

King Island Bush Blitz
Gastropoda (terrestrial)

Oct 23-30 2023

Submitted: 28 April 2024

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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.			
Name	Institution/affiliation	Qualifications/area of expertise	Level/form of contribution
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1. Introduction

Unusually for a Tasmanian Bush Blitz, King Island is a very well surveyed area for land snails, the author having visited for seven previous trips. King Island is of interest because its fauna is much more similar to that of Victoria than mainland Tasmania, and because of the presence of *Chloritobadistes victoriae*, which is listed on the Tasmanian Threatened Species Protection Act. 24 native species had been previously recorded from the island although one of these had been identified to genus level from a single dead shell only. It was expected that nearly all of these would be re-recorded on the current survey but that there would be few if any new species recorded for the island in view of the level of previous surveying.

2. Methods

2.1 Site selection

Site selection for land snails was determined primarily by opportunities to sample suitable habitats based on the plans of other group members. One site at Colliers Swamp was chosen because it was one of the island's most potentially significant unsampled areas for snails. A previously sampled area at Fraser River was resampled in the hope of collecting live specimens of the yellow colour form of *Chloritobadistes victoriae*, known only from this area. The sites sampled were a mix of wet forest, dry woodland/scrub and coastal sites, with somewhat more emphasis on wet forest as it supports the most diversity on the island and was considered more likely to yield previously unrecorded species. A site at Granite Lagoon was intended for snail surveying but proved impractical to access in the available time because the lagoon was full.

2.2 Survey techniques

Survey methods for snails at most sites consisted of hand collecting with the main aim of surveying being to record as many species as possible, firstly for the area as a whole and secondly from each site.

Surveying at each site was free-ranging over a small area (typically 50 m or so, in cases up to 100 m) around a central point. Search times per site varied from passing searches to up to around 120 minutes, depending on the interest value of the site and logistics. Opportunistic collecting by other members of the party also produced several extra specimens.

Three sites were sampled by a mixture of hand sampling and litter sorting with a sandwich bag full of leaf litter being sorted under the microscope; in one such case (Yarra Creek) two bags of litter were sorted with one taken solely from arboreal habitats (litter collected in forks of trees, manfern crowns etc). Two sites were sampled exclusively by taking and sorting litter samples (both these sites had been ground-sampled on previous trips).

2.2.1 Methods used at standard survey sites

Areas close to both standard survey sites were surveyed by hand collection (searching litter, logs, bark and other available microhabitats) for two person-hours, with the exception of SSS1 where surveying consisted of a one-hour in-person search and a one-hour litter bag sort.

2.3 Identifying the collections

All specimens were identified by the author who is the primary living authority on the Tasmanian fauna. The vast majority of specimens were identified either in the field or at base camp, with all identifications checked by microscope on return and compared against the author's reference collection where necessary. Potentially adult specimens of *Ambigolimax* were part-dissected to attempt to identify them to species.

3. Results and Discussion

Appendix 1 lists all terrestrial Gastropoda recorded during the Bush Blitz. Collections made during this Bush Blitz will result in about 352 specimens being added to public collections and about 120 records being added to publicly accessible databases.

3.1 Un-named or not formalised taxa

All these species have been previously collected from King Island though the *Gratilaoma* tentatively identified here as *G. sp. "Knocklofty"* had previously been IDd to genus only.

Taxon	Comment
<i>Austrorhytida</i> sp. "Rafferty"	Known undescribed species common on King Island (mainly in wet forests) and also occurring in the Otways, Vic. Surprisingly only one specimen recorded during this survey.
<i>Gratilaoma</i> sp. "Knocklofty"	Very common species across Tasmania, probably also occurs in southern Victoria. Tentative identification, was previously known from only one dead juvenile shell that had not been identified to species. Found alive in this survey, including first live-collected adult which was obtained as bycatch from a stream sample by Karen Richards.
<i>Magilaoma</i> sp. "Tasmania"	Widespread Tasmanian coastal species, common on Bass Strait islands and around Tasmanian mainland.
Punctidae sp "Micro Cripps"	Very common Tasmanian wet forest species, probably also occurs in southern Victoria. This species was only confirmed from King Island for the first time in May 2023 but on this survey was recorded in all six leaf litter samples plus once by hand collecting.
<i>Flammulops</i> sp. "Gentle Annie"	Known undescribed King Island endemic charopid informally assigned to this genus. Mostly found in wet forest, occurs patchily but locally common.
<i>Scelidoropa</i> sp. "Ridges Road"	Known undescribed species common in wet forests on King Island and also known from the Otways and Rodondo Island. May not belong to this genus.
<i>Cystopelta</i> sp. "King"	Known undescribed species common on King Island, mainly in wet forest, and also widespread in the Otways, Vic.

