting native bees at the standard survey sites were blue vane traps and targeted hand netting and sweep netting on flowering plants. We also used a vehicle net to collect in the general area of the standard survey sites. In addition, while we intended to include bees from malaise traps placed at these sites, the specimens did not reach us in time to be included.

2.3 Identifying the collections

Pinned specimens were identified by the us. We first labelled with a unique catalogue number. After adding a label with the full metadata, specimens were sorted to morphospecies and labelled with a morphospecies code for specific to this survey (KB###). After that we attempted to identify the collection to the lowest classificatory level as possible. Given the fact that less than half of the known Australian native bee species are in identification keys, and many of these keys are incomplete, identification to species level is a huge task.

For identification of native bees, the following publications were used: Michener, C.D. (1965, 2007) was used for identification of genera and subgenera within the families. Specific generic and subgeneric revisions were used to identify the specimens to species level. These include: Batley and Houston (2012) for *Trichocolletes*; Batley (2016 and Exley (1968a) for *Euryglossula*; Exley (1968b) for *Brachyhesma*; Exley (1968c) for *Euryglossina*; Exley (1969) for *Xanthesma*; Exley (1974) for *Callohesma*; Exley (1976) for *Euryglossa*; Exley (2001, 2002) and Hogendoorn et al.(2015) for various *Euhesma*; Exley (2004) for *Dasyhesma*; Houston (1975, 1981) for *Hylaeus*; Houston (1985) for *Ctenocolletes*; Maynard (1992) for *Leioproctus (Cladocerapis);* Maynard (2013) for several *Leioproctus subgenera*; Walker (1995) for *Lasioglossum* (*Chilalictus*); and Walker (1986) for *Homalictus*.

Identified specimens were also compared to the Padil website https://www.padil.gov.au, which provides diagnostic images of many Australian native bees.

3. Results and Discussion

Seven hundred and one (701) native bee specimens were collected from at least 19 species of flowering plants. A total of five Australian bee families, 17 genera, 27 identified subgenera, and an estimated 187 species were represented in the collection (Appendix 1). An ALA search showed that of these 187 species, only 15 had already been recorded from the area.

Forty-four (44) species were identified to species level and 103 as morpho-species. The latter are species in groups for which no identification keys exist. An additional 42 species were recognised as new, because they did not key out with existing identification tools. This number is likely to increase with further identification of the collected specimens.

About half of the specimens were collected using the vehicle net, the remaining by sweep netting of flowers. The use of a vehicle net proved a very efficient survey method: 80 (43%) species were collected only using the vehicle net, 51 (27%) species were found using vehicle net and collecting from flowers, while 58 (30%) species were collected from flowers only. The effectiveness of blue vane traps was very low during this survey (only used at the standard survey sites), which was not a surprise because these traps are relatively unattractive when there is a high abundance of flowers.

Appendix 1 lists all native bee species recorded during the Nada Bush Blitz. Collections made during this Bush Blitz will result in 701 specimens being added to public collections and 701 records being added to publicly accessible databases.

3.1 Un-named or not formalised taxa

Table 1. Putatively un-named or not formalised taxa

Taxon	Comment
Brachyhesma (or wasp) sp. KB132	
Brachyhesma sp. KB134	
Brachyhesma sp. KB135	
Callohesma sp. KB115	
Callohesma sp. KB116	
Dasyhesma cf. forresti	
Dasyhesma sp. KB16	
Euhesma (crabronica group) sp. KB113	
Euhesma ? (Dasyhesma?) sp. KB95	
Euhesma ? sp. KB99	

Euhesma brevipalpa	
Euhesma sp. KB129	
Euhesma sp. KB130	
Euhesma sp. KB133	
Euhesma sp. KB138	
Euhesma sp. KB139	
Euhesma sp. KB140	
Euhesma sp. KB141	
Euhesma sp. KB142	
Euhesma sp. KB143	
Euhesma sp. KB144	
Euhesma sp. KB145	
Euhesma sp. KB146	
Euhesma sp. KB147	
Euhesma sp. KB148	
Euhesma sp. KB149	
Euhesma sp. KB150	
Euhesma sp. KB151	
Euhesma sp. KB152	
Euhesma sp. KB153	
Euhesma sp. KB154	
Euhesma sp. KB155	
Euhesma sp. KB156	
Euhesma sp. KB157	
Euhesma sp. KB172	
Euhesma sp. KB174	
Euhesma sp. KB175	
Euhesma sp. KB181	
Euhesma sp. KB182	
Euhesma sp. KB183	
Euhesma sp. KB184	
Euhesma sp. KB185	
Euhesma sp. KB186	
Euryglossa sp. KB01	
Euryglossa sp. KB02 NOT depressa	
Euryglossa sp. KB101	
Euryglossa sp. KB17 blue	
Euryglossa sp. KB18	
Euryglossa sp. KB96	

