King Island Bush Blitz

Freshwater Aquatic Invertebrates

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Karen Richards

Nomenclature and taxonomy used in this report is consistent with:

The Australian Faunal Directory (AFD)

Contents

List of contributors

List of contributors to this report.			
Name	**Institution/affiliation**	**Qualifications/area of expertise**	**Level/form of contribution**
Karen Richards	***TMAG***	***Aquatic Biologist/ Aquatic invertebrates***	***Survey participant, main specimen identifier and report author***
Simon Grove	***TMAG***	***Entomologist***	***Survey participant, and contributor of Coleoptera identification***

Kirrily Moore	***TMAG***	***Technical support***	***Survey participant, field and laboratory assistant, and contributor of specimens to KR***
Nicole Zehntner	***TMAG***	***Technical support***	***Survey participant, field and laboratory assistant, and contributor of specimens to KR***
Stephanie Clark	***Invertebrate Identification***	***Malacologist***	***Consultation on freshwater mollusc identifications***
Elizabeth Cambra	***Private landowner***		***Contributor of specimens to KR***

Abstract

A survey of King Island's freshwater invertebrate fauna was conducted as part of the Bush Blitz held on the island 23-30 October, 2023. Whilst the weather was not conducive to surveying terrestrial fauna (as reported by others), sampling of aquatic invertebrates was not impeded by wind or rain. Site selection maximised coverage of streams and waterbodies across King Island and resulted in a reasonable list of taxa obtained, some of which had not been documented for King Island previously. The additions included widespread, as well as more localised Tasmanian species, and some taxa not otherwise known from Tasmania but occurring on the Australian mainland.

Some taxonomic groups were unable to be separated further due to poor taxonomic resolution or reporting time constraints. Limited data exists for aquatic fauna on King Island, so this survey adds significantly to knowledge of the fauna present. Once the dipteran, amphipod and mite specimens are separated, the list is expected to grow by >20 species. Some of the unidentified taxa will be 'cosmopolitan species' known from both the Tasmanian and Australian mainlands, but others are likely to be range extensions. Meanwhile, the results do indicate site-specific differences in species compositions, both between and within stream and wetland habitats, increasing the scientific understanding of species distributions and habitat requirements.

1. Introduction

King Island is a geographically remote, isolated island of Tasmania, located in Bass Strait midway between the Australian, and northwestern tip of the Tasmanian mainlands. To date the island has received limited freshwater taxa research attention, therefore, it is unsurprising that knowledge gaps in its aquatic invertebrate biodiversity exist. Much of the island's original native vegetation has now been cleared in pursuit of agricultural opportunities, but there remain remnants of native vegetation scattered across the landscape, forming islands where the native biodiversity may still be found. As a result of clearing most of the island's catchments have been compromised to varying degrees, the majority retaining only remnant riparian vegetation cover, where present.

Given the scale of landscape-level changes, expectations of finding a diverse aquatic invertebrate fauna were low, especially as the few prior surveys conducted on the island have contributed only a handful of records to databases (Natural Values Database and Atlas of Living Australia), including the freshwater molluscs (Ponder et al 1993; Clark et al 2003); although no comprehensive surveys appear to have been conducted for any specific taxon.

2. Methods

2.1 Site selection

A total of 17 sites were sampled, selected to encompass a wide geographical range and to maximise the range of aquatic habitat types present. Approximately half of the sites were within the existing reserve network, primarily concordant with those selected by Bush Blitz participants when conducting field work in groups. Other sites targeted large streams with retained streamside vegetation, while a few others took advantage of easy access points, or were places of personal interest.

2.2 Survey techniques

The standard aquatic survey methods: dip-netting and kick sampling (for a maximum 30-minute period inclusive, where rocky habitat existed), were applied to sample aquatic fauna. The combined methods aim to dislodge aquatic invertebrates from a different array of instream microhabitats to maximise sampling taxonomic diversity. Additional specimens were hand-collected from overturned rocks, using tweezers, or by handwashing rocky substrate into a net to dislodge the invertebrate inhabitants. At each site the samples collected were combined and net contents placed into 400 ml jars, topped up with water and kept cool until return to base camp. Samples were live-sorted upon return to the base camp laboratory, where possible. Live-sorted specimens, sample residues and unsorted samples were each preserved in 70% ethanol for further sorting and identification upon return to the Tasmanian Museum & Art Gallery. Live-sorted aquatic beetles were provided to Dr Simon Grove and included in his report.