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.

No species new to science were discovered or recognised on this survey.

Table 2. Putative new species (new to science)

Species	Comment

3.3 Exotic and pest species

Exotic snails and slugs are common on King Island because of the extent of human impact. In this survey ten species (including five slugs) were recorded; of these only *Deroceras invadens* is newly recorded for King Island.

Table 3. Exotic and pest species recorded

Exotic/pest species	Location sighted/observed	Indication of abundance	Comments
<i>Oxychilus alliarius</i>	Pegarah NR	1 only found	
<i>Ambigolimax valentianus</i>	Only confirmed to species level by dissection from Counsel Hill CA and Grassy.	Fairly common	Specimens of <i>Ambigolimax</i> not identifiable to species were collected from many sites. It is suspected that all are <i>A. valentianus</i>
<i>Limax maximus</i>	Pegarah NR, Fraser River near Naracoopa	Pegarah – 2 seen Fraser River – common	
<i>Deroceras invadens</i>	Pegarah NR, Yellow Rock River	Pegarah NR – common Yellow Rock River – 1 only	Newly recorded for King Island, probably long present and common but overlooked.
<i>Deroceras reticulatum</i>	Lake Flannigan	A few seen	
<i>Theba pisana</i>	Many coastal sites	Abundant	
<i>Cornu aspersum</i>	Yellow Rock River, Boggy Creek	Common	
<i>Candidula intersecta</i>	Big Lake	Uncommon	Unwanted Quarantine Pest status in Tasmania, but erroneously so because it was incorrectly thought to be absent from the state and is actually widespread. Status may be reviewed.
<i>Cochlicella barbara</i>	Many coastal sites	Very common	
<i>Arion intermedius</i>	Grassy River	1 only found	

3.4 Threatened species

Chloritobadistes victoriae was recorded four times on this survey, including one new site. This species occurs in southern Victoria (where it is common and secure) and King Island (where the Tasmanian population is listed as Vulnerable at state level because of past habitat loss and large-scale fire events in Lavinia Nature Reserve.) The species has large populations in the Pennys Lagoon / Lake Martha Lavinia area with generally small and localised populations scattered across the eastern half of the island. Sites at which the species was found in numbers included two sites that were affected by the 2007 fire, suggesting the species can occur in reasonable numbers 16 years after such a fire. (That said numbers at the Pennys Lagoon fire-affected site were well down on pre-fire levels).

At the site searched for standard survey site 2, six live specimens were found (three adult, one juvenile and 2 hatchlings) as well as 25 dead shells and an estimated 53 eggs. This is the largest number of eggs seen at one site in a survey for this species. Eggs occurred mostly in clusters, of which several were found.

Species	Listing status and level (EBPC, State/Territory)	Location sighted/observed	Indication of abundance
<i>Chloritobadistes victoriae</i>	Vulnerable (Tas, state)	Pennys Lagoon (2 sites)	Very common at SSS2, reduced numbers compared to pre-fire at Pennys Lagoon near carpark.
<i>Chloritobadistes victoriae</i>	Vulnerable (Tas, state)	Counsel Hill CA near Bootlace boundary	2 live 4 dead. New site in reserve with no previous records, but close to a previous record on the Bootlace property.
<i>Chloritobadistes victoriae</i>	Vulnerable (Tas, state)	Fraser River	3 dead. More difficult to find here than in 1996.

3.5 Range extensions

Minor extensions for species that are common on the island have not been included. There were no new native species records for King Island as a whole in this survey. Several records were new at specific reserve or location level.

Species	Location sighted/observed	Distance from nearest known record (km)	Comments
<i>Meredithena dandenongensis</i>	Colliers Swamp CA near Big Lake	8	Range extension, 50% increase of known Tasmanian range

<i>Succinea australis</i>	Lavinia Beach	13	Range infill, first record from large Lavinia Nature Reserve
<i>Gratilaoma</i> sp. "Knocklofty"	Fraser River	15	Second locality for this species on island, first adult specimen from island. ID tentative.

3.6 Genetic information

No specific sampling of genetic material was undertaken but live-collected material has been preserved in ethanol (mostly 75%, in some cases 100%).

4. Information on species lists

Identification of *Gratilaoma* sp. "Knocklofty" is tentative. Most specimens of *Ambigolimax* collected could not be identified to species by dissection because they were not reproductively mature. The King Island population of *Meredithena dandenongensis* has some differences with Victorian populations and may not be the same species.