Euryglossa sp. KB97	
Euryglossa sp. KB98	
Euryglossula cf. microdontura sp. KB160	
Hylaeus (Prosopisteron) sp. KB80	
Hylaeus (Prosopisteron) sp. KB81	
Hylaeus (Pseudhylaeus) sp. KB77	
Hylaeus (Pseudhylaeus) sp. KB84	
Hylaeus (?) sp. KB87	
Leioproctus (?) sp. KB176	
Leioproctus (Colletellus) sp. KB168	
Leioproctus (Colletellus) sp. KB171	
Leioproctus (Colletellus) sp. KB178	
Leioproctus (Colletellus) sp. KB179	
Leioproctus (Colletellus) sp. KB180	
Leioproctus (Colletellus) sp. KB188	
Leioproctus (Euriglossidia) sp. KB166	
Leioproctus sp. KB110	
Leioproctus sp. KB49	
Leioproctus sp. KB50	
Leioproctus sp. KB51	
Leioproctus sp. KB52	
Leioproctus sp. KB52	
Leioproctus sp. KB53	
Leioproctus sp. KB54	
Leioproctus sp. KB55	
Leioproctus sp. KB56	
Leioproctus sp. KB57	
Leioproctus sp. KB58	
Leioproctus sp. KB59	
Leioproctus sp. KB60	
Leioproctus sp. KB61	
Leioproctus sp. KB62	
Leioproctus sp. KB63	
Leioproctus sp. KB64	
Leioproctus sp. KB65	
Leioproctus sp. KB66	
Leioproctus sp. KB67	
Leioproctus sp. KB68	
Leioproctus sp. KB69	

Leioproctus sp. KB70	
Leioproctus sp. KB71	
Leioproctus sp. KB72	
Xanthesma sp. KB137	
Lasioglossum (Chilalictus) sp. KB102	
Lasioglossum (Homalictus) sp. KB177	
Megachile (Eutricharaea) sp. KB28	
Megachile (Notomegachile ?) sp. KB33	
Megachile (Notomegachile) sp. KB40 NOT horatii	
Megachile sp. KB36	
Stenotritus sp. KB112	
? sp. KB136	

3.2 Species new to science

In this report, ‘species new to science’ means species that were not recognised by Western science before this Bush Blitz.

Table 2. Species new to science

Species	Comment
Callohesma sp. nov. KB126	
Callohesma sp. nov. KB115	
Callohesma sp. nov. KB119	
Callohesma sp. nov. KB121	
Callohesma sp. nov. KB122	
Callohesma sp. nov. KB123	
Callohesma sp. nov. KB125	
Callohesma sp. nov.? KB118	
Dasyhesma sp. nov. KB23	
Euhesma (crabronica group) sp. nov. KB05 'evansi'	
Euhesma (crabronica group) sp. nov. KB06 'sulcata'	
Euhesma (crabronica group) sp. nov. KB07	
Euhesma (crabronica group) sp. nov. KB09	
Euhesma (crabronica group) sp. nov. KB11	
Euhesma (crabronica group) sp. nov. KB14	
Euhesma (crabronica group) sp. nov. 'KB14 'evansi' black	
Euhesma (walkeriana group) sp. nov.? KB131	
Euhesma sp. nov. KB09	
Euhesma sp. nov. KB11	