Crayfish burrow excavations were conducted where burrows were present adjacent to survey sites and conditions allowed. A hand trowel and shovel were used to excavate the burrows. An assessment of danger prior to excavation was undertaken when broken glass or metal was and/or when unearthed. In such instances, excavations either ceased completely or were relocated to nearby ‘less dangerous’ locations.

2.2.1 Methods used at standard survey sites

Streams or wetlands nearby standard survey sites (SSS) were targeted as part of the Bush Blitz, as predominantly site selection was not inclusive of waterbodies. The methods listed above were applied at these locations.

2.3 Identifying the collections

All specimens will be lodged into the TMAG collections. Identifications were made through consulting relevant taxonomic keys or taxonomic descriptions where time and resources permitted.

Images of freshwater molluscs of the genus *Austropyrgus* (Tateidae) collected during the Bush Blitz were sent to Dr Stephanie Clark for consultation where specimen identification was in question, while the freshwater bivalves were determined using the interactive online freshwater mollusc key (https://keys.lucidcentral.org/keys/v3/freshwater_molluscs/). Confirmation of undetermined bivalve and tateid specimens with specialists is proposed.

3. Results and Discussion

Appendix 1 lists all freshwater aquatic invertebrates recorded during the Bush Blitz. Collections made during this Bush Blitz will result in 378 species records being added to publicly accessible databases, with multiple specimens recorded across most sites, although some taxa presented more localised distributions. All specimens have been submitted to TMAG for inclusion into the collection.

3.1 Un-named or not formalised taxa

Owing to the poor taxonomic resolution of some freshwater invertebrate groups (e.g. water mites, leeches and larvae of some dipteran families) there is uncertainty around presence of

un-named or not formalised species present in the Bush Blitz samples. This should be resolved through consultation with specialists of the relevant groups.

3.2 Putative new species (new to science)

In this report, 'putative new species' means an unnamed species that, as far as can be ascertained, was identified as a new species as a direct result of this Bush Blitz.

The freshwater mollusc taxa of King Island are more diverse than previously known. Further work is required to ascertain the number of species represented. Once the specimens are more closely examined, i.e. by dissection, it is likely that several new species will be identified as a direct result of this Bush Blitz. At this point, however, the potentially new species are relegated to 'nr' species in Appendix 1.

Table 2. Putative new species (new to science)

Species	Comment
Austropyrgus spp (undetermined)	Several species of *Austropyrgus* are present in the King Island samples. Dissection is required for confirmation of species-level identification. Consultation with the genus-specialist confirms likelihood of multiple species' presence.
Arsipoda sp TMAG_F143147	Reported by S. Grove. A flea-beetle. A second individual KI specimen was recorded in the aquatic sample. It could be an outlier of a described or undescribed mainland Australian species.

3.3 Exotic and pest species

Two freshwater 'exotic' or 'pest' species were recorded over the course of the Bush Blitz. The first, *Cherax destructor*, is an Australian mainland native freshwater crayfish, the second is an invasive freshwater snail native to New Zealand introduced to King Island via mainland Australia or Tasmania where the species also occurs.

Cherax destructor, commonly called 'yabby', is a freshwater crayfish species native to eastern mainland Australia, where it is currently listed as vulnerable on the International Union for Conservation of Nature (IUCN) Redlist, the principal threat being overfishing. Its size and relative ease of capture makes it a good food source, specimens often translocated to new locations for this purpose. The species is not native to Tasmania but now inhabits many locations across both mainland Tasmania and King Island, aggressively colonises new locations and outcompetes the native crayfish fauna for available habitat.

The New Zealand freshwater snail *Potamopyrgus antipodarum* has successfully colonised waterways around the world. Outside New Zealand the populations are typically purely female, individuals reproducing clonally, each capable of producing many thousands of live offspring in a lifetime. Difficult to control given its method of reproduction, fecundity, and tolerance to desiccation, this species is often found in abundance, using a variety of microhabitats and outcompetes the native freshwater snail fauna, many of which are habitat selective.

Table 3. Exotic and pest species recorded

Exotic/pest species	Location sighted/observed	Indication of abundance	Comments
Cherax destructor	Currie (private property) Yarra Ck Road (private property)	Unknown at Currie 100's at Yarra Ck property	One specimen (claw only) was provided to the Bush Blitz team from a local landowner for identification. Images of a second sent through post-bush blitz.
Potamopyrgus antipodarum	Big Lake & intake, Muddy Lagoon, Porky Creek, Sea Elephant River, Grassy River, Fraser River	*Porky Creek – present in 10000's per m^2*	Lowest numbers recorded were at Big Lake, where it is found co-occurring with a number of native mollusc species It is the dominant species in Porky Creek, occurring in significant numbers, with few native species in low densities.

