

# **ACT Expedition Bush Blitz**

Hemiptera, Hymenoptera, Lepidoptera,  
Orthoptera, Terrestrial molluscs

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Nomenclature and taxonomy used in this report is consistent with:

The Australian Faunal Directory (AFD)

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## List of contributors

List of contributors to this report.			
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## Abstract

The Australian National Insect Collection (ANIC) participated in the ACT Bush Blitz Expedition from the 26<sup>th</sup> November to the 6<sup>th</sup> December 2018. Target invertebrate groups included Hemiptera, Hymenoptera, Lepidoptera, Orthoptera and terrestrial molluscs with relevant staff assigned to each group. The target groups were surveyed in over 50 collecting spots across Namadgi National Park, Tidbinbilla Nature Reserve, the Australian National Botanic Gardens (ANBG) and in the courtyards of Parliament House, Canberra. Various techniques were used to collect target invertebrate specimens including malaise traps, light traps, coloured pan traps and active searching (sweeping, beating, soil sampling, etc.).

All specimens were sorted to order level, and subsequently identified by the participants and other contributors affiliated within CSIRO. As a result, this reports also includes information on many non-target insect groups, such as Diptera and Strepsiptera. Identifications are provided for a total of 348 taxa (63 identified to species level; 54 to genus, and 231 to family level or above). While 9 species were confirmed as new to science, other exemplars not identified to species level may still represent novel taxa. These will require the examination of an additional number of specimens, genitalia dissections or molecular analyses before they can be confirmed. Therefore, the number of insects which will warrant formal recognition is expected to be much larger, once this material is more carefully studied by a broader team of specialists. New distribution data is also provided for Namadgi NP (7) and Tidbinbilla NR (1), and one introduced species of snail is newly recorded for the Australian Botanical Gardens.

## 1. Introduction

Namadgi National Park and Tidbinbilla Nature Reserve are two of the 11 protected areas making up the Heritage listed Australian Alps National Parks and Reserves. The name “Namadgi” is the local Aboriginal name for the mountain range that lies southwest of Canberra. The area is of cultural significance to the local indigenous Australians with many Aboriginal sites within the park recognising their presence and custodianship over the past 21,000 years. Namadgi National Park was declared a National Park in 1984 and in 1991 it was expanded to its current size of 106,095 hectares forming a conservation area covers almost half of the state. It incorporates a wide diversity of alpine and sub-alpine habitats from bogs, wetlands, open grasslands, shrublands, woodlands, forests etc. and includes Bimberi Peak which is the highest mountain in the ACT measuring 1,911 metres.

Tidbinbilla Nature Reserve gets its name from the Ngunnawal word “Jedbinbilla” which means “a place where boys were made men”. It was declared a nature reserve in 1971 serving to protect an area of 55 km<sup>2</sup> on the northern fringe of Namadgi National Park. It covers similar alpine and sub alpine vegetation that is prevalent in Namadgi National Park. It is important to bear in mind the 2003 bush fires that had a devastating impact on both protected areas.

The target groups for the 2018 Bush Blitz were Hemiptera, Hymenoptera, Lepidoptera, Orthoptera and terrestrial molluscs. Due to the proximity to Canberra and the ANIC, the insects of Namadgi and Tidbinbilla have been reasonably well surveyed. Because some groups had been already targeted during the 2014 Bush Blitz expedition, new distribution records were not initially expected for Lepidoptera and Orthoptera. However, this is not the case for several other invertebrate groups, such as terrestrial molluscs and non-holometabolous insect orders, especially Hemiptera. Although Hemiptera: Heteroptera is a well-studied group in Australia, the equally diverse and economically significant sap-feeding insects in Hemiptera: Auchenorrhyncha have been poorly surveyed, and were probably not previously targeted in a Bush Blitz expedition. Additionally, the only previous significant survey of terrestrial molluscs in the ACT was the 2014 Bush Blitz expedition.

This Bush Blitz expedition also included a survey of the invertebrate fauna in urban areas, such as the private courtyards of Parliament house (33 hectares) in the Parliamentary Triangle and

the Australian National Botanic Gardens (ANBG) (85 hectares). The environment in the courtyards is similar to domestic gardens in Canberra, which have been well surveyed, although not in an official capacity. The ANBG lies adjacent to the bushland of Black Mountain (which has also been well surveyed in the past) and consists of a series of gullies and ridges containing a great diversity of vegetation and habitats.

The survey team would only expect about 10% new species (except for the Lepidoptera, which were targeted in 2014) since this region has been very well surveyed by ANIC in the past.

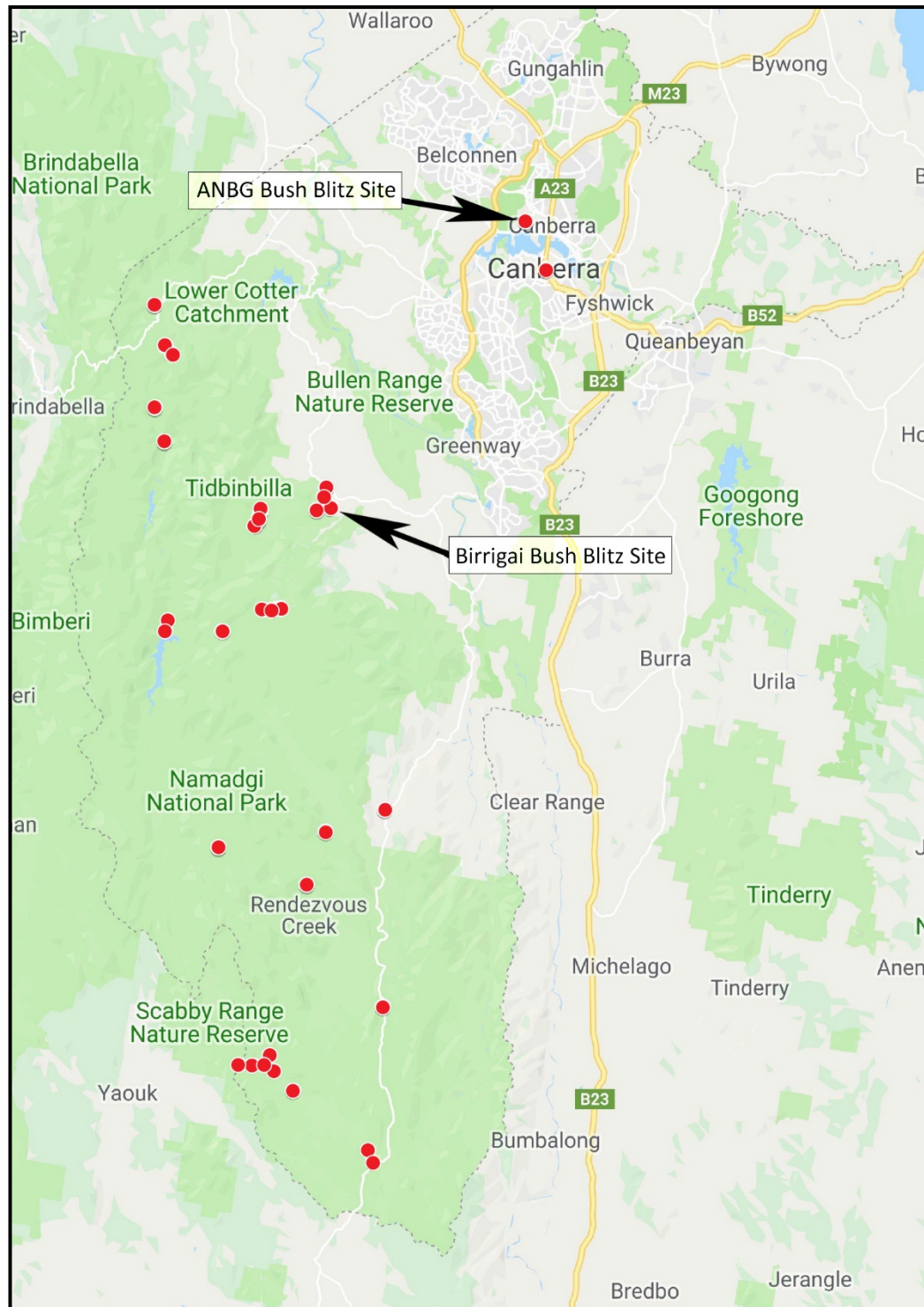


Fig. 1. Map showing area and sites surveyed by the ANIC team.

## 2. Methods

### 2.1 Site selection

The aim of the expedition was to increase our knowledge of the ACT fauna by gathering new distribution records and discovering novel species of insects and invertebrates. Because this region has been well surveyed by local specialists in the past decades, field sites were selected based on the following set of criteria:

- a) adequate representation of the diversity of invertebrate habitat types
- b) sites with fewer collecting records
- c) landscapes not recently disturbed by bushfire

Previous significant burning events in the south eastern corner of Namadgi were a limiting factor in determining pristine areas in this section of the park. In preparation for the expedition, Michael Braby and Youning Su drove to pre-selected sites in southern Namadgi to ensure their adequacy for our specific purpose. In total, collecting events comprised over 50 unique geographic coordinates, from the Lower Cotter Catchment Reserve in the northern edge of Namadgi to Mount Clear, near the southern ACT border. Figure 1 illustrates the survey sites, with additional details included in the appendices.

### 2.2 Survey techniques

Multiple survey techniques were employed to collect terrestrial insects and molluscs, according to the procedures outlined below. The sampling strategy (number of traps and their specific locations across natural and urban areas) is explained in more detail in section 2.2.1.