Euryglossula sp. nov. KB158	
Euryglossula sp. nov. KB161	
Euryglossula sp. nov. KB162	
Hylaeus (Hylaeteron) sp. nov. KB86	
Hylaeus (Planihylaeus?) sp. nov. KB76	
Hylaeus (Prosopisteron) sp. nov. KB83	
Leioproctus (Cladocerapis) sp. nov. KB45	
Leioproctus (Cladocerapis) sp. nov. KB47	
Leioproctus (Colletellus) sp. nov. KB165	
Leioproctus (Colletellus) sp. nov. KB167	
Leioproctus (Colletellus) sp. nov. KB168	
Leioproctus (Colletellus) sp. nov. KB173	
Leioproctus (Colletellus) sp. nov. RB170	
Leioproctus (Filiglossa) sp. nov. KB169	
Leioproctus sp. nov. KB48	
Xanthesma (Xanthesma) sp. nov. KB128	
Lasioglossum (Chilalictus) sp. nov. KB106	
Lipotriches (Austronomia) sp. nov. KB 104	
Megachile (Austrochile) sp. nov. KB32	
Megachile (Austrochile) sp. nov. KB39	
Megachile (Coorooa) sp. nov.? sp. KB35	
Megachile (Notomegachile ?) sp. nov.? KB41	
Ctenocolletes sp. nov. KB111	

3.3 Introduced species

Native bees are not considered pest species. However, the honeybee, *Apis mellifera,* which is an introduced species*,* although it is not listed as a pest species in WA, may act as a pest species in certain circumstances. Feral colonies of honeybees may take over or occupy nesting hollows that otherwise are used by hollow breeding birds such as parrots, lorikeets, and cockatoos. Honeybees may also compete with native bees, birds and small mammals for nectar and pollen especially when these resources are scarce. During the time of the survey only few honeybees were found.

Table 3. Introduced species recorded

Introduced species	Location sighted/observed	Indication of abundance	Comments
Apis mellifera	Kalbarri NP, Four Ways access track at gorge	Low abundance	

3.4 Threatened species

There are no native bees currently listed under the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth) and/or State or Territory legislation.

3.5 Range extensions

Data on range extensions (eg. as result of climate change) of individual native bee species will only be possible with the availability of fine scale distributional data that include time-series, which are hardly available for native bees in Australia.

3.6 Genetic information

No genetic sampling was undertaken. However, depending on funding availability,identified specimens of species currently not present in the DNA barcode reference library at the South Australian Museum, may be sampled for DNA barcoding. Similarly, a selection of the unidentified morphospecies and putative new species will be sampled for DNA barcoding. This will result in the recognition of (additional) new species, and/or matching morphospecies from other Bush Blitz surveys.

4. Information on species lists

Many specimens especially in the genera *Leioproctus* (Neopasiphaeinae) and *Euhesma* (Euryglossinae), could not be identified to species level because identification keys for these groups do not exist, or are incomplete. These specimens were identified to morphospecies level and were given a unique species identifier (eg. sp.KB ##) for this survey. Further work would be necessary to identify these specimens. This work will consist of comparing specimens with identified species in museum collections, or comparing DNA barcodes of the collected specimens with a DNA reference database of Australian bee species once such a database becomes available.

5. Information for land managers

Most native bees rely on an abundance of locally native flowering plants, as their developing larvae cannot digest pollen from introduced plants or weeds. Due to the pristine habitat in Kalbarri NP, the area hosts a high abundance of such specialist bee species. The abundance of bee species that can digest weeds and are therefore more common in agricultural areas, was relatively low. Most of Kalbarri NP is therefore high-quality habitat for bees.

The balance between specialists and generalist bees was less favourable in Eurardy, and along the eastern and southern boundary of Kalbarri NP, where relatively more weeds are found. Reducing invasive weeds in those areas,and keeping them out of the pristine areas is therefore of utmost importance. Having said that, Kalbarri NP is managed exceptionally well, in particular because the general public has limited access, which helps to protect the majority of the area against invasive weeds.

Most native bees will need to find all their food within 200 – 300 m from their nest. Therefore, fuel reduction/managed burns should be limited in frequency and area, and some patches should be left long-term unburnt. Infrequent, small mosaic burns are good for bees, but larger, more frequent burns will wipe out plant species and the bees that rely on them. Also, with increasing natural fire frequency and intensity, close monitoring and rapid, large responses during summer months are needed to prevent large intensive fires.

As a management option, local reduction of feral honey bee colonies could be considered. In addition, and beekeeping should not be allowed, as the hives take substantial amount of floral resources and produce swarms which are left behind.

6. Conclusions

During the survey 187 native bee species were found in the Kalbarri-Eurardy area. More than 40 species are confirmed to be undescribed, but it is expected that several others will be undescribed as well. This will become clear after further identifications, careful comparison with museum specimens and DNA barcoding.

