

TASMANIAN MUSEUM AND ART GALLERY'S EXPEDITION OF DISCOVERY I – THE FLORA AND FAUNA OF *WIND SONG*, LITTLE SWANPORT, TASMANIA

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(with 15 plates, two tables and an appendix)

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A flora and fauna survey was conducted at the east coast Tasmanian property *Wind Song* in 2017 as part of the Tasmanian Museum and Art Gallery's ongoing research, collection-building and nature-discovery program. The survey recorded 885 taxa, primarily from the targeted groups of vascular plants, bryophytes, lichens, butterflies, moths, beetles, snails and slugs. Several of the taxa recorded, chiefly lichens and invertebrates, are new to science or new records for Tasmania. The survey provides a benchmark for further work and serves as an indicator of the biodiversity of a former farming property on Tasmania's east coast.

Key Words: species discovery, biodiversity, Tasmania, lichens, multidisciplinary survey.

INTRODUCTION

In 2017, the Tasmanian Museum and Art Gallery (TMAG) launched its *Expeditions of Discovery* program with the aims of: building TMAG's collections of flora and fauna from under-sampled parts of Tasmania; documenting the species of plants and animals recorded; discovering new or hitherto overlooked species; and highlighting the role that baseline species-discovery research plays in understanding and managing Tasmania's remarkable biota. This initiative for TMAG was inspired by the Australian Government's *Bush Blitz* species discovery program. TMAG has been a part of the *Bush Blitz* program over many years, collaborating in surveys in remote Tasmanian locations such as the Tasmanian Wilderness World Heritage Area, Flinders Island and the Tarkine region (Bauer *et al.* 2010, Commonwealth of Australia 2012, 2014a, 2014b, 2016, 2017a, 2017b, 2017c, Byrne 2017). Together these surveys recognised some 335 putative new species. In Tasmania, multidisciplinary flora and fauna studies, such as the Lower Gordon River Scientific Surveys conducted in the late 1970s (for example Bratt 1978, Hickman & Hill 1978, Hocking *et al.* 1978, Jarman & Crowden 1978, Rose 1978; the Warra Silvicultural Systems Trial (Neyland *et al.* 2012); and the Wilderness Ecosystems Baseline Studies (Driessen *et al.* 1998)) have generated a wealth of information and specimens that have led to the documentation of new species. However, apart from past *Bush Blitz* surveys, no previous work has aimed to document both the flora and fauna so comprehensively at a particular location or, most importantly, has been backed up with a more-or-less complete collection of the voucher material that is so critical for the identification process and which underpins future research (Huber 1998, Culley 2013). With estimates suggesting that approximately 70% of Australian organisms are yet to be discovered and described (Cassis *et al.* 2016), it is only to be expected that with concerted searches

new species will continue to be found. Whilst this is not true for all groups of organisms, such as the well-documented and highly visible mammals, birds and flowering plants, it is still very much the case for lesser-known or less conspicuous groups such as lichens and invertebrates. Certainly, surveys of these organisms undertaken to date indicate that Tasmania is rich in novelties.

The *Wind Song* property on Tasmania's East Coast was chosen for the first of these expeditions as it is known to contain a diverse range of habitats, it was readily accessible from Hobart, and the project had the enthusiastic support of the landowners. Drawing on the specialist expertise of TMAG staff and associates, the survey focused on vascular plants, bryophytes, lichens, butterflies, moths, beetles, snails and slugs; other taxonomic groups were also recorded opportunistically. Here we present an inventory and discussion of the plants, lichens and animals discovered. As well as offering an insight into a biodiverse corner of Tasmania, the results serve as a benchmark for future studies in other parts of Tasmania.

MATERIALS AND METHODS

The property

Wind Song is a 220 ha former farming property, situated at Little Swanport on Tasmania's east coast (pl. 1). The property is bounded by Swanston Road along the northern margin, by Strip Road along the western margin, and by private property along most of its other boundaries. It is intersected by the intermittently flowing White Hut Creek. The property has a shallow elevation profile, with the flats along the course of White Hut Creek situated at approximately 10 m a.s.l., and the northwest corner at approximately 70 m a.s.l. Much of the wooded area is protected by a 42 ha private reserve (pl. 1).