3.4 Threatened species

No threatened aquatic invertebrate species listed on either the EPBC (1999) or Tasmanian TSPA (1995) were recorded in the samples collected.

Table 4. Threatened species			
Species	**Listing status and level (EBPC, State/Territory)**	**Location sighted/observed**	**Indication of abundance**
-	-	-	-

3.5 Range extensions

A number of species collected and identified on this expedition constitute new records for King Island (not previously recorded on the Atlas of Living Australia or Natural Values Atlas). Most species are known from Tasmania, or the Australia mainland, but 29 represent new records for Tasmania, of which KI is part.

Further range extensions are likely once the remaining samples are processed and identified.

Table 5. Range extensions or significant infill in distribution records for species			
Species	**Location sighted/observed**	**Distance from nearest known record (km)**	**Comments**
Austropyrgus goliath	Big Lake, Sea Elephant River, Porky Creek	>100 km	Not recorded from KI in ALA or NVA, but recorded from site in Western Victoria
Geocharax tasmanicus	Big lake, Lancaster Ck Pegarah SF, Fraser River and Eldorado Creek	< 50 km	Recorded from KI, but patchy ALA records. Infill
Engaeus cunicularis	Big Lake, Lancaster Ck Pegarah SF, Sea Elephant River	< 50 km	Recorded from NE and NW Tasmania and southern KI. Provides range extensions to mid KI
Pisidium etheridgei	Naracoopa, Big Lake, Yarra Creek, Sea Elephant River, Grassy River, Fraser River, muddy Lagoon	< 50 km	Recorded from single location on KI, but common on mainland Australia and Tasmania. Infill distribution data.
Pisidium tasmanicum	Big Lake	< 50 km	Recorded at 4 sites on KI on ALA, but not on NVA, otherwise common in Tasmania and the mainland. Infill distribution data.
Ferrissia tasmanicus	Yarra Creek, Grassy River, Porky Creek	>100 km	Not recorded from KI in ALA or NVA, but recorded from mainland Tasmania and Australia

Glyptophysa novaehollandica	Granite Laggon, Grassy River, Big Lake, Muddy Lagoon, Pennys Lagoon, Boggy Lagoon, Porky Creek, Sea Elephant River	< 50 km	Recorded from KI on NVA and ALA, western locations. Provides extension to NE KI
Physa acuta	Naracoopa, Sea Elephant River, Granite Lagoon, Lake Flannigan	< 50 km	Recorded from KI on NVA and ALA, western locations. Provides extension to NE KI
Austropyrgus nitidus	Big Lake, Muddy Lagoon, Eldorado Creek	< 50 km	Recorded from 3 sites along western KI. Infill
Necterosoma penicillatum	Sea Elephant River	>100 km	Not recorded from KI in ALA or NVA, but widespread in TAS.
Lancetes lanceolatus	Big Lake, Porky Creek	< 50 km	Recorded from KI, single location, on ALA. No records on NVA. Provides extension data
Hyphydrus elegans	Big Lake	>100 km	Not recorded from KI, although records on NVA and ALA from eastern Tasmania and mainland Australia
Megaporus hamatus	Granite Lagoon, Boggy Creek	>100 km	Not recorded from KI, although records on NVA and ALA from mainland Tasmania and SE Australia
Sternopriscus tasmanicus	Pennys Lagoon	>100 km	Not recorded from KI on NVA and ALA, although occurs across SE Australia, including Tasmania
Sternopriscus wehnckei	Eldorado Creek	>100 km	Not recorded from KI on ALA or NVA. No records from Tasmania.
Gibbidessus chipi	Eldorado Creek	>200 km	Not recorded from KI on ALA or NVA. No records from Tasmania.
Rhantus suturalis	Eldorado Creek	< 50 km	Recorded on ALA from a single KI location, but common elsewhere