- a. **Malaise trap:** flight interception trap widely used to capture insects active at a certain site (Figure 2). The trap is a tent-like structure made of black polyester mesh with a white roof, made of a similar fabric. Traps are placed in small clearings near dense vegetation, which were likely used by insects to transit between areas. When flies and wasps hit the central black panel, they instinctively fly upwards into the collection bottle at the top of the white roof, which is filled with preservative liquid (in this case, absolute ethanol). The advantage of a malaise trap is that it can be left in the field for up to one week, during which time it can collect a substantial number of insects. Although this is an efficient method to survey Diptera (flies) and Hymenoptera (sawflies and wasps), it can occasionally capture species of Orthoptera (grasshoppers, crickets and katyids), Hemiptera (true bugs, plant- and leafhoppers), Psocoptera (booklice), and other rare insect orders such as Strepsiptera. Malaise traps often intercept a large number of nocturnal moths, however, once specimens fall into the preservative, their scales come off, rendering them unfit for taxonomic studies.
- b. **Light trap:** designed to capture a wide variety of insect groups at night in large numbers (Figure 3). The trap is assembled using a high-intensity mercury vapour lamp attached to a pole in front of a vertical white sheet, near dense vegetation. The trap can stay active for a few hours to a whole evening, depending on the conditions and the quality of collecting. Insects are attracted to the light source and eventually land on the white sheet, from where they can be collected using forceps, plastic tubes or an insect aspirator. This trap will work more efficiently in the new moon and in deserted areas devoid of light pollution. It often attracts a large number of Lepidoptera (nocturnal moths), Coleoptera (beetles), Diptera (flies), Hymenoptera (wasps), Neuroptera (lace wings), Hemiptera (true bugs, plant- and leafhoppers), and Orthoptera (grasshoppers, crickets and katyids), as well as smaller orders of insects.

- c. **Pan traps:** small coloured dishes (yellow, white and blue) that are used to target specific groups of day-flying insects, especially pollinators and micro-Hymenoptera (Figure 4). Dishes are placed on the ground and filled with salty soapy water, which allows specimens to sink, at the same time it avoids water absorption through osmosis. A small weight, such as a metal ring, can be placed inside the dish to prevent it from being displaced. The insects are attracted to the flower-mimicking colours get trapped in the soapy water. Although pan traps can be used for several days, they need to be tended frequently as the water will evaporate relatively quickly. Specimens trapped using this method are less suitable for DNA studies.
- d. **Sweeping:** this is undoubtedly the most traditional collecting method, which can be used to survey virtually any group of flying insects (Figure 5). An entomological net is used to intercept insects at flight or dislodge them from vegetation, especially small trees, shrubs and grassland. The net handle is usually made from lightweight aluminium or fiberglass with additional extensions to sample higher flying insects; the net itself can consist of a more delicate mesh or a thicker fabric to sweep through vegetation.
- e. **Active searching in soil samples and hand picking:** this is an effective technique to survey terrestrial molluscs and insects (mostly larvae and wingless forms), in which the collector carefully inspects fallen logs, rocks, and surrounding leaf litter. In a more thorough inspection of the soil, protective gloves, shovels and plastic bags are used to move the sediment and facilitate the collection of soil and litter samples. Soil samples are subsequently sorted under a microscope to visualize cryptic and smaller groups.

Other collecting tools and accessories used to collect and sort samples in the field include insect aspirators, forceps, brushes, entomological pins and envelopes, cryogenic vials, whirl-pack sample bags, leak-proof polypropylene bottles and falcon tubes. Insects in the order Lepidoptera and Orthoptera were killed using potassium cyanide, and subsequently stored in entomological envelopes or pinned. All other orders of insects (e.g., Hymenoptera, Hemiptera, Diptera) were captured and preserved in absolute ethanol in cryogenic tubes. The majority of this material will be preserved for future DNA studies.

### 2.2.1 Methods used at standard survey sites

Active collecting (soil sampling, hand picking and sweeping) was conducted on both survey sites, according to the procedures outlined in section 2.2. Several types of insect net (with extendable and non-extendable handle; fine mesh or thick fabric) were used to survey insects during the Bush Blitz expedition. One malaise trap was set in each survey site, and they stayed active for approximately one week before being dismantled. Two sets of pan traps (each set consisting of 20-30 dishes of different colours) were placed at Birrigai, and they were in the field for nearly the whole survey period, being tended periodically to replenish the water, and collect trapped insects. A light trap was assembled during one evening in the first week, adjacent to the Birrigai standard survey site. The trap could not be placed within the exact demarcation of the survey site because the area was relatively steep and rocky. Nevertheless, due to the intensity of the light source, the survey site was certainly within the range of the trap, since the light attracts insects at relatively long distances. No light traps were set in the Botanical Gardens due to light pollution in the surrounding urban area.

During the Bush Blitz expedition, a total of 11 malaise traps were set, and were distributed as follows: Namadgi (6), Birrigai (3, including the standard survey site), Australian Botanical Gardens (1), and the Ministerial Court at the Parliament House (1). Malaise traps were effective between 5-9 days before being disassembled and removed. Light traps were operated for at least five hours per night, once at Namadgi and once at Birrigai. Three sets of pan traps were distributed in Namadgi (1) and Birrigai (2), sampling insects for approximately a week. Sweeping and active searching were consistently employed throughout the expedition.



Different factors are thought to have affected the survey of some groups, including the time of the year. Because the expedition was carried out too early in the season, most of the Orthoptera specimens were still immatures, and therefore could not be reliably identified. Suboptimal temperature at higher altitudes negatively impacted the survey of butterflies and moth groups known to occur in montane areas. More importantly, the severe drought contributed to a significant decrease in the diversity and abundance of invertebrate species. During the survey itself, light rain and strong winds may have decreased the efficiency of the malaise and pan traps, especially during the collecting events at the Parliament House.



Fig 2: Malaise traps (Photos by Juanita Rodriguez)





Fig. 3: Light traps (photos by You Ning Su)



Fig. 4: Coloured pan traps (photo by Mich Couper)



Fig. 5: Olivia Evangelista sweeping (photo by Jane Brandenburg)

## 2.3 Identifying the collections

Specimens were identified by the survey participants and other specialists affiliated with CSIRO (research fellows, technicians and graduate students). All individuals involved in identifying specimens are mentioned below; they are also listed as contributors in the beginning of this report.

All collected specimens, including non-target taxa in various insect groups, were sorted to order or family level. This material was fully curated and is accessible to the scientific community for future taxonomic studies. For this report, participants identified exemplars in their groups of expertise, and additional specimens were made available to other ANIC specialists who wished to provide determinations of other insect groups. Species lists include data for all exemplars of Orthoptera, Hemiptera and terrestrial molluscs, which were fully identified at least to family-level. Due to the substantial volume of specimens of Diptera and Hymenoptera, and the lack of taxonomic expertise for some subgroups, only a subset of the material was identified. In these orders, highlights in terms of morphologically remarkable or rarely collected taxa were identified to family-level.

All insects and terrestrial molluscs collected in the courtyards of the Parliament House were identified. In this case, specimens were sorted into morphospecies and identified to family-level. The goal of this approach is to provide a panorama of urban biodiversity in terms of number of insect species, families and orders.

Relevant identification sources included online interactive keys, taxonomic catalogues, textbooks, field guides, original descriptions, and articles published in peer-reviewed journals. When available, type specimens (or their photographs) were used to confirm identifications and assist in the determination of novel taxa. Scientific names are consistent with the Australian Faunal Directory in terms of taxonomic classification and nomenclature, and references used are cited in full at the end of this document.

**List of specialists who contributed with identifications for this report. Specialists are listed in terms of their relative contribution and number of identifications provided.**

Full name	Institution/affiliation	Identifications provided
Olivia Evangelista	CSIRO, Research Projects Officer	Family-level identification of Parliament House insects. Family to species level identification of Hymenoptera and Hemiptera: Auchenorrhyncha
Keith Mohr Bayless	CSIRO, Postdoctoral Fellow	Family-level identification of Parliament House insects. Family to species level identification of Diptera
Juanita Rodriguez	CSIRO, Research Scientist	Family to species level identification of Hymenoptera
Jaime Florez	CSIRO, Research Projects Officer	Family to species level identification of Hymenoptera
You Ning Su	CSIRO, Research Projects Officer	Genus/species level identification of Orthoptera
Luisa Teasdale	CSIRO, Postdoctoral Fellow	Genus/species level identification of terrestrial Mollusca and Onychophora
Michael Braby	CSIRO/ANU, Visiting Scientist	Species level identification of Lepidoptera
David Yuan	CSIRO/ANU, Graduate Student	Genus-level identification of Hymenoptera
Xuankun Li	CSIRO/ANU, Graduate Student	Genus-level identification of Diptera

### 3. Results and Discussion

This report provides information on target groups of invertebrates (Hemiptera, Hymenoptera, Orthoptera, Lepidoptera, Mollusca) and also includes determinations for non-target orders of insects (Diptera, Strepsiptera, Coleoptera, Neuroptera, Blattodea, and Psocoptera). Surveys were carried out in over 50 unique geographical coordinates in Namadgi, Tidbinbilla, Botanical Gardens, Parliament House, and Birrigai Outdoor School. Identifications are provided for a total of 348 taxa (63 identified to species level; 54 to genus, and 208 to family level). Of these, 9 species are considered new to science, however, many other non-formalised identifications may still include novel taxa but require additional analyses before they can be confirmed. Therefore, the number of insects which will warrant formal recognition is expected to be much larger, once this material is more carefully studied by a broader team of specialists. New distribution data is provided for Namadgi NP (7) and Tidbinbilla NR (1), and one introduced species of snail is newly recorded for the Australian Botanical Gardens. The results are summarised below for the groups collected in natural areas in Namadgi and Tidbinbilla and the Botanical Gardens. The diversity of invertebrate fauna in the Parliament House is also discussed below, in a separate section. Appendix 1 lists all the groups listed below recorded during the Bush Blitz.