The native bee biodiversity in the area turned out to be much higher than known from recorded museum specimens. While a total of 77 species had been previously recorded from the area, only 15 of these were recollected during the survey. This implies that an estimated additional 174 species were found as new to the area. The large number of additional encountered species can be explained by the timing of the survey, which was later in the season (October) than previous sampling efforts, which were concentrated around August. The difference in species numbers and composition can probably be explained by a seasonal difference in flowering plant species. Additionally, the difference may be partly due to the use of the vehicle net. A vehicle net was not used before in the area, and 80 (43%) of the species it collected were not collected in any other way.

Because most species were only encountered in low numbers and because we only collected over a short period of time, our findings are just a snapshot of the total potential bee biodiversity of the area.

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Appendices

Appendix 1. List of bees recorded during the Nanda Country Bush Blitz

Family	Species	Common name	Species new to science	Threatened species (EPBC Act)	Threatened species (Biodiversity Conservation Act 2016)	Introduced species
Apidae	*Amegilla (Notomegilla) chlorocyanea*	Blue Banded Bee	no	no	no	no
Apidae	*Apis mellifera*	European Honey Bee	no	no	no	yes
Apidae	*Thyreus waroonensis*	na	no	no	no	no
Colletidae	*Brachyhesma* or wasp sp. KB132	na	no	no	no	no
Colletidae	*Brachyhesma* sp. KB134	na	no	no	no	no
Colletidae	*Brachyhesma* sp. KB135	na	no	no	no	no
Colletidae	*Callohesma flavopicta*	na	no	no	no	no
Colletidae	*Callohesma skermani?*	na	no	no	no	no
Colletidae	*Callohesma* sp. KB115	na	no	no	no	no
Colletidae	*Callohesma* sp. KB116	na	no	no	no	no
Colletidae	*Callohesma* sp. nov. KB115	na	yes	no	no	no
Colletidae	*Callohesma* sp. nov. KB119	na	yes	no	no	no
Colletidae	*Callohesma* sp. nov. KB121	na	yes	no	no	no
Colletidae	*Callohesma* sp. nov. KB122	na	yes	no	no	no
Colletidae	*Callohesma* sp. nov. KB123	na	yes	no	no	no
Colletidae	*Callohesma* sp. nov. KB125	na	yes	no	no	no

Family	Species	Common name	Species new to science	Threatened species (EPBC Act)	Threatened species (Biodiversity Conservation Act 2016)	Introduced species
Colletidae	*Callohesma* sp. nov. KB126	na	yes	no	no	no
Colletidae	*Callohesma* sp. nov.? KB118	na	yes	no	no	no
Colletidae	Colletidae sp. KB136	na	no	no	no	no
Colletidae	*Dasyhesma albula*	na	no	no	no	no
Colletidae	*Dasyhesma brevipalpa*	na	no	no	no	no
Colletidae	*Dasyhesma* cf. *forestii*	na	no	no	no	no
Colletidae	*Dasyhesma clypeata*	na	no	no	no	no
Colletidae	*Dasyhesma depressa*	na	no	no	no	no
Colletidae	*Dasyhesma muelleriana*	na	no	no	no	no
Colletidae	*Dasyhesma simulata*	na	no	no	no	no
Colletidae	*Dasyhesma* sp. KB16	na	no	no	no	no
Colletidae	*Dasyhesma* sp. nov. KB23	na	yes	no	no	no
Colletidae	*Euhesma* (crabronica group) *lucida*	na	no	no	no	no
Colletidae	*Euhesma* (crabronica group) sp. KB113	na	no	no	no	no
Colletidae	*Euhesma* (crabronica group) sp. nov. KB05 'evansi'	na	yes	no	no	no
Colletidae	*Euhesma* (crabronica group) sp. nov. KB06 'sulcata'	na	yes	no	no	no
Colletidae	*Euhesma* (crabronica group) sp. nov. KB07	na	yes	no	no	no
Colletidae	*Euhesma* (crabronica group) sp. nov. KB09	na	yes	no	no	no