Notriolus quadriplagiata	Yarra Creek, Fraser River	>200 km	Not recorded from KI on ALA or NVA. Single record from NE Tasmania, common in eastern Victoria.
Notriolus simsoni	Fraser River	< 50 km	Recorded on ALA from a single KI location (historic record), but common in SE Australia, including Tasmania
Notriolus victoriae	Fraser River	>100 km	Not recorded from KI on ALA or NVA. Common in Victoria, 4 records from Tasmania.
Notriolus galstonius	Grassy River	>100 km	Not recorded from KI on ALA or NVA. Common in Victoria, 1 record from Tasmania.
Austrolimnius unplaced	Grassy River	>100 km	Recorded on ALA from a single KI location (historic record), but common in SE Australia, including Tasmania
Enochrus sp TMAG_F101078	Big Lake, Boggy Creek, Eldorado Creek	>100 km	Not recorded from KI on ALA or NVA.
Bidessini unplaced	Pennys Lagoon, Eldorado Creek	< 50 km?	This tribe is represented on KI by 2 ALA records only.
Limnoxenus zealandicus	Pennys Lagoon, Eldorado Creek	< 50 km	Recorded on ALA from 2 KI locations. Occurs on Australian and Tasmanian mainlands. Infill data
Gymnochthebius setosus	Muddy Lagoon, Eldorado Creek	>300 km	Not recorded from KI, few records on NVA and ALA from mainland Tasmania and eastern Australia
Cortinicara sp TMAG_143395	Porky Creek		Terrestrial specimen, Not recorded from KI
Tasmanocoenis tillyardi	Naracoopa, Big Lake, Pennys Lagoon	>200 km	Not recorded from KI on ALA or NVA. Records in NE

			Tasmania and SE mainland Australia.
Koorrnonga sp AV1/sp3	Lancaster Creek, Boggy Creek, Sea Elephant River, Yarra Creek	>100 km	Genus recorded from single location on KI, species recorded from Tasmania on NVA.
Ulmerophlebia sp AV2	Yarra Creek	>100 km	Not recorded from Tasmania, including KI on ALA or NVA. Recorded in eastern mainland Australia
Drepanovelia dubia	Fraser River, Sea Elephant River	>100 km	Not recorded from KI on ALA or NVA. Records occur in Tasmania and SE mainland Australia.
Anisops thienemanni	Granite Laggon, Lake Flannigan, Big Lake, Yarra Creek	< 50 km	Single record from KI in ALA. Otherwise widespread in Tasmania and across Australia. Infill data.
Sisyra unplaced	Lake Flannigan: southern shoreline, Boggy Ck, Sea Elephant River Fraser Rd crossing	250 km	No key to larva of this genus. Not recorded from KI in ALA or NVA. See Grove report for adult ID
Nannochorista unplaced	Yarra Creek, Fraser River	>100 km	Not recorded from KI on ALA or NVA, although genus occurs in Tasmania and SE Australia.
Anax papuensis	Granite Lagoon, Porky Creek	>100 km	Not recorded from KI on ALA or NVA, although species occurs in Tasmania and SE Australia.
Riekoperla triloba triloba	Lake Flannigan, Grassy River, Yarra Creek, Sea Elephant River	>100 km	Not recorded from KI on ALA or NVA. Present in Tasmania and few records from SE Australia
Tasmanocerca bifasciata	Yarra Creek, Grassy River	>100 km	Tasmanian endemic. Not recorded from KI on ALA or NVA.
Alloecella grisea	Yarra Creek	>100 km	Not recorded from KI on ALA or NVA. Common in Tasmania and SE Australia

Notoperata sparsa	Yarra Creek	>200 km	Tasmanian endemic. Not recorded from KI on ALA or NVA.
Triplectides ciuskus	Pennys Lagoon	>100 km	Not recorded from KI on ALA or NVA. Common in Tasmania and SE Australia
Hellyethira simplex	Boggy Creek	>100 km	Not recorded from KI on ALA or NVA. Common across SE Australia including Tasmania
Tasimia sp AV1 group	Yarra Creek, Grassy River	>100 km	Genus not recorded from KI on ALA or NVA. Present across SE Australia including Tasmania
Pristina unplaced	Lancaster Creek	>200 km	Not recorded from KI on ALA or NVA.

3.6 Genetic information

No genetic sampling was undertaken.

4. Information on species lists

Prior to this Bush Blitz survey effort targeting freshwater fauna on King Island has been sporadic and localised, with few taxa recorded from the island.