- **Orthoptera:** 16 named species and 3 known but as yet undescribed species were identified. Because the expedition was carried out too early in the season, most of the Orthoptera specimens were still immatures, and therefore could not be reliably identified. On the other hand, adults were identified with high certainty due to the availability of taxonomic revisions and the fact these species have a well-known distribution record, as well as a good representation of exemplars in the ANIC holdings.
- **Lepidoptera:** 7 species of butterflies, 4 species of diurnal moths (2 Zygaenidae, 2 Agaristinae) and 3 species of cup moths (Limacodidae) were recorded. Several hundred species of moths have yet to be formally identified and processed (these are currently pinned and labelled in the accessions).
- **Terrestrial molluscs:** in total, 14 species of terrestrial molluscs (and 1 non-target velvet worm) were collected. Five of the species collected are exotic pests and were found in areas of human activity (e.g. parliament house, the Australian National Botanic Gardens, the Sanctuary at Tidbinbilla, Birriagi). The wet forest along Blundells Creek Road and Warks Road in northern Namadgie was particularly good for collecting terrestrial molluscs. The long unburnt region we visited in southern Namadgi was less productive and there was evidence of burning at the site, perhaps resulting from burn offs.
- **Hemiptera:** 45 species of Hemiptera were found, including two new species of treehoppers in poorly revised genera that are endemic to Australia. The species reported here (with exception of one species of Thaumastocoridae) are classified to a different suborder of Hemiptera (Auchenorrhyncha), so these records do not overlap with the Hemipteran groups surveyed by other participants. Although leafhoppers and planthoppers include many species of economic significance, the community of specialists in Australia is very small and aged. For this reason, the ANIC holdings do not include a good representation of Auchenorrhyncha specimens, and many tribes/genera are in great need of revision. For this reason, the survey of these groups in the ACT area is a relevant contribution to the ANIC collection, and will hopefully foster future taxonomic studies.
- **Hymenoptera:** 122 species were recorded, classified in 27 families of sawflies, bees and wasps. Four new species of spider wasps were discovered, some of which will require molecular tools to be identified to genus-level as these groups are highly sexually dimorphic,

and ground taxonomic work is currently lacking. The presence of two common exotic species of Hymenoptera – honey bee and European wasp – was recorded to help the management of natural areas. In total, 6 new records of wasps are provided for the ACT area.

- **Diptera:** although this was not formally targeted in the Bush Blitz, malaise traps have yielded an abundance of fly specimens, which are being fully sorted and curated. CSIRO specialists have accessed this material, and were able to provide a substantial number of identifications for this megadiverse insect order. In total, 100 species of Diptera were recorded. Three species were discovered in this material, which also includes multiple highlights that indicate the level of conservation of some natural areas.
- **Parliament House:** 189 species of insects and land snails were found in the private courtyards. Species of insects were classified to 69 families across 9 orders. As a highlight, a small family of unusually looking true bugs (Thaumastocoridae) was collected, and although not very rare, only 22 species of this family are known in Australia. One species of fern fly (Teratomizidae) found in the gardens is usually associated with more pristine forest areas. Its presence at the gardens indicate that the environmentally friendly practises implemented sustains a diverse and healthy insect community.

### 3.1 Un-named or not formalised taxa

Table 1. Putatively un-named or not formalised taxa		
Taxon	Comment	Location/Property name
Orthoptera: <i>Bobilla</i> Bush Blitz ACT 1_2018	<i>Bobilla</i> species very close to <i>B. kinderra</i> , the male calling song also similar. This species may be a different species since it lives in alpine area and is very dark in colour.	Namadgi NP Tidbinbilla NR
Orthoptera: <i>Pteronemobius</i> Bush Blitz ACT 1_2018	This species was treated as <i>Pteronemobius arima</i> , Morphologically it is identical to <i>P. arima</i> , but male with different calling songs and genitalia.	Tidbinbilla NR
Orthoptera: <i>Coptaspis</i> Bush Blitz ACT 1_2018	ANIC undescribed species- <i>Coptaspis</i> sp. 5	Tidbinbilla NR
Lepidoptera: <i>Hestiochora</i> sp	Collected feeding on flowers of <i>Epacris</i> . The species resembles <i>H. furcata</i> but is likely to be an undescribed species based on material in the ANIC in which a few other specimens (mainly from Tallaganda) have been sorted and separated from this species. <i>H. furcata</i> itself is known from only limited material, including a few specimens in the ACT and adjacent areas.	Namadgi NP
<i>Pogonella</i> sp.	This is likely a new species of treehopper, however, more careful examination of males is needed.	Namadgi NP, ANBG



### 3.2 Putative new species (new to science)

Table 2. Putative new species (new to science)		
Species	Comment	Location
Hemiptera: Membracidae <i>Ceraon</i> n.sp. [BB-ACT-18-ANIC-02]	This charismatic sap-feeding treehopper is quite robust and exhibits peculiar thoracic ornaments in the shape of a long pair of horns. The appearance of these horns distinguishes this new species from the other five currently recognized in <i>Ceraon</i> .	Namadgi NP
Hemiptera: Membracidae <i>Eufrenchia</i> n.sp. [BB-ACT-18-ANIC-05]	<i>Eufrenchia</i> is a treehopper genus endemic to Australia, for which two species are currently recognized. Although the tribe has been subject to a recent morphology-based phylogenetic analysis, no taxonomic studies were conducted since the description of this genus in the early 1900s. The appearance of its thoracic horns, much thicker and curved than other species, indicates this species is new to science.	Namadgi NP
Diptera: Cryptochetidae <i>Cryptochetum</i> n. sp. [BB-ACT-18-ANIC-03]	Species of this genus are scale parasitoids. They are rarely collected other than rearing the hosts. Three species are known from Australia, and a new species was collected in Namadgi. It is much smaller and more pruinose than other known species.	Namadgi NP
Diptera: Teratomyzidae <i>Auster</i> n.sp. [BB-ACT-18-ANIC-01]	Only 1 species of <i>Auster</i> is described but there are dozens of undescribed species in Eastern Australia. They are associated with ferns, generally with a tight host species relationship. The undescribed species collected during Bush Blitz lives on tree ferns.	Namadgi NP
Diptera: Milichiidae <i>Paramyia</i> n.sp. [BB-ACT-18-ANIC-06]	No described species of this very small acalyptrate are known from Australia, but some undescribed species are in collections from QLD and coastal NSW. Specimens of a new species were collected in a malaise trap. Species in the Northern Hemisphere are associated with tree sap and fallen logs, can be very common in bogs, and adults steal from spider webs (kleptoparasitism). Biology of Australian species is unknown.	Namadgi NP
Hymenoptera: Pompilidae	<i>Epipompilus</i> is a cosmopolitan genus that comprises 52 species, 36 in	Namadgi NP

<i>Epipompilus</i> n. sp.[BB-ACT-18-ANIC-04]	Australia and 16 in the New World. Unlike most of pompilids, which dig nests to store their prey, females of <i>Epipompilus</i> lay their eggs directly into their spider host when they are hunting, a behaviour considered more ancestral within the family. Graduate student David Yuan (ANU, CSIRO) is currently working on the <i>Empipompilus</i> species of the ACT region. He is describing 5 new species for the genus, one of which was discovered during this Bush Blitz expedition.	
Hymenoptera: Pompilidae Pompilidae n. gen., n. sp. [BB-ACT-18-ANIC-07]	These three new species of Pompilidae are represented only from males. They are likely to belong to either of the following genera described by Haupt: <i>Alococurgus</i> , <i>Dolichocurgus</i> , <i>Eremocurgus</i> , <i>Mimocurgus</i> , <i>Pachycurgus</i> , <i>Poecilocurgus</i> and <i>Xenocurgus</i> . These groups have not been studied since their original description and were all described based on female specimens. Due to the strong sexual dimorphism in these pompilids, it is not possible to associate male specimens with their corresponding females only based on morphology. Our goal is to obtain molecular data from these specimens and include them in an evolutionary study of Australian pompilids. This project is currently being developed by Juanita Rodriguez in collaboration with James Pitts from Utah State University.	Tidbinbilla NR
Hymenoptera: Pompilidae Pompilidae n. gen., n. sp. [BB-ACT-18-ANIC-08]	Same as above.	Botanical Gardens
Hymenoptera: Pompilidae Pompilidae n. gen., n. sp. [BB-ACT-18-ANIC-09]	Same as above.	Tidbinbilla NR

### 3.3 Exotic and pest species

Five exotic species of terrestrial molluscs were collected during the survey. They were found in areas of human and horticultural activity, namely Parliament House, the Australian National Botanic Gardens, the Sanctuary walk at Tidbinbilla, and Birrigai. Four of the observed species are anecdotally common in the ACT but are rarely formally collected. The Hedgehog slug, *Arion intermedius*, had not previously been recorded in the ACT (at least not on ALA), but its occurrence in the ACT is not surprising given they are found through Victoria and around Sydney. It is difficult to know how long *Arion intermedius* has been in the ACT. Given the lack of records, this is likely due to a lack of survey effort rather than its absence. While most introduced snails and slugs are strongly associated with human activity, *Arion intermedius* is known to invade natural habitats. However, the impact of *Arion intermedius* on the environment is still not well understood.

**Table 3. Exotic and pest species recorded**

Exotic/pest species	Location sighted/observed	Indication of abundance	Comments
<i>Arion intermedius</i>	ANBG	4	First record for the ACT
<i>Cornu aspersum</i>	Parliament House, ANBG	Highly abundant	
<i>Deroceras reticulatum</i>	Parliament House	Highly abundant	
<i>Lehmanna nyctelia</i>	Parliament House, Birrigai	Highly abundant	
<i>Oxychilus alliarius</i>	Parliament House, Tidbinbilla, ANBG	Highly abundant	
<i>Apis mellifera</i>	All surveyed areas	Highly abundant	
<i>Vespula germanica</i>		Moderately abundant	

### 3.4 Threatened species

No critically endangered, vulnerable or conservation dependent species were found.