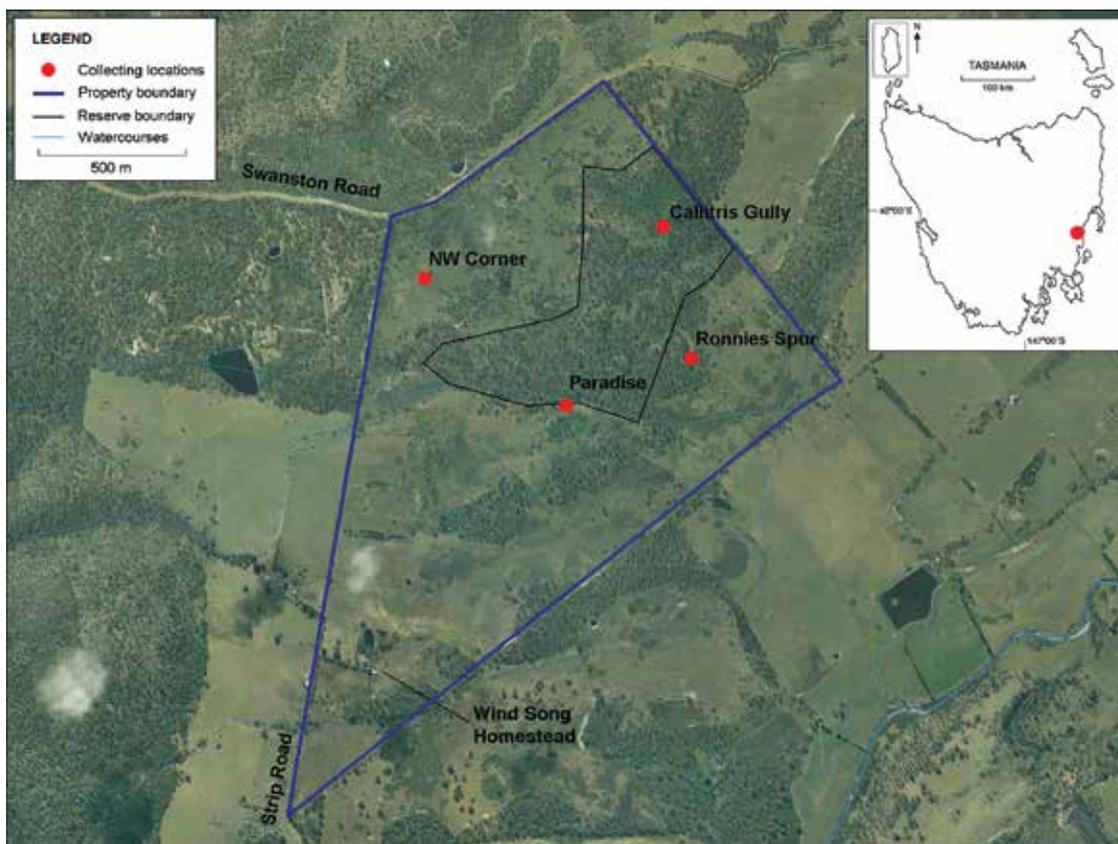


PLATE 1 – Location of *Wind Song*, Tasmania: showing main collecting locations and private reserve boundary.

Geologically, the property straddles the boundary between Triassic sandstone (with siltstone and mudstone), which underlies most of the property's surface, and Jurassic dolerite, which outcrops along the western margin (Calver *et al.* 2016). The sedimentary sequences are partly metamorphosed near the geological boundary, with patches of hornfels exposed near the northern edge of the property. Some of the northwesterly to southeasterly orientated spurs contain abundant pisolitic ironstone and represent relict Tertiary laterites.

The climate in central eastern Tasmania where the property is situated has a Köppen classification of *Cfb* (temperate, warm summer, without dry season (Peel *et al.* 2007)). Average temperatures in the nearby town of Orford fluctuate from a winter minimum of 3.5°C and maximum of 13°C in July, to a summer minimum of 12°C and maximum of 22°C in February. Rain is more common in late winter and spring, with an annual average of 668 mm (BOM 2018).

There is a history of sheep grazing and timber harvesting on the property, but these activities have largely ceased and stocking levels were greatly reduced approximately seven years ago. A small number of sheep and horses remain on a portion of the property and are used primarily for land management and recreational purposes. Occasional firewood collection continues.

Mapped vegetation types on *Wind Song* include the following: *Eucalyptus globulus* dry forest and woodland (DGL); *Eucalyptus pulchella