Freshwater Tateidae (Mollusca) identification remains incomplete, challenged by the minute size, plasticity of shell form and sexual variability in some species. Dissection is required for species-level identification, many of the Tateidae species are <3 mm in length, making dissection challenging. Taxonomic keys to species are unavailable for amphipods and nematodes, while lack of taxonomic resolution exists for many Diptera larvae, challenging identification amongst these groups. Keys for Chironomidae larvae do exist but reporting time constraints have prevented identification below sub-family.

5. Information for land managers

Despite the extensive landscape-level vegetation clearing which has occurred across King Island, the streams and wetlands support diverse freshwater communities, the composition of invertebrates differing between sites and geographic location, and each being worthy of protection.

Catchments in the southeast retain patches of intact riparian vegetation, contributing substantially to in-stream aquatic habitat and supporting more diversity in caddisfly, mayfly and dipteran taxa. Of the wetlands surveyed Lake Flannigan hosts the greatest array of mollusc fauna, some which may be new to science. However, of all the sites visited, Boggy Creek and its nearby tufa, with their mineral-rich waters, present a unique environment and are worthy of further investigation. The only downside is the continued stock access that has

the potential to further degrade this unique site, so efforts to exclude stock access would be beneficial.

6. Other significant findings

The freshwater sponge and associated spongefly taxa were recorded at two sites, however, little is known about the species from Tasmania, of which King Island is part. Sea Elephant River below the bridge on Fraser Rd supports a continuous sheet of freshwater sponge on the surfaces of the submerged rocks. The sponge hosted spongefly larvae, a group also mentioned in the Grove report. At least 2 species of spongefly larvae were detected from locations during the Bush Blitz. Prior to the Bush Blitz there were no records of spongefly from King Island. Further investigation of both the sponges and spongefly taxa is warranted.

Freshwater molluscs – The Bush Blitz survey found that freshwater mollusc diversity across King Island is not homogeneous, with potentially > 15 taxa present (compared with the 10 previously recorded), although not at a single location. Streams within Pegarah Forest were least diverse containing a single species of bivalve, while Boggy Creek and its associated tufa contained up to 4 *Austropyrgus* species, (currently undifferentiated) and Lake Flannigan hosts several other *Austropyrgus* species (sample again undifferentiated due to time constraints).

Taxonomic resolution of the *Austropyrgus* collected on this Bush Blitz remains outstanding but will far exceed the 2 species previously recorded from King Island. The diversity appears to be a combination of mainland and northwest Tasmania species, but also includes some un-named species which may be endemic to King Island.

7. Conclusions

The survey has contributed greatly to knowledge of the aquatic invertebrate fauna of King Island, increasing the lists of species, genera or families known from the island. As with the terrestrial insects, the new records represent range extensions from widespread Tamanian or mainland species, while others infill knowledge gaps of species present on both mainlands, but not previously recorded on King Island. Further review of undifferentiated taxonomic groups will increase the number of aquatic taxa recorded for this Bush Blitz and result in undescribed mollusc species being identified.

Acknowledgements

I wish to thank the Bush Blitz team and program and TMAG for allowing me to contribute to this expedition. Simon Grove identified hydrophilid and hydraenid beetles last minute, and Stephanie Clark offered expert opinion on *Austropyrgus* speciation. I also thank KI resident Lizzie Cambra for supplying the *Cherax destructor* claw and I thank my keen crayfish burrow excavators Nicole Zehntner, Matt Rose and Fiona Scott for going over and above. Thanks also to Kirrily Moore and Nicole Zehntner for technical assistance, sample processing and maintaining such an infectious, positive attitude. The teachers and students of the King Island High School deserve a big thanks for sampling Big Lake and collecting samples included in this report.