### 3.5 Range extensions

**Table 5. Range extensions or significant infill in distribution records for species**

Species	Location sighted/observed	Distance from nearest known record (km)	Comments
Gastropoda: <i>Arion intermedius</i> * (exotic pest)	ANBG		First record for the ACT
Hymenoptera: <i>Auplopus cornelia</i>	Namadgi		First record for the ACT. It was previously known from QLD.
Hymenoptera: <i>Auplopus novarae</i>	Namadgi		First record for the ACT. It was previously known from NSW, QLD and VIC.

Hymenoptera: <i>Epipompilus semitinctus</i>	Namadgi		First record for the ACT. It was previously known from QLD.
Hymenoptera: <i>Psoropempula tuma</i>	Namadgi		First record for the ACT. It was previously known from QLD.
Hymenoptera: <i>Sphictostethus geevestoni</i>	Namadgi		First record for the ACT. It was previously known from TAS.
Hymenoptera: <i>Dolichocurgus</i> spp.	Namadgi, Tidbinbilla		First record for the ACT. It was previously known from SA, WA.
Lepidoptera: <i>Pseudalmenus chlorinda</i>	Namadgi NP		Newly recorded from the southern ACT. It was previously known only from the northern montane areas of the ACT and all previous sites were eliminated by the 2003 fire storm

\* Note: it is difficult to know how long *Arion intermedius* has been in the ACT. This more likely explained by the lack of survey effort than its absence.

### 3.6 Genetic information

Although no genetic studies were yet performed on the collected individuals, several specimens are likely to be sampled in future phylogenetic studies based on molecular data. After being sorted and assigned to orders/families, samples from three major insect groups (Diptera, Hymenoptera and Hemiptera) were placed into cryogenic vials, and immersed in absolute ethanol. Duplicate specimens were pinned for morphological analyses and will be kept as a reference of the ethanol preserved vouchers. After the completion of this report, these samples will be further curated and then stored in a -20°C freezer, which will ensure long-term tissue preservation for high quality genomic extracts.

## 4. Information on species lists

Species lists were provided for the ACT area in previous iterations of Bush Blitz, which occurred in 2013 and 2014. The large number of traps employed yielded thousands of insect samples, which makes the curation and identification of the material much more time consuming. The majority of the material is currently stored in cryogenic vials to better preserve their tissue for future studies, and the duplicates still need to be sorted and pinned before they can be databased under institutional accession numbers. The absence of institutional numbers for several recorded species means that new curatorial steps still need to be undertaken before these specimens are accessioned in the collection.

In several instances, we noticed the lack of reliable insect identification tools at the genus and species level, especially in Hemiptera, Hymenoptera and Diptera. The morphology of these groups can be challenging and highly variable, and some exemplars need careful dissections before they can be even identified to genus. Nevertheless, a family-level identification can still be very useful to determine which groups occur in a certain area, and what kind of ecological niches these species occupy – whether they are parasitic, phytophagous, or predator species, for instance. For this reason, family-level determinations were provided for all groups that were considered relevant to inform the overall diversity of the insect fauna in the ACT.



## 5. Information for land managers

No recommendations in terms of invertebrate fauna.

## 6. Other significant findings

Table 6. Lists of other significant findings		
Species	Comment	Location
<b>Hemiptera: Cicadellidae</b> <i>Austrolopa brunensis</i>	This leafhopper is a sap-feeding insect with peculiar morphology and an elaborate acoustic communication system via vibrations of the substrate. The genus is endemic to Australia, and while only two species are recognized, a taxonomic revision would certainly yield multiple new species. A single previous record is known for the ACT area, in the Brindabella range.	Namadgi NP
<b>Hemiptera: Thaumastocoridae</b> Thaumastocoridae sp.	These very small and unusual true bugs are associated with eucalyptus, <i>Banksia</i> and <i>Acacia</i> , but until very recently little was known of their biology. 22 species are known from Australia. Although some species may be common, the ANIC collection has very few representatives of this group.	Namadgi NP, Parliament House
<b>Lepidoptera: Lycaenidae</b> <i>Pseudalmenus chlorinda</i>	The lycaenid butterfly <i>Pseudalmenus chlorinda</i> was newly recorded from the southern ACT area. It was previously known only from the northern montane areas of the ACT and all sites where it previously occurred were eliminated by the 2003 fire storm.	Namadgi NP
<b>Lepidoptera: Zygaenidae</b> <i>Hestiochora</i> sp.	The zygaenid <i>Hestiochora</i> sp. was collected feeding on flowers of <i>Epacris</i> . The species resembles <i>H. furcata</i> but is likely to be an undescribed species based on material in the ANIC in which a few other specimens (mainly from Tallaganda) have been sorted and separated from this species. <i>H. furcata</i> itself is known from only limited material, including a few specimens in the ACT and adjacent areas.	Namadgi NP
<b>Lepidoptera: Limacodidae</b> <i>Doratifera pinguis</i>	The life history of the limacodid <i>Doratifera pinguis</i> was previously unknown, but a freshly emerged female was collected at the light sheet. The female was enclosed in a	Namadgi NP

	container with several males overnight and she mated one of them. The mated female then laid a number of fertile eggs from which the larvae hatched and were reared in captivity on leaves of <i>Eucalyptus</i> .	
<b>Diptera: Heleomyzidae:</b> <i>Pentachaeta pinguis</i> , <i>Trixoleria maculipennis</i> , <i>Austroleria extensa</i> <b>Diptera: Rhagionidae:</b> <i>Atherimorpha</i> sp.	These taxa are rarely collected. They occur in montane rainforests from Tasmania to Northern NSW. They indicate a well-preserved forest ecosystem.	Namadgi NP
<b>Diptera: Athericidae</b> <i>Dasyomma tonnoiri</i>	Larvae of this family are predators in fast flowing pristine montane streams. Their distribution is patchy and this was fortunately collected during the expedition.	Namadgi NP
<b>Diptera: Syphidae</b> <i>Microdon</i> sp.	Larvae of this flower fly are parasites orinquilines in ant nests. They are highly modified and have been accidentally described as molluscs. Adults are rarely encountered.	Namadgi NP
<b>Diptera: Acroceridae</b> <i>Ogcodes</i> sp.	This is another rare parasitoid fly. The larvae attack spiders.	Namadgi NP
<b>Diptera: Pyrgotidae</b> <i>Cardiacera</i> sp. <i>Osa</i> p.	Both of these genera are parasites of scarab beetles. They are rarely encountered as the adults are nocturnal, but sometimes come to light traps.	Tidbinbilla NR  Namadgi NP
<b>Diptera: Fergusoninidae</b> <i>Fergusonina</i> sp.	This group is restricted to Australasia. They have symbiotic nematodes which live inside female. The female deposits both eggs and nematodes into the myrtaceous host plant, and the nematodes form a gall in which the larva lives. While easy to rear from galls, free living adults are hard to find. There are likely thousands of species of <i>Fergusonina</i> in Australia.	Namadgi NP
<b>Diptera: Hippoboscidae</b> Hippoboscidae sp.	Commonly known as “louse flies” or “keds”, these species are external parasites on birds and mammals. One of the common species is a kangaroo parasite but the species collected during Bush Blitz is more likely a parasite of birds.	Namadgi NP
<b>Diptera: Stratiomyidae</b> <i>Boreoides</i> sp.	These are strange soldier flies with wingless females, several species are in Australia, mainly in pristine montane environments.	Namadgi NP
<b>Diptera: Chamaemyiidae</b> Chamaemyiidae sp.	These are parasites of various sternorrhyncha, not very commonly collected in Australia	Namadgi NP
<b>Insecta: Strepsiptera</b> Strepsiptera sp.	Several specimens of these twisted-wing parasites were collected in malaise traps during Bush Blitz.	Namadgi NP

## 7. Conclusions

This report offers relevant information about the invertebrate fauna in the ACT region, including new distribution records and newly discovered species of insects. Although some groups of insects (such as butterflies, moth and beetles) were already well known and surveyed, the 2018 expedition of Bush Blitz further expands on this foundation, improving the ANIC holdings in many other poorly studied insect groups. Our results demonstrate that several new species in this region still await formal recognition. This has been observed especially in groups of insects for which there were no local specialists until more recently (i.e., spider wasps, treehoppers, leafhoppers and planthoppers), or megadiverse groups that can be easily overlooked due to their small size, such as flies.

During this expedition, insects and terrestrial molluscs were surveyed in many different types of habitats, including the Namadgi National Park, Tidbinbilla Nature Reserve, as well as more human associated areas, like the Parliament House and the Australian Botanic Gardens. The different collecting techniques have yielded thousands of samples, which are being fully curated and identified. In total, identifications are provided for a considerable number of taxa: 348 species in 121 families, with 9 newly discovered species. We believe, however, that the number of undiscovered species will increase as the material is examined by a broader team of specialists.

Despite the poor weather conditions during the survey of the Parliament House, a surprising number of species was recorded for the gardens. The parliament courtyards include variety of introduced and native plants, and their management implements a combination of environmentally sensitive practises that avoid the excessive use of chemicals. The diversity of insects across a broad number of orders and families indicates that the pest management techniques are not heavily affecting non-target insect species, which leads to a more well-balanced and healthy urban environment. Nevertheless, the abundance of plant resources still offers ideal conditions for other invasive species, as exemplified by the exotic land snails, which occurred in moderate to high numbers across the gardens.

## Acknowledgements

On behalf of the Australian National Insect Collection, we would extend our appreciation to the Bush Blitz team (Jo Harding and Kate Gillespie) for their organisation and support prior to and during the expedition. The ACT parks staff provided great assistance in field trips. Leanne Clarke helped obtaining the permits to access the private courtyards of the Parliament House; she also assisted in the collecting itself, escorting the specialists and tending the pan traps, which were active for nearly a week at the gardens. Paula Banks offered prompt and relevant advice on the structure and reasoning of the report, as well as the composition of species lists. We would also like to thank other contributors affiliated with ANIC/CSIRO, who have kindly offered their expertise to confirm the identification of selected specimens: David Rentz (Orthoptera) and Robyn Meier (Hymenoptera).