5. Information for land managers

This survey found significant recovery by *Chloritobadistes victoriae* at two sites burnt in the 2007 fire. During the author's 2009 survey one juvenile specimen had been found in a recently burnt area but the present survey found several live adults in areas burnt 16 years ago, showing that the species can repopulate successfully after fires if some specimens in the area survive the fire and the forest habitat is not permanently destroyed.

6. Other significant findings

Leaf litter sampling from arboreal microhabitats at Yarra Creek was highly successful. A sandwich bag of leaf litter yielded many specimens of eight species including 18 live specimens of *Scelidoropa* sp. "Ridges Road", a species that is usually found in only small numbers in hand collecting.

7. Conclusions

In all 21 of the 24 previously recorded native species were rerecorded on this survey. Two of the species not rerecorded (*Trocholaoma parvissima* and *Gratilaoma globula*) had only been previously recorded from one location on the island, and that location was not revisited in either case during this survey. The third was *Paralaoma* sp. "Furieux" which has been recorded from several sites on the island, but is most readily found in intact scrub along rocky shorelines. The only rocky shoreline site sampled in this survey (Boggy Creek) was degraded by cattle grazing and the species was not found.

While a more serious attempt to record species unrecorded from King Island would have been possible if site selection was directed purely at land snails, the fact that no such species were recorded in this survey suggests the King Island species list is very close to completion.

As found previously, the King Island fauna includes several species that are otherwise found only in Victoria, and one endemic species with Victorian connections.

Acknowledgements

Additional specimens were provided by Simon Grove, Karen Richards and Zoe Blosch. Search assistance was also provided by Steve Barley, Freya Karkeek, Sandra McCullough, John Douglas and Kirrily Moore.

Appendix 1. List of terrestrial Gastropoda recorded during the King Island Bush Blitz						
Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State Act)	Exotic/ pest
Agriolimacidae	<i>Deroceras invadens</i>	Chestnut slug	No	No	No	Yes
Agriolimacidae	<i>Deroceras reticulatum</i>	Grey field slug	No	No	No	Yes
Arionidae	<i>Arion intermedius</i>	Hedgehog slug	No	No	No	Yes
Camaenidae	<i>Chloritobadistes victoriae</i>	Southern Hairy Red Snail	No	No	Yes	No
Charopidae	<i>Bonhamaropa tarravillensis</i>		No	No	No	No
Charopidae	<i>Flammulops</i> sp. "Gentle Annie"		No	No	No	No
Charopidae	<i>Meredithena dandenongensis</i>		No	No	No	No
Charopidae	<i>Scelidoropa officeri</i>		No	No	No	No
Charopidae	<i>Scelidoropa</i> sp. "Ridges Road"		No	No	No	No
Charopidae	<i>Scelidoropa tamarensis</i>		No	No	No	No
Cystopeltidae	<i>Cystopelta</i> sp. "King"		No	No	No	No
Helicarionidae	<i>Helicarion cuvieri</i>		No	No	No	No
Helicidae	<i>Cornu aspersum</i>	Common garden snail	No	No	No	Yes
Helicidae	<i>Theba pisana</i>	White Italian snail	No	No	No	Yes
Hygromiidae	<i>Candidula intersecta</i>	Wrinkled snail	No	No	No	Yes
Hygromiidae	<i>Prietocella barbara</i>	Small pointed snail	No	No	No	Yes
Limacidae	<i>Ambigolimax valentianus</i>	Three-band slug	No	No	No	Yes
Limacidae	<i>Limax maximus</i>	Leopard slug	No	No	No	Yes
Punctidae	<i>Gratilaoma halli</i>		No	No	No	No
Punctidae	<i>Gratilaoma</i> sp. "Knocklofty"		No	No	No	No
Punctidae	<i>Laomavix collisi</i>		No	No	No	No
Punctidae	<i>Magilaoma penolensis</i>		No	No	No	No
Punctidae	<i>Magilaoma</i> sp. "Tasmania"		No	No	No	No
Punctidae	<i>Miselaoma sinistra</i>		No	No	No	No
Punctidae	<i>Paralaoma hobarti</i>		No	No	No	No
Punctidae	<i>Paralaoma mucoides</i>		No	No	No	No
Punctidae	Punctidae sp. "Micro Cripps"		No	No	No	No
Rhytididae	<i>Austrorhytida</i> sp. "Rafferty"		No	No	No	No

Family	Species	Common name	Putative new species	Threatened (EPBC Act)	Threatened (State Act)	Exotic/ pest
Rhytididae	<i>Prolesophanta dyeri</i>		No	No	No	No
Succineidae	<i>Succinea australis</i>		No	No	No	No
Zonitidae	<i>Oxychilus alliarius</i>	Garlic snail	No	No	No	Yes