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Appendix 1. List of freshwater aquatic invertebrates recorded during the King Island Bush Blitz								
Class	**Order**	**Family**	**Species**	**Common name**	**Putative new species**	**Threatened (EPBC Act)**	**Threatened (State Act)**	**Exotic/ pest**
Arachnida	Acari		Acari undifferentiated	water mite	No	No	No	No
Bivalvia		Sphaeriidae	Bivalvia undifferentiated	pea shell, pea clam	No	No	No	No
Bivalvia		Sphaeriidae	*Pisidium etheridgei*	pea shell, pea clam	No	No	No	No
Bivalvia		Sphaeriidae	*Pisidium tasmanicum*	pea shell, pea clam	No	No	No	No
Branchipoda			Cladocera undifferentiated	water flea	No	No	No	No
Copepoda			Copepoda undifferentiated		No	No	No	No
Crustacea	Amphipoda		Amphipoda undifferentiated		No	No	No	No
Crustacea	Decapoda	Hymenosomatidae	*Amarinus lacustris*	freshwater crab	No	No	No	No
Crustacea	Isopoda	Janiridae	*Heterias* unplaced		No	No	No	No
Crustacea	Syncarida	Koonungidae	*Koonunga* unplaced		No	No	No	No
Euhirudinea			Euhirudinea undifferentiated	leech	No	No	No	No
Gastropoda	Hygrophila	Planorbidae	*Glyptophysa novahollandica*	pouched snail	No	No	No	No
Gastropoda	Hypsogastropoda	Tateidae	*Ascorhis tasmanica*		No	No	No	No
Gastropoda	Hypsogastropoda	Tateidae	*Austropyrgus* BC spp 1-4		No	No	No	No
Gastropoda	Hypsogastropoda	Tateidae	*Austropyrgus* BL sp 1		No	No	No	No
Gastropoda	Hypsogastropoda	Tateidae	*Austropyrgus* Eldorado sp 2		No	No	No	No
Gastropoda	Hypsogastropoda	Tateidae	*Austropyrgus* Eldorado sp 3		No	No	No	No
Gastropoda	Hypsogastropoda	Tateidae	*Austropyrgus goliathus*		No	No	No	No
Gastropoda	Hypsogastropoda	Tateidae	*Austropyrgus nitidus*		No	No	No	No
Gastropoda	Hypsogastropoda	Tateidae	*Austropyrgus* SE sp 1		No	No	No	No
Gastropoda	Hypsogastropoda	Tateidae	*Austropyrgus sp nr goliathus*		No	No	No	No
Gastropoda	Hypsogastropoda	Tateidae	*Austropyrgus sp nr nitidus*		No	No	No	No
Gastropoda	Hypsogastropoda	Tateidae	*Austropyrgus* undifferentiated		No	No	No	No

Class	Order	Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State Act)	Exotic/ pest
Gastropoda	Hypsogastropoda	Tateidae	*Potamopyrgus antipodarum*	NZ mudsnail	No	No	No	Yes
Gastropoda	Hypsogastropoda	Tateidae	*Tatea rufilabris*		No	No	No	No
Gastropoda	Lymnaeida	Pseudococcidae	*Ferrissia tasmanicus*	broad freahwater limpet	No	No	No	No
Gastropoda		Physidae	*Physa acuta*	bladder snail, acute bladder snail	No	No	No	No
Insecta	Coleoptera	Chrysomelidae	*Arsipoda* sp TMAG_F143147		No	No	No	No
Insecta	Coleoptera	Dytiscidae	Bidessini unplaced		No	No	No	No
Insecta	Coleoptera	Dytiscidae	Dytiscidae unplaced	diving beetle	No	No	No	No
Insecta	Coleoptera	Dytiscidae	*Gibbidessus chipi*	diving beetle	No	No	No	No
Insecta	Coleoptera	Dytiscidae	*Hyphydrus elegans*	diving beetle	No	No	No	No
Insecta	Coleoptera	Dytiscidae	*Lancetes lanceolatus*	diving beetle	No	No	No	No
Insecta	Coleoptera	Dytiscidae	*Liodessus unplaced*	diving beetle	No	No	No	No
Insecta	Coleoptera	Dytiscidae	*Megaporus hamatus*	diving beetle	No	No	No	No
Insecta	Coleoptera	Dytiscidae	*Megaporus* unplaced	diving beetle	No	No	No	No
Insecta	Coleoptera	Dytiscidae	*Necterosoma penicillatum*	diving beetle	No	No	No	No
Insecta	Coleoptera	Dytiscidae	*Rhantus suturalis*	diving beetle	No	No	No	No