Family	Species	Common name	Species new to science	Threatened species (EPBC Act)	Threatened species (Biodiversity Conservation Act 2016)	Introduced species
Colletidae	*Euhesma* (crabronica group) sp. nov. KB11	na	yes	no	no	no
Colletidae	*Euhesma* (crabronica group) sp. nov. KB14	na	yes	no	no	no
Colletidae	*Euhesma* (crabronica group) sp. nov. 'KB14 'evansi' black	na	yes	no	no	no
Colletidae	*Euhesma* (crabronica group) stria?	na	no	no	no	no
Colletidae	*Euhesma* (crabronica group?) sp. KB15	na	no	no	no	no
Colletidae	*Euhesma* (walkeriana group) sp. nov.? KB131	na	yes	no	no	no
Colletidae	*Euhesma ? (Dasyhesma?)* sp. KB95	na	no	no	no	no
Colletidae	*Euhesma* ? sp. KB99	na	no	no	no	no
Colletidae	*Euhesma* sp. KB129	na	no	no	no	no
Colletidae	*Euhesma* sp. KB130	na	no	no	no	no
Colletidae	*Euhesma* sp. KB133	na	no	no	no	no
Colletidae	*Euhesma* sp. KB138	na	no	no	no	no
Colletidae	*Euhesma* sp. KB139	na	no	no	no	no
Colletidae	*Euhesma* sp. KB140	na	no	no	no	no
Colletidae	*Euhesma* sp. KB141	na	no	no	no	no
Colletidae	*Euhesma* sp. KB142	na	no	no	no	no
Colletidae	*Euhesma* sp. KB143	na	no	no	no	no
Colletidae	*Euhesma* sp. KB144	na	no	no	no	no
Colletidae	*Euhesma* sp. KB145	na	no	no	no	no

Family	Species	Common name	Species new to science	Threatened species (EPBC Act)	Threatened species (Biodiversity Conservation Act 2016)	Introduced species
Colletidae	*Euhesma* sp. KB146	na	no	no	no	no
Colletidae	*Euhesma* sp. KB147	na	no	no	no	no
Colletidae	*Euhesma* sp. KB148	na	no	no	no	no
Colletidae	*Euhesma* sp. KB149	na	no	no	no	no
Colletidae	*Euhesma* sp. KB150	na	no	no	no	no
Colletidae	*Euhesma* sp. KB151	na	no	no	no	no
Colletidae	*Euhesma* sp. KB152	na	no	no	no	no
Colletidae	*Euhesma* sp. KB153	na	no	no	no	no
Colletidae	*Euhesma* sp. KB154	na	no	no	no	no
Colletidae	*Euhesma* sp. KB155	na	no	no	no	no
Colletidae	*Euhesma* sp. KB156	na	no	no	no	no
Colletidae	*Euhesma* sp. KB157	na	no	no	no	no
Colletidae	*Euhesma* sp. KB172	na	no	no	no	no
Colletidae	*Euhesma* sp. KB174	na	no	no	no	no
Colletidae	*Euhesma* sp. KB175	na	no	no	no	no
Colletidae	*Euhesma* sp. KB181	na	no	no	no	no
Colletidae	*Euhesma* sp. KB182	na	no	no	no	no
Colletidae	*Euhesma* sp. KB183	na	no	no	no	no
Colletidae	*Euhesma* sp. KB184	na	no	no	no	no
Colletidae	*Euhesma* sp. KB185	na	no	no	no	no

Family	Species	Common name	Species new to science	Threatened species (EPBC Act)	Threatened species (Biodiversity Conservation Act 2016)	Introduced species
Colletidae	*Euhesma* sp. KB186	na	no	no	no	no
Colletidae	*Euhesma* sp. nov. KB09	na	yes	no	no	no
Colletidae	*Euhesma* sp. nov. KB11	na	yes	no	no	no
Colletidae	*Euhesma tubulifera*	na	no	no	no	no
Colletidae	*Euryglossa calaina*	na	no	no	no	no
Colletidae	*Euryglossa cupreochalybea*	na	no	no	no	no
Colletidae	*Euryglossa millstreamensis?*	na	no	no	no	no
Colletidae	*Euryglossa* sp. KB01	na	no	no	no	no
Colletidae	*Euryglossa* sp. KB02 NOT depressa	na	no	no	no	no
Colletidae	*Euryglossa* sp. KB17 blue	na	no	no	no	no
Colletidae	*Euryglossa* sp. KB18	na	no	no	no	no
Colletidae	*Euryglossa* sp. KB96	na	no	no	no	no
Colletidae	*Euryglossa* sp. KB97	na	no	no	no	no
Colletidae	*Euryglossa* sp. KB98	na	no	no	no	no
Colletidae	*Euryglossa* sp. KB101	na	no	no	no	no
Colletidae	*Euryglossula microdonta* sp. KB163	na	no	no	no	no
Colletidae	*Euryglossula* cf. *microdonta* sp. KB160	na	no	no	no	no
Colletidae	*Euryglossula fultoni*	na	no	no	no	no
Colletidae	*Euryglossula* sp. KB159	na	no	no	no	no
Colletidae	*Euryglossula* sp. KB187	na	no	no	no	no