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## Appendices

**Appendix 1.** List of Hemiptera, Hymenoptera, Diptera, Strepsiptera, Neuroptera, Blattodea, Psocodea, Lepidoptera, Orthoptera and Mollusca recorded in Namadgi National Park, Tidbinbilla Nature Reserve, Australian Botanical Gardens and Private Courtyards of Parliament House during the 2018 ACT Bush Blitz.

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Acalyptrate	Acalyptrate sp.		No	No	No	No	Specimen	Namadgi NP			
Achiliidae	Achiliidae sp. 1	Planthopper	No	No	No	No	Specimen				Parliament House
Achiliidae	Achiliidae sp. 2	Planthopper	No	No	No	No	Specimen				Parliament House
Acrididae	<i>Caledia captiva</i>	Caledia	No	No	No	No	Specimen		Tidbinbilla NR		
Acrididae	<i>Goniaea vocans</i>	Slender Gumleaf Grasshopper	No	No	No	No	Specimen		Tidbinbilla NR		
Acrididae	<i>Phaulacridium vittatum</i>	Wingless Grasshopper	No	No	No	No	Specimen		Tidbinbilla NR		
Acrididae	<i>Praxibulus insolens</i>	Odd Praxibulus	No	No	No	No	Specimen		Tidbinbilla NR		
Acridinae	<i>Coryphistes ruricola</i>	Bark-mimicking Grasshopper	No	No	No	No	Specimen	Namadgi NP			
Acridinae	<i>Cryptobothrus chrysophorus</i>	Golden Bandwing	No	No	No	No	Specimen	Namadgi NP			
Acridinae	<i>Perala viridis</i>	Spring Buzzer	No	No	No	No	Specimen	Namadgi NP			
Acroceridae	<i>Ogcodes</i> sp.	Hunch-back fly	No	No	No	No	Specimen	Namadgi NP			
Agriolimacidae	<i>Deroceras reticulatum</i>	Grey Field Slug	No	No	No	Yes	Specimen				Parliament House

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Agromyzidae	Agromyzidae sp.1	Leaf-miner fly	No	No	No	No	Specimen				Parliament House
Anthribidae	Anthribidae sp.1		No	No	No	No	Specimen				Parliament House
Aphelinidae	Aphelinidae sp.1		No	No	No	No	Specimen				Parliament House
Aphididae	Aphididae sp.1		No	No	No	No	Specimen				Parliament House
Apidae	Apidae sp.1		No	No	No	No	Specimen				Parliament House
Apidae	<i>Apis mellifera</i>	Honey bee	No	No	No	Yes	Specimen	Namadgi NP	Tidbinbilla NR		
Apidae	<i>Exoneura</i> ( <i>Exoneura</i> ) sp.1		No	No	No	No	Specimen	Namadgi NP			
Arionidae	<i>Arion intermedius</i>	Hedgehog Slug	No	No	No	Yes	Specimen			ANBG	
Athericidae	<i>Dasyomma tonnoiri</i>		No	No	No	No	Specimen	Namadgi NP			
Bethylidae	Bethylidae sp.1		No	No	No	No	Specimen				Parliament House
Bibionidae	Bibionidae sp. 1		No	No	No	No	Specimen				Parliament House
Blattodea	Blattodea sp.1		No	No	No	No	Specimen				Parliament House
Bombyliidae	<i>Australiphthiria</i> sp.		No	No	No	No	Specimen	Namadgi NP			
Bombyliidae	<i>Geron</i> sp.		No	No	No	No	Specimen		Tidbinbilla NR		
Bombyliidae	<i>Marmosoma sumptuosum</i>		No	No	No	No	Specimen	Namadgi NP			
Bombyliidae	<i>Thraxan</i> sp.		No	No	No	No	Specimen		Tidbinbilla NR		
Braconidae	Braconidae sp.1		No	No	No	No	Specimen				Parliament House

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Braconidae	Braconidae sp.2		No	No	No	No	Specimen				Parliament House
Braconidae	Braconidae sp.3		No	No	No	No	Specimen				Parliament House
Braconidae	Braconidae sp.4		No	No	No	No	Specimen				Parliament House
Braconidae	Braconidae sp.5		No	No	No	No	Specimen				Parliament House
Camaenidae	<i>Austrochloritis kosciuszkoensis</i>	Kosciuszko Bristle Snail	No	No	No	No	Specimen	Namadgi NP			
Cecidomyiidae	Cecidomyiidae sp.1		No	No	No	No	Specimen				Parliament House
Cecidomyiidae	Cecidomyiidae sp.2		No	No	No	No	Specimen				Parliament House
Cecidomyiidae	Cecidomyiidae sp.3		No	No	No	No	Specimen				Parliament House
Cecidomyiidae	Cecidomyiidae sp.4		No	No	No	No	Specimen				Parliament House
Cecidomyiidae	Cecidomyiidae sp.5		No	No	No	No	Specimen				Parliament House
Cecidomyiidae	Cecidomyiidae sp.6		No	No	No	No	Specimen				Parliament House
Ceraphronoidea	Ceraphronoidea sp.1		No	No	No	No	Specimen				Parliament House
Ceraphronoidea	Ceraphronoidea sp.2		No	No	No	No	Specimen				Parliament House
Ceraphronoidea	Ceraphronoidea sp.3		No	No	No	No	Specimen				Parliament House
Ceraphronoidea	Ceraphronoidea sp.4		No	No	No	No	Specimen				Parliament House
Ceratopogonidae	Ceratopogonidae sp.1		No	No	No	No	Specimen				Parliament House
Chalcididae	Chalcididae sp.1		No	No	No	No	Specimen				Parliament House

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Chalcidoidea	Chalcidoidea sp.1		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.10		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.11		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.12		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.13		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.14		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.15		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.2		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.3		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.4		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.5		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.6		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.7		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.8		No	No	No	No	Specimen				Parliament House
Chalcidoidea	Chalcidoidea sp.9		No	No	No	No	Specimen			ANBG	Parliament House
Chamaemyiidae	Chamaemyiidae sp.		No	No	No	No	Specimen	Namadgi NP			
Charopidae	<i>Diphyoropa saturni</i>	Sydney Copper Pinwheel Snail	No	No	No	No	Specimen	Namadgi NP			



FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Charopidae	<i>Discocharopa aperta</i>	Miniscule White Pinwheel Snail	No	No	No	No	Specimen	Namadgi NP			
Charopidae	<i>Elsothera funerea</i>	Grim Reaper Pinwheel Snail	No	No	No	No	Specimen	Namadgi NP	Tidbinbilla NR		
Charopidae	<i>Gyrocochlea notiala</i>	Batemans Bay Pinwheel Snail	No	No	No	No	Specimen	Namadgi NP			
Chironomidae	Chironomidae sp.1	Non-biting midge	No	No	No	No	Specimen				Parliament House
Chironomidae	Chironomidae sp.2	Non-biting midge	No	No	No	No	Specimen				Parliament House
Chironomidae	Chironomidae sp.3	Non-biting midge	No	No	No	No	Specimen				Parliament House
Chironomidae	Chironomidae sp.4	Non-biting midge	No	No	No	No	Specimen				Parliament House
Chironomidae	Chironomidae sp.5	Non-biting midge	No	No	No	No	Specimen				Parliament House
Chironomidae	Chironomidae sp.6	Non-biting midge	No	No	No	No	Specimen				Parliament House
Chironomidae	Chironomidae sp.7	Non-biting midge	No	No	No	No	Specimen				Parliament House
Chironomidae	Chironomidae sp.8	Non-biting midge	No	No	No	No	Specimen				Parliament House
Chloropidae	Chloropidae sp.1	Grass fly	No	No	No	No	Specimen				Parliament House
Chloropidae	Chloropidae sp.2	Grass fly	No	No	No	No	Specimen				Parliament House
Chloropidae	Chloropidae sp.3	Grass fly	No	No	No	No	Specimen				Parliament House
Chloropidae	Chloropidae sp.4	Grass fly	No	No	No	No	Specimen				Parliament House
Chloropidae	Chloropidae sp.5	Grass fly	No	No	No	No	Specimen				Parliament House

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Chloropidae	Chloropidae sp.6	Grass fly	No	No	No	No	Specimen				Parliament House
Chloropidae	Chloropidae sp.7	Grass fly	No	No	No	No	Specimen				Parliament House
Chrysididae	Chrysididae sp.1	Cuckoo wasp	No	No	No	No	Specimen		Tidbinbilla NR		
Chrysididae	Chrysididae sp.2	Cuckoo wasp	No	No	No	No	Specimen		Tidbinbilla NR		
Chrysididae	Chrysididae sp.3	Cuckoo wasp	No	No	No	No	Specimen	Namadgi NP			
Chrysomelidae	Chrysomelidae sp.1	Leaf beetle	No	No	No	No	Specimen				Parliament House
Chrysomelidae	Chrysomelidae sp.2	Leaf beetle	No	No	No	No	Specimen				Parliament House
Chrysopidae	Chrysopidae sp.1	Green lacewing	No	No	No	No	Specimen				Parliament House
Cicadellidae	<i>Austrolopa brunensis</i>	Leafhopper	No	No	No	No	Specimen	Namadgi NP			
Cicadellidae	Cicadellidae sp.1	Leafhopper	No	No	No	No	Specimen	Namadgi NP			Parliament House
Cicadellidae	Cicadellidae sp.2	Leafhopper	No	No	No	No	Specimen	Namadgi NP			Parliament House
Cicadellidae	Cicadellidae sp.3	Leafhopper	No	No	No	No	Specimen	Namadgi NP			Parliament House
Cicadellidae	Cicadellidae sp.4	Leafhopper	No	No	No	No	Specimen	Namadgi NP			Parliament House
Cicadellidae	Cicadellidae sp.5	Leafhopper	No	No	No	No	Specimen	Namadgi NP			
Cicadellidae	Cicadellidae sp.6	Leafhopper	No	No	No	No	Specimen	Namadgi NP			
Cicadellidae	Cicadellidae sp.10	Leafhopper	No	No	No	No	Specimen		Tidbinbilla NR		
Cicadellidae	Cicadellidae sp.11	Leafhopper	No	No	No	No	Specimen	Namadgi NP			