Class	Order	Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State Act)	Exotic/ pest
Insecta	Coleoptera	Dytiscidae	*Sternopriscus tasmanicus*	diving beetle	No	No	No	No
Insecta	Coleoptera	Dytiscidae	*Sternopriscus wehnckei*	diving beetle	No	No	No	No
Insecta	Coleoptera	Elmidae	*Austrolimnius* unplaced		No	No	No	No
Insecta	Coleoptera	Elmidae	*Notriolus galstonius*		No	No	No	No
Insecta	Coleoptera	Elmidae	*Notriolus quadriplagiata*		No	No	No	No
Insecta	Coleoptera	Elmidae	*Notriolus simsoni*		No	No	No	No
Insecta	Coleoptera	Elmidae	*Notriolus* unplaced		No	No	No	No
Insecta	Coleoptera	Elmidae	*Notriolus victoriae*		No	No	No	No
Insecta	Coleoptera	Hydraenidae	Hydraena unplaced		No	No	No	No
Insecta	Coleoptera	Hydraenidae	*Gymnochthebius setosus*		No	No	No	No
Insecta	Coleoptera	Hydrophilidae	*Enochrus* sp TMAG_F101078		No	No	No	No
Insecta	Coleoptera	Hydrophilidae	Hydrophilidae unplaced		No	No	No	No
Insecta	Coleoptera	Hydrophilidae	*Limnoxenus zealandicus*		No	No	No	No
Insecta	Coleoptera	Hydrophilidae	*Paracymus cf pygmaeus*		No	No	No	No
Insecta	Coleoptera	Latridiidae	*Cortinicara* sp TMAG_F143395		No	No	No	No
Insecta	Coleoptera	Scirtidae	Scirtidae unplaced		No	No	No	No
Insecta	Diptera	Ceratopogonidae	Ceratopogonidae unplaced		No	No	No	No
Insecta	Diptera	Ceratopogonidae	Dasyheleinae unplaced		No	No	No	No
Insecta	Diptera	Ceratopogonidae	Forcipomyiinae unplaced		No	No	No	No
Insecta	Diptera	Chironomidae	Chironomidae undifferentiated	midge	No	No	No	No
Insecta	Diptera	Chironomidae	Chironominae undifferentiated	midge	No	No	No	No
Insecta	Diptera	Chironomidae	Chironominae unplaced	midge	No	No	No	No
Insecta	Diptera	Chironomidae	Tanypodinae undifferentiated	midge	No	No	No	No
Insecta	Diptera	Dolicopodidae	Dolichopodidae unplaced		No	No	No	No
Insecta	Diptera	Empididae	Empididae undifferentiated		No	No	No	No
Insecta	Diptera	Empididae	Empididae unplaced		No	No	No	No
Insecta	Diptera	Ephydridae	Ephydridae unplaced		No	No	No	No
Insecta	Diptera	Pscodidae	Psychodidae unplaced		No	No	No	No

Class	Order	Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State Act)	Exotic/ pest
Insecta	Diptera	Simulidae	Simuliidae undifferentiated		No	No	No	No
Insecta	Diptera	Stratiomyidae	Stratiomyidae unplaced		No	No	No	No
Insecta	Diptera	Tabanidae	Tabanidae unplaced		No	No	No	No
Insecta	Diptera	Tipulidae	Tipulidae unplaced		No	No	No	No
Insecta	Ephemeroptera	Caenidae	*Tasmanocoenis tillyardi*	mayfly	No	No	No	No
Insecta	Ephemeroptera	Leptophlebiidae	*Austrophlebioides* unplaced	mayfly	No	No	No	No
Insecta	Ephemeroptera	Leptophlebiidae	*Koorrnonga* sp AV1/sp 3	mayfly	No	No	No	No
Insecta	Ephemeroptera	Leptophlebiidae	*Nousia* sp AV6	mayfly	No	No	No	No
Insecta	Ephemeroptera	Leptophlebiidae	*Nousia* sp AV7	mayfly	No	No	No	No
Insecta	Ephemeroptera	Leptophlebiidae	*Nousia* undifferentiated	mayfly	No	No	No	No
Insecta	Ephemeroptera	Leptophlebiidae	*Ulmerophlebia* sp AV2	mayfly	No	No	No	No
Insecta	Hemiptera	Corixidae	*Sigara unplaced*		No	No	No	No
Insecta	Hemiptera	Mesovelidae	*Drepanovelia dubia*		No	No	No	No
Insecta	Hemiptera	Mesovelidae	*Nesidovelia peramoena*		No	No	No	No
Insecta	Hemiptera	Naucoridae	*Naucoris congrex*		No	No	No	No
Insecta	Hemiptera	Notonectidae	*Anisops thienemanni*		No	No	No	No
Insecta	Hemiptera	Pleidae	*Paraplea halei*		No	No	No	No
Insecta	Lepidoptera		Lepidoptera undifferentiated		No	No	No	No
Insecta	Mecoptera	Nannochoristidae	*Nannochorista* unplaced		No	No	No	No
Insecta	Neuroptera	Sisyridae	*Sisyra* unplaced		No	No	No	No
Insecta	Odonata	Aeshnidae	*Anax papuensis*	Australian emperor dragonfly	No	No	No	No
Insecta	Odonata	Coenagrionidae	*Ischnura aurora*	aurora bluetail	No	No	No	No
Insecta	Odonata	Coenagrionidae	*Ischnura heterosticta tasmanica*	Australian bluetail	No	No	No	No
Insecta	Odonata	Corduliidae	*Hemicordulia tau*	Tau emerald	No	No	No	No