Family	Species	Common name	Species new to science	Threatened species (EPBC Act)	Threatened species (Biodiversity Conservation Act 2016)	Introduced species
Colletidae	*Euryglossula* sp. nov. KB158	na	yes	no	no	no
Colletidae	*Euryglossula* sp. nov. KB161	na	yes	no	no	no
Colletidae	*Euryglossula* sp. nov. KB162	na	yes	no	no	no
Colletidae	*Hylaeus* (?) sp. KB78	na	no	no	no	no
Colletidae	*Hylaeus (Euprosopellus) certus*	na	no	no	no	no
Colletidae	*Hylaeus (Euprosopis) elegans*	na	no	no	no	no
Colletidae	*Hylaeus (Euprosopis) violaceus*	na	no	no	no	no
Colletidae	*Hylaeus (Gnathoprosopis) amiculus*	na	no	no	no	no
Colletidae	*Hylaeus (Hylaeteron) riekianus*	na	no	no	no	no
Colletidae	*Hylaeus (Hylaeteron)* sp. nov. KB86	na	yes	no	no	no
Colletidae	*Hylaeus (Planihylaeus ?)* sp. nov. KB76	na	yes	no	no	no
Colletidae	*Hylaeus (Prosopisteron) chlorosomus*	na	no	no	no	no
Colletidae	*Hylaeus (Prosopisteron) distractus*	na	no	no	no	no
Colletidae	*Hylaeus (Prosopisteron)* sp. KB80	na	no	no	no	no
Colletidae	*Hylaeus (Prosopisteron)* sp. KB81	na	no	no	no	no
Colletidae	*Hylaeus (Prosopisteron)* sp. nov. KB83	na	yes	no	no	no
Colletidae	*Hylaeus (Prosopisteron) vittatifrons ?*	na	no	no	no	no
Colletidae	*Hylaeus (Pseudhylaeus)* sp. KB77	na	no	no	no	no
Colletidae	*Hylaeus (Pseudhylaeus)* sp. KB84	na	no	no	no	no
Colletidae	*Hylaeus (Rhodohylaeus) proximus*	na	no	no	no	no

Family	Species	Common name	Species new to science	Threatened species (EPBC Act)	Threatened species (Biodiversity Conservation Act 2016)	Introduced species
Colletidae	*Hylaeus* sp. KB87	na	no	no	no	no
Colletidae	*Leioproctus* (?) sp. KB176	na	no	no	no	no
Colletidae	*Leioproctus (Cladocerapis) clypeatus*	na	no	no	no	no
Colletidae	*Leioproctus (Cladocerapis)* sp. nov. KB45	na	yes	no	no	no
Colletidae	*Leioproctus (Cladocerapis)* sp. nov. KB47	na	yes	no	no	no
Colletidae	*Leioproctus (Colletellus)* sp. KB168	na	no	no	no	no
Colletidae	*Leioproctus (Colletellus)* sp. KB171	na	no	no	no	no
Colletidae	*Leioproctus (Colletellus)* sp. KB178	na	no	no	no	no
Colletidae	*Leioproctus (Colletellus)* sp. KB179	na	no	no	no	no
Colletidae	*Leioproctus (Colletellus)* sp. KB180	na	no	no	no	no
Colletidae	*Leioproctus (Colletellus)* sp. KB188	na	no	no	no	no
Colletidae	*Leioproctus (Colletellus)* sp. nov. KB165	na	yes	no	no	no
Colletidae	*Leioproctus (Colletellus)* sp. nov. KB167	na	yes	no	no	no
Colletidae	*Leioproctus (Colletellus)* sp. nov. KB168	na	yes	no	no	no
Colletidae	*Leioproctus (Colletellus)* sp. nov. KB173	na	yes	no	no	no
Colletidae	*Leioproctus (Colletellus)* sp. nov. RB170	na	yes	no	no	no
Colletidae	*Leioproctus (Euryglossidia)* sp. KB166	na	no	no	no	no
Colletidae	*Leioproctus (Filiglossa)* sp. nov. KB169	na	yes	no	no	no
Colletidae	*Leioproctus* sp. KB49	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB50	na	no	no	no	no