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Cicadellidae	Cicadellidae sp.12	Leafhopper	No	No	No	No	Specimen		Tidbinbilla NR		
Cicadellidae	Cicadellidae sp.13	Leafhopper	No	No	No	No	Specimen	Namadgi NP			
Cicadellidae	Cicadellidae sp.14	Leafhopper	No	No	No	No	Specimen	Namadgi NP			
Cicadellidae	Cicadellidae sp.15	Leafhopper	No	No	No	No	Specimen	Namadgi NP			
Cicadellidae	Cicadellidae sp.16	Leafhopper	No	No	No	No	Specimen		Tidbinbilla NR	ANBG	
Cicadellidae	Cicadellidae sp.17	Leafhopper	No	No	No	No	Specimen	Namadgi NP			
Cicadellidae	Cicadellidae sp.18	Leafhopper	No	No	No	No	Specimen		Tidbinbilla NR		
Cicadellidae	Cicadellidae sp.19	Leafhopper	No	No	No	No	Specimen	Namadgi NP			
Cicadellidae	Cicadellidae sp.20	Leafhopper	No	No	No	No	Specimen	Namadgi NP			
Cicadellidae	Cicadellidae sp.7	Leafhopper	No	No	No	No	Specimen	Namadgi NP			
Cicadellidae	Cicadellidae sp.8	Leafhopper	No	No	No	No	Specimen	Namadgi NP			
Cicadellidae	Cicadellidae sp.9	Leafhopper	No	No	No	No	Specimen	Namadgi NP		ANBG	
Cicadidae	<i>Pauropsalta</i> sp.	Bark buzzer	No	No	No	No	Specimen	Namadgi NP			
Cleridae	Cleridae sp.1	Checkered beetle	No	No	No	No	Specimen				Parliament House
Cleridae	Cleridae sp.2	Checkered beetle	No	No	No	No	Specimen				Parliament House
Coccidae	Coccidae sp.1	Scale insect	No	No	No	No	Specimen			ANBG	Parliament House
Coccinelidae	Coccinelidae sp.1	Ladybird beetle	No	No	No	No	Specimen				Parliament House

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Coccinellidae	Coccinellidae sp.2	Ladybird beetle	No	No	No	No	Specimen				Parliament House
Coccinellidae	Coccinellidae sp.3	Ladybird beetle	No	No	No	No	Specimen				Parliament House
Coccinellidae	Coccinellidae sp.4	Ladybird beetle	No	No	No	No	Specimen				Parliament House
Coccinellidae	Coccinellidae sp.5	Ladybird beetle	No	No	No	No	Specimen				Parliament House
Coccinellidae	Coccinellidae sp.6	Ladybird beetle	No	No	No	No	Specimen				Parliament House
Colletidae	<i>Euryglossa</i> sp.1	Plasterer Bee	No	No	No	No	Specimen		Tidbinbilla NR		
Colletidae	<i>Hylaeinae</i> sp.1	Plasterer Bee	No	No	No	No	Specimen	Namadgi NP			
Colletidae	<i>Leioproctus</i> sp.1	Plasterer Bee	No	No	No	No	Specimen	Namadgi NP			
Colletidae	<i>Lipotriches</i> sp.1	Plasterer Bee	No	No	No	No	Specimen		Tidbinbilla NR		
Colletidae	<i>Lipotriches</i> sp.2	Plasterer Bee	No	No	No	No	Specimen		Tidbinbilla NR		
Colletidae	<i>Trichocolletes</i> sp.1	Plasterer Bee	No	No	No	No	Specimen	Namadgi NP			
Cryptochetidae	<i>Cryptochetum</i> n.sp. [BB-ACT-18-ANIC-03]	Fly	Yes	No	No	No	Specimen	Namadgi NP			
Culicidae	Culicidae sp.1	Mosquito	No	No	No	No	Specimen				Parliament House
Curculionidae	Curculionidae sp.1	Weevil	No	No	No	No	Specimen				Parliament House
Curculionidae	Curculionidae sp.2	Weevil	No	No	No	No	Specimen				Parliament House
Curculionidae	Curculionidae sp.3	Weevil	No	No	No	No	Specimen				Parliament House

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Curculionidae	Curculionidae sp.4	Weevil	No	No	No	No	Specimen				Parliament House
Derbidae	Derbidae sp.1	Planthopper	No	No	No	No	Specimen	Namadgi NP			
Dermaptera	Dermaptera sp.1	Earwig	No	No	No	No	Specimen				Parliament House
Diapriidae	Diapriidae sp.1	Wasp	No	No	No	No	Specimen				Parliament House
Diapriidae	Diapriidae sp.2	Wasp	No	No	No	No	Specimen				Parliament House
Diapriidae	Diapriidae sp.3	Wasp	No	No	No	No	Specimen				Parliament House
Diapriidae	Diapriidae sp.4	Wasp	No	No	No	No	Specimen				Parliament House
Diapriidae	Diapriidae sp.5	Wasp	No	No	No	No	Specimen				Parliament House
Diapriidae	Diapriidae sp.6	Wasp	No	No	No	No	Specimen				Parliament House
Dolichopodidae	Dolichopodidae sp.1	Long-legged fly	No	No	No	No	Specimen				Parliament House
Dolichopodidae	Dolichopodidae sp.2	Long-legged fly	No	No	No	No	Specimen				Parliament House
Dolichopodidae	Dolichopodidae sp.3	Long-legged fly	No	No	No	No	Specimen				Parliament House
Dolichopodidae	Dolichopodidae sp.4	Long-legged fly	No	No	No	No	Specimen				Parliament House
Dolichopodidae	Dolichopodidae sp.5	Long-legged fly	No	No	No	No	Specimen				Parliament House
Dolichopodidae	Dolichopodidae sp.6	Long-legged fly	No	No	No	No	Specimen				Parliament House
Dolichopodidae	Dolichopodidae sp.7	Long-legged fly	No	No	No	No	Specimen				Parliament House
Drosophilidae	Drosophilidae sp.1	Fruit fly	No	No	No	No	Specimen				Parliament House

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Drosophilidae	Drosophilidae sp.2	Fruit fly	No	No	No	No	Specimen				Parliament House
Drosophilidae	Drosophilidae sp.3	Fruit fly	No	No	No	No	Specimen				Parliament House
Drosophilidae	Drosophilidae sp.4	Fruit fly	No	No	No	No	Specimen				Parliament House
Drosophilidae	Drosophilidae sp.5	Fruit fly	No	No	No	No	Specimen				Parliament House
Encyrtidae	Encyrtidae sp.1	Wasp	No	No	No	No	Specimen				Parliament House
Encyrtidae	Encyrtidae sp.2	Wasp	No	No	No	No	Specimen				Parliament House
Ephydriidae	Ephydriidae sp.1	Shore fly	No	No	No	No	Specimen				Parliament House
Eupelmidae	Eupelmidae sp.1		No	No	No	No	Specimen				Parliament House
Eurybrachidae	<i>Platybrachys</i> sp.		No	No	No	No	Specimen	Namadgi NP			
Eurytomidae	Eurytomidae sp.1		No	No	No	No	Specimen				Parliament House
Evaniidae	Evaniidae sp.1		No	No	No	No	Specimen	Namadgi NP			
Evaniidae	Evaniidae sp.2		No	No	No	No	Specimen		Tidbinbilla NR		
Evaniidae	Evaniidae sp.3		No	No	No	No	Specimen		Tidbinbilla NR		
Evaniidae	Evaniidae sp.4		No	No	No	No	Specimen	Namadgi NP			
Evaniidae	Evaniidae sp.5		No	No	No	No	Specimen	Namadgi NP			
Evaniidae	Evaniidae sp.6		No	No	No	No	Specimen	Namadgi NP			
Fergusoninidae	<i>Fergusonina</i> sp.		No	No	No	No	Specimen	Namadgi NP			

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Figiditae	Figiditae sp.1		No	No	No	No	Specimen				Parliament House
Flatidae	Flatidae sp.1		No	No	No	No	Specimen	Namadgi NP			
Flatidae	Flatidae sp.2		No	No	No	No	Specimen			ANBG	
Flatidae	Flatidae sp.3		No	No	No	No	Specimen		Tidbinbilla NR		
Formicidae	Formicidae sp.1		No	No	No	No	Specimen				Parliament House
Formicidae	Formicidae sp.2		No	No	No	No	Specimen				Parliament House
Formicidae	Formicidae sp.3		No	No	No	No	Specimen				Parliament House
Formicidae	Formicidae sp.4		No	No	No	No	Specimen				Parliament House
Formicidae	Formicidae sp.5		No	No	No	No	Specimen				Parliament House
Formicidae	Formicidae sp.6		No	No	No	No	Specimen				Parliament House
Formicidae	Formicidae sp.7		No	No	No	No	Specimen				Parliament House
Formicidae	Formicidae sp.8		No	No	No	No	Specimen				Parliament House
Gryllidae	<i>Velarifictorus diminuens</i>	Diminutive Ground Cricket	No	No	No	No	Specimen		Tidbinbilla NR		
Gryllinae	<i>Lepidogryllus comparatus</i>	Slow-Chirping Field Cricket	No	No	No	No	Specimen		Tidbinbilla NR		
Halictidae	Halictinae sp.1		No	No	No	No	Specimen	Namadgi NP			
Halictidae	<i>Homalictus</i> sp.1		No	No	No	No	Specimen		Tidbinbilla NR		
Halictidae	<i>Homalictus</i> sp.2		No	No	No	No	Specimen		Tidbinbilla NR		



FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Halictidae	<i>Homalictus</i> sp.3		No	No	No	No	Specimen	Namadgi NP			
Halictidae	<i>Lasioglossum</i> ( <i>Parasphecodes</i> ) sp.1		No	No	No	No	Specimen	Namadgi NP			
Halictidae	<i>Lasioglossum</i> ( <i>Parasphecodes</i> ) sp.2		No	No	No	No	Specimen	Namadgi NP			
Halictidae	<i>Lasioglossum</i> ( <i>Parasphecodes</i> ) sp.3		No	No	No	No	Specimen	Namadgi NP			
Halictidae	<i>Lasioglossum</i> sp.1		No	No	No	No	Specimen		Tidbinbilla NR		
Halictidae	<i>Lasioglossum</i> sp.2		No	No	No	No	Specimen		Tidbinbilla NR		
Halictidae	<i>Lasioglossum</i> sp.3		No	No	No	No	Specimen		Tidbinbilla NR		
Halictidae	<i>Lasioglossum</i> sp.4		No	No	No	No	Specimen	Namadgi NP			
Halictidae	<i>Lasioglossum</i> sp.5		No	No	No	No	Specimen		Tidbinbilla NR		
Halictidae	<i>Lasioglossum</i> sp.5		No	No	No	No	Specimen	Namadgi NP			
Halictidae	<i>Lasioglossum</i> sp.6		No	No	No	No	Specimen	Namadgi NP			
Halictidae	<i>Lasioglossum</i> sp.7		No	No	No	No	Specimen	Namadgi NP			
Heleomyzidae	<i>Austroleria extensa</i>		No	No	No	No	Specimen	Namadgi NP			
Heleomyzidae	<i>Pentachaeta pinguis</i>		No	No	No	No	Specimen	Namadgi NP			
Heleomyzidae	<i>Trioxleria maculipennis</i>		No	No	No	No	Specimen	Namadgi NP			

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Helicarionidae	<i>Helicarion mastersi</i>	Royal Semi-slug	No	No	No	No	Specimen	Namadgi NP			
Helicidae	<i>Cornu aspersum</i>	European Garden Snail	No	No	No	Yes	Specimen			ANBG	Parliament House
Hesperiidae	<i>Pasma tasmanica</i>	Two-spotted Grass-skipper	No	No	No	No	Specimen	Namadgi NP			
Hippoboscidae	Hippoboscidae sp.		No	No	No	No	Specimen	Namadgi NP			
Hybotidae	Hybotidae sp.1		No	No	No	No	Specimen				Parliament House
Ichneumonidae	Ichneumonidae sp.1		No	No	No	No	Specimen				Parliament House
Ichneumonidae	Ichneumonidae sp.2		No	No	No	No	Specimen				Parliament House
Ichneumonidae	Ichneumonidae sp.3		No	No	No	No	Specimen				Parliament House
Ichneumonidae	Ichneumonidae sp.4		No	No	No	No	Specimen				Parliament House
Ichneumonidae	Ichneumonidae sp.5		No	No	No	No	Specimen				Parliament House
Ichneumonidae	Ichneumonidae sp.6		No	No	No	No	Specimen				Parliament House
Latridiidae	Latridiidae sp.1		No	No	No	No	Specimen				Parliament House
Lauxaniidae	Lauxaniidae sp.1		No	No	No	No	Specimen				Parliament House
Limacidae	<i>Lehmannia nyctelia</i>	Striped Field Slug	No	No	No	Yes	Specimen		Tidbinbilla NR		Parliament House
Limacodidae	<i>Doratifera casta</i>		No	No	No	No	Specimen	Namadgi NP			
Limacodidae	<i>Doratifera pinguis</i>		No	No	No	No	Specimen	Namadgi NP			
Limacodidae	<i>Pseudanapaea transvestita</i>		No	No	No	No	Specimen	Namadgi NP			

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Lycaenidae	<i>Paralucia aurifera</i>	Bright Copper	No	No	No	No	Specimen		Tidbinbilla NR		
Lycaenidae	<i>Pseudalmenus chlorinda zephyrus</i>	Silky Hairstreak	No	No	No	No	Specimen	Namadgi NP			
Megachilidae	<i>Megachile</i> sp.1		No	No	No	No	Specimen	Namadgi NP			
Megachilidae	<i>Megachile</i> sp.2		No	No	No	No	Specimen	Namadgi NP			
Megachilidae	<i>Megachile</i> sp.3		No	No	No	No	Specimen	Namadgi NP			
Megachilidae	<i>Megachile</i> sp.4		No	No	No	No	Specimen		Tidbinbilla NR		
Melyridae	Melyridae sp.1		No	No	No	No	Specimen				Parliament House
Membracidae	<i>Ceraon</i> n.sp. [BB-ACT-18-ANIC-02]		Yes	No	No	No	Specimen	Namadgi NP			
Membracidae	<i>Eufrenchia</i> n.sp. [BB-ACT-18-ANIC-05]		Yes	No	No	No	Specimen	Namadgi NP			
Membracidae	<i>Pogonella</i> sp		No	No	No	No	Specimen	Namadgi NP		ANBG	
Membracidae	<i>Sextius virescens</i>		No	No	No	No	Specimen	Namadgi NP			
Milichiidae	<i>Paramyia</i> n.sp. [BB-ACT-18-ANIC-06]		Yes	No	No	No	Specimen	Namadgi NP			
Miridae	Miridae sp.1		No	No	No	No	Specimen				Parliament House
Miridae	Miridae sp.2		No	No	No	No	Specimen				Parliament House
Miridae	Miridae sp.3		No	No	No	No	Specimen				Parliament House
Mordellidae	Mordellidae sp.1		No	No	No	No	Specimen				Parliament House

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Mutillidae	Mutillidae sp.1		No	No	No	No	Specimen		Tidbinbilla NR		
Mutillidae	Mutillidae sp.2		No	No	No	No	Specimen		Tidbinbilla NR		
Mutillidae	Mutillidae sp.3		No	No	No	No	Specimen	Namadgi NP			
Mutillidae	Mutillidae sp.4		No	No	No	No	Specimen	Namadgi NP			
Mutillidae	Mutillidae sp.5		No	No	No	No	Specimen	Namadgi NP			
Mutillidae	Mutillidae sp.6		No	No	No	No	Specimen	Namadgi NP			
Mycetophilidae	Mycetophilidae sp.1		No	No	No	No	Specimen				Parliament House
Mycetophilidae	Mycetophilidae sp.2		No	No	No	No	Specimen				Parliament House
Mycetophilidae	Mycetophilidae sp.3		No	No	No	No	Specimen				Parliament House
Noctuidae: Agaristinae	<i>Agaristodes feisthamelii</i>		No	No	No	No	Specimen	Namadgi NP			
Noctuidae: Agaristinae	<i>Phalaenoides tristifica</i>		No	No	No	No	Observation	Namadgi NP			
Nymphalidae	<i>Heteronympha merope merope</i>	Common Brown	No	No	No	No	Observation	Namadgi NP			
Nymphalidae	<i>Vanessa itea</i>	Yellow Admiral	No	No	No	No	Observation	Namadgi NP			
Nymphalidae	<i>Vanessa kershawi</i>	Australian Painted Lady	No	No	No	No	Observation	Namadgi NP	Tidbinbilla NR		
Pentatomidae	Pentatomidae sp.1		No	No	No	No	Specimen				Parliament House
Pergidae	Pergidae sp.1		No	No	No	No	Specimen	Namadgi NP			
Pergidae	Pergidae sp.2		No	No	No	No	Specimen		Tidbinbilla NR		

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Pergidae	Pergidae sp.3		No	No	No	No	Specimen		Tidbinbilla NR		
Peripatopsidae	Peripatopsidae sp.	Velvet worm	No	No	No	No	Specimen	Namadgi NP			
Phoridae	Phoridae sp.1		No	No	No	No	Specimen				Parliament House
Phoridae	Phoridae sp.10		No	No	No	No	Specimen				Parliament House
Phoridae	Phoridae sp.2		No	No	No	No	Specimen				Parliament House
Phoridae	Phoridae sp.3		No	No	No	No	Specimen				Parliament House
Phoridae	Phoridae sp.4		No	No	No	No	Specimen				Parliament House
Phoridae	Phoridae sp.5		No	No	No	No	Specimen				Parliament House
Phoridae	Phoridae sp.6		No	No	No	No	Specimen				Parliament House
Phoridae	Phoridae sp.7		No	No	No	No	Specimen				Parliament House
Phoridae	Phoridae sp.8		No	No	No	No	Specimen				Parliament House
Phoridae	Phoridae sp.9		No	No	No	No	Specimen				Parliament House
Pieridae	<i>Pieris rapae</i>	Cabbage White	No	No	No	No	Observation	Namadgi NP			
Platypezidae	Platypezidae sp.1		No	No	No	No	Specimen				Parliament House
Platystomatidae	Platystomatidae sp.1		No	No	No	No	Specimen				Parliament House
Pompilidae	<i>Auplopus cornelia</i> cf.		No	No	No	No	Specimen	Namadgi NP			
Pompilidae	<i>Auplopus novarae</i> cf.		No	No	No	No	Specimen	Namadgi NP			