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Insecta	Odonata	Lestidae	*Austrolestes annulosus*	Blue ringtail	No	No	No	No
Insecta	Plecoptera	Gripopterygidae	*Dinotoperla serricauda*	stonefly	No	No	No	No
Insecta	Plecoptera	Gripopterygidae	*Illiesoperla mayi*	stonefly	No	No	No	No
Insecta	Plecoptera	Gripopterygidae	*Riekoperla triloba triloba*	stonefly	No	No	No	No
Insecta	Plecoptera	Notonemouridae	Notonemouridae unplaced	stonefly	No	No	No	No
Insecta	Plecoptera	Notonemouridae	*Tasmanocerca bifasciata*	stonefly	No	No	No	No
Insecta	Trichoptera	Calocidae	*Alloecella grisea*	caddisfly	No	No	No	No
Insecta	Trichoptera	Calocidae	Calocidae unplaced	caddisfly	No	No	No	No
Insecta	Trichoptera	Calocidae	*Lingora aurata*	caddisfly	No	No	No	No
Insecta	Trichoptera	Conoesucidae	Conoesucidae unplaced	caddisfly	No	No	No	No
Insecta	Trichoptera	Hydrobiosidae	*Taschorema evansi*	caddisfly	No	No	No	No
Insecta	Trichoptera	Hydrobiosidae	*Taschorema* unplaced	caddisfly	No	No	No	No
Insecta	Trichoptera	Hydroptilidae	*Hellyethira simplex*	caddisfly	No	No	No	No
Insecta	Trichoptera	Hydroptilidae	*Hellyethira* unplaced	caddisfly	No	No	No	No
Insecta	Trichoptera	Leptoceridae	*Atriplectides dubius*	caddisfly	No	No	No	No
Insecta	Trichoptera	Leptoceridae	*Lectrides varians*	caddisfly	No	No	No	No
Insecta	Trichoptera	Leptoceridae	*Notalina fulva/bifaria complex*	caddisfly	No	No	No	No
Insecta	Trichoptera	Leptoceridae	*Notalina sp AV 2*	caddisfly	No	No	No	No
Insecta	Trichoptera	Leptoceridae	*Notoperata sparsa*	caddisfly	No	No	No	No
Insecta	Trichoptera	Leptoceridae	*Oecetis* unplaced	caddisfly	No	No	No	No
Insecta	Trichoptera	Leptoceridae	*Symphitoneuria* unplaced	caddisfly	No	No	No	No
Insecta	Trichoptera	Leptoceridae	*Triplectides australis*	caddisfly	No	No	No	No
Insecta	Trichoptera	Leptoceridae	*Triplectides ciuskus*	caddisfly	No	No	No	No
Insecta	Trichoptera	Leptoceridae	*Triplectides truncatus*	caddisfly	No	No	No	No
Insecta	Trichoptera	Leptoceridae	*Triplectides unplaced*	caddisfly	No	No	No	No
Insecta	Trichoptera	Leptoceridae	*Triplectidina nigricornis*	caddisfly	No	No	No	No
Insecta	Trichoptera	Plectrotarsidae	*Plectrotarsus tasmanicus*	caddisfly	No	No	No	No
Insecta	Trichoptera	Tasimiidae	*Tasimia sp AV1 group*	caddisfly	No	No	No	No
Insecta	Trichoptera	Tasimiidae	*Tasimia* unplaced	caddisfly	No	No	No	No

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Malacostraca	Decapoda	Parasticidae	*Cherax destructor*	common yabby	No	No	No	Yes
Malacostraca	Decapoda	Parasticidae	*Engaeus cunicularius*	burrowing crayfish	No	No	No	No
Malacostraca	Decapoda	Parasticidae	*Geocharax tasmanicus*	burrowing crayfish	No	No	No	No
Oligochaeta	Tubifica		Pristina unplaced		No	No	No	No
Oligochaeta			Oligochaeta undifferentiated	worm	No	No	No	No
Ostracoda			Ostracoda undifferentiated	seed shrimp	No	No	No	No