Family	Species	Common name	Species new to science	Threatened species (EPBC Act)	Threatened species (Biodiversity Conservation Act 2016)	Introduced species
Colletidae	*Leioproctus* sp. KB51	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB52	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB53	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB54	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB55	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB56	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB57	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB58	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB59	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB60	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB61	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB62	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB63	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB64	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB65	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB66	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB67	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB68	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB69	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB70	na	no	no	no	no

Family	Species	Common name	Species new to science	Threatened species (EPBC Act)	Threatened species (Biodiversity Conservation Act 2016)	Introduced species
Colletidae	*Leioproctus* sp. KB71	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB72	na	no	no	no	no
Colletidae	*Leioproctus* sp. KB110	na	no	no	no	no
Colletidae	*Leioproctus* sp. nov. KB48	na	yes	no	no	no
Colletidae	*Xanthesma (Xanthesma)* sp. nov. KB128	na	yes	no	no	no
Colletidae	*Xanthesma (Xanthesma) vittata*	na	no	no	no	no
Colletidae	*Xanthesma* sp. KB137	na	no	no	no	no
Halictidae	*Lasioglossum (Chilalictus) eremaean*	na	no	no	no	no
Halictidae	*Lasioglossum (Chilalictus) fasciatum*	na	no	no	no	no
Halictidae	*Lasioglossum (Chilalictus) pollux*	na	no	no	no	no
Halictidae	*Lasioglossum (Chilalictus)* sp. KB102	na	no	no	no	no
Halictidae	*Lasioglossum (Chilalictus)* sp. nov. KB106	na	yes	no	no	no
Halictidae	*Lasioglossum (Chilalictus) vitripenne*	na	no	no	no	no
Halictidae	*Lasioglossum (Homalictus) bremerense*	na	no	no	no	no
Halictidae	*Lasioglossum (Homalictus)* sp. KB177	na	no	no	no	no
Halictidae	*Lipotrichus (Austronomia)* sp. nov. KB 104	na	yes	no	no	no
Megachilidae	*Megachile (Austrochile) kirbyana*	na	no	no	no	no
Megachilidae	*Megachile (Austrochile) rottnestensis*	na	no	no	no	no
Megachilidae	*Megachile (Austrochile)* sp. nov. KB32	na	yes	no	no	no
Megachilidae	*Megachile (Austrochile)* sp. nov. KB39	na	yes	no	no	no

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Megachilidae	*Megachile (Coorooa) leeuwinensis*	na	no	no	no	no
Megachilidae	*Megachile (Coorooa)* sp. nov.? sp. KB35	na	yes	no	no	no
Megachilidae	*Megachile (Coorooa) speluncarum*	na	no	no	no	no
Megachilidae	*Megachile (Eutricharaea) macularis*	na	no	no	no	no
Megachilidae	*Megachile (Eutricharaea)* sp. KB28	na	no	no	no	no
Megachilidae	*Megachile (Hackeriapis) oblonga*	na	no	no	no	no
Megachilidae	*Megachile (Notomegachile ?)* sp. KB33	na	no	no	no	no
Megachilidae	*Megachile (Notomegachile ?)* sp. nov.? KB41	na	yes	no	no	no
Megachilidae	*Megachile (Notomegachile) maculosipes*	na	no	no	no	no
Megachilidae	*Megachile (Notomegachile)* sp. KB40 NOT *horatii*	na	no	no	no	no
Megachilidae	*Megachile (Torridapis) bidentis ?*	na	no	no	no	no
Megachilidae	*Megachile* sp. KB36	na	no	no	no	no
Stenotritidae	*Ctenocolletes* sp. nov. KB111	na	yes	no	no	no
Stenotritidae	*Stenotritus greavesi*	na	no	no	no	no
Stenotritidae	*Stenotritus* sp. KB112	na	no	no	no	no

na Not available.