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Pompilidae	<i>Ctenostegus</i> sp.1		No	No	No	No	Specimen			ANBG	
Pompilidae	<i>Dolichocurgus</i> sp.1		No	No	No	No	Specimen	Namadgi NP			
Pompilidae	<i>Dolichocurgus</i> sp.2		No	No	No	No	Specimen		Tidbinbilla NR		
Pompilidae	<i>Epipompilus collessi</i>		No	No	No	No	Specimen	Namadgi NP			
Pompilidae	<i>Epipompilus semitinctus</i>		No	No	No	No	Specimen	Namadgi NP			
Pompilidae	<i>Epipompilus</i> sp.		No	No	No	No	Specimen	Namadgi NP			
Pompilidae	<i>Epipompilus turneri</i>		No	No	No	No	Specimen	Namadgi NP			
Pompilidae	<i>Epipompilus</i> n. sp. [BB-ACT-18-ANIC-04]		Yes	No	No	No	Specimen	Namadgi NP			
Pompilidae	Pompilidae n. sp. [BB-ACT-18-ANIC-07]		Yes	No	No	No	Specimen		Tidbinbilla NR		
Pompilidae	Pompilidae n. sp. [BB-ACT-18-ANIC-08]		Yes	No	No	No	Specimen			ANBG	
Pompilidae	Pompilidae n. sp. [BB-ACT-18-ANIC-09]		Yes	No	No	No	Specimen		Tidbinbilla NR		
Pompilidae	<i>Pompilus cinereus</i>		No	No	No	No	Specimen			ANBG	
Pompilidae	<i>Psoropempula tuma</i>		No	No	No	No	Specimen	Namadgi NP			
Pompilidae	<i>Sphictostethus geevestoni</i>		No	No	No	No	Specimen	Namadgi NP			
Psocoptera	Psocoptera sp.1		No	No	No	No	Specimen				Parliament House
Psocoptera	Psocoptera sp.2		No	No	No	No	Specimen				Parliament House



FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Psocoptera	Psocoptera sp.3		No	No	No	No	Specimen				Parliament House
Psychodidae	Psychodidae sp.1		No	No	No	No	Specimen				Parliament House
Psychodidae	Psychodidae sp.2		No	No	No	No	Specimen				Parliament House
Psychodidae	Psychodidae sp.3		No	No	No	No	Specimen				Parliament House
Psychodidae	Psychodidae sp.4		No	No	No	No	Specimen				Parliament House
Psychodidae	Psychodidae sp.5		No	No	No	No	Specimen				Parliament House
Psyllidae	Psyllidae sp.1		No	No	No	No	Specimen				Parliament House
Psyllidae	Psyllidae sp.2		No	No	No	No	Specimen				Parliament House
Psyllidae	Psyllidae sp.3		No	No	No	No	Specimen				Parliament House
Psyllidae	Psyllidae sp.4		No	No	No	No	Specimen				Parliament House
Punctidae	<i>Iotula microcosmos</i>	Miniscule Pinhead Snail	No	No	No	No	Specimen	Namadgi NP			
Punctidae	<i>Paralaoma</i> sp		No	No	No	No	Specimen				Parliament House
Pyrgotidae	<i>Cardiacera</i> sp.		No	No	No	No	Specimen		Tidbinbilla NR		
Pyrgotidae	<i>Osa</i> sp.		No	No	No	No	Specimen	Namadgi NP			
Rhagionidae	<i>Atherimorpha</i> sp.		No	No	No	No	Specimen	Namadgi NP			
Rhamnaceae	<i>Ziziphus mauritiana</i>	Chinese Apple	No	No	No	Yes	Specimen				

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Rhytididae	<i>Austrorhytida capillacea</i>	Common Southern Carnivorous Snail	No	No	No	No	Specimen	Namadgi NP		ANBG	
Scarabeidae	Scarabeidae sp.1		No	No	No	No	Specimen				Parliament House
Scelionidae	Scelionidae sp.1		No	No	No	No	Specimen				Parliament House
Scelionidae	Scelionidae sp.2		No	No	No	No	Specimen				Parliament House
Sciaridae	Sciaridae sp.1		No	No	No	No	Specimen				Parliament House
Sciaridae	Sciaridae sp.2		No	No	No	No	Specimen				Parliament House
Sciaridae	Sciaridae sp.3		No	No	No	No	Specimen				Parliament House
Sciaridae	Sciaridae sp.4		No	No	No	No	Specimen				Parliament House
Sciaridae	Sciaridae sp.5		No	No	No	No	Specimen				Parliament House
Sciaridae	Sciaridae sp.6		No	No	No	No	Specimen				Parliament House
Sciaridae	Sciaridae sp.7		No	No	No	No	Specimen				Parliament House
Sciaridae	Sciaridae sp.8		No	No	No	No	Specimen				Parliament House
Sciaridae	Sciaridae sp.9		No	No	No	No	Specimen				Parliament House
Sphaeroceridae	Sphaeroceridae sp.1		No	No	No	No	Specimen				Parliament House
Sphaeroceridae	Sphaeroceridae sp.2		No	No	No	No	Specimen				Parliament House

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Sphaeroceridae	Sphaeroceridae sp.3		No	No	No	No	Specimen				Parliament House
Sphaeroceridae	Sphaeroceridae sp.4		No	No	No	No	Specimen				Parliament House
Staphylinidae	Staphylinidae sp.1		No	No	No	No	Specimen				Parliament House
Staphylinidae	Staphylinidae sp.2		No	No	No	No	Specimen				Parliament House
Stratiomyidae	<i>Boreoides</i> sp.		No	No	No	No	Specimen	Namadgi NP			
Stratiomyidae	Stratiomyidae sp. 1		No	No	No	No	Specimen				Parliament House
Stratiomyidae	Stratiomyidae sp.1		No	No	No	No	Specimen				Parliament House
Strepsiptera	Strepsiptera sp.		No	No	No	No	Specimen	Namadgi NP			
Syphidae	<i>Microdon</i> sp.		No	No	No	No	Specimen	Namadgi NP			
Syrphidae	Syrphidae sp.1		No	No	No	No	Specimen				Parliament House
Tenebrionidae	Tenebrionidae sp.1		No	No	No	No	Specimen				Parliament House
Teratomyzidae	<i>Auster</i> n.sp. [BB-ACT-18-ANIC-01]		Yes	No	No	No	Specimen	Namadgi NP			
Teratomyzidae	Teratomyzidae sp.1		No	No	No	No	Specimen				Parliament House
Tettigonidae	Tettigonidae sp.1		No	No	No	No	Specimen				Parliament House
Tettigonidae	Tettigonidae sp.2		No	No	No	No	Specimen				Parliament House
Tettigonidae	Tettigonidae sp.3		No	No	No	No	Specimen				Parliament House
Tettigoniidae	<i>Acripeza reticulata</i>	Mountain Katyids	No	No	No	No	Specimen	Namadgi NP			

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/ territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Tettigoniidae	<i>Coptaspis</i> Bush Blitz ACT 1		No	No	No	No	Specimen		Tidbinbilla NR		
Tettigoniidae	<i>Lanciana montana</i>	Montana Ground Shield-back	No	No	No	No	Specimen	Namadgi NP			
Tettigoniidae	<i>Zaprochilus australis</i>	Australian Twig-mimicking Katydid	No	No	No	No	Specimen		Tidbinbilla NR		
Thaumastocoridae	Thaumastocoridae sp.		No	No	No	No	Specimen	Namadgi NP			
Thaumastocoridae	Thaumastocoridae sp.1		No	No	No	No	Specimen				Parliament House
Therevidae	Therevidae sp. 1		No	No	No	No	Specimen				Parliament House
Therevidae	Therevidae sp. 2		No	No	No	No	Specimen				Parliament House
Tiphiidae	<i>Diamma bicolor</i>		No	No	No	No	Specimen		Tidbinbilla NR		
Tiphiidae	<i>Diamma bicolor</i>		No	No	No	No	Specimen	Namadgi NP			
Torymidae	Torymidae sp.1		No	No	No	No	Specimen				Parliament House
Trichogrammatidae	Trichogrammatidae sp.1		No	No	No	No	Specimen				Parliament House
Trigonidiidae	<i>Bobilla</i> Bush Blitz ACT 1		No	No	No	No	Specimen	Namadgi NP			
Trigonidiidae	<i>Pteronemobius</i> Bush Blitz ACT 1		No	No	No	No	Specimen		Tidbinbilla NR		
Trigonidiidae	<i>Trigonidium gidya</i>	Gidya Trig	No	No	No	No	Specimen	Namadgi NP			
Trigonidiidae	<i>Bobilla kindyerra</i>	Pale Southern Pygmy Cricket	No	No	No	No	Specimen		Tidbinbilla NR		

FAMILY	SPECIES	COMMON NAME	NEW SPECIES	Threatened /EPBC ACT	Threatened (state/territory)	Exotic / pest	Record type	Property 1 Namadgi NP	Property 2 Tidbinbilla NR	Property 3 ANBG	Property 4 Parliament House
Trigonidiidae	<i>Bobilla victoriae</i>	Dark-eyes Southern Pygmy Cricket	No	No	No	No	Specimen		Tidbinbilla NR		
Trigonidiidae	<i>Pteronemobius truncatus</i>	Confusing Pygmy Cricket	No	No	No	No	Specimen		Tidbinbilla NR		
Vespidae	Eumeninae sp. 1		No	No	No	No	Specimen	Namadgi NP			
Vespidae	<i>Vespa germanica</i>		No	No	No	Yes	Specimen	Namadgi NP	Tidbinbilla NR		
Zonitidae	<i>Oxychilus alliarius</i>	Garlic Snail	No	No	No	Yes	Specimen		Tidbinbilla NR	ANBG	Parliament House
Zygaenidae	<i>Hestiochora</i> sp. ( <i>furcata</i> )		No	No	No	No	Specimen	Namadgi NP			
Zygaenidae	<i>Pollanisus viridipulverulenta</i>		No	No	No	No	Specimen		Tidbinbilla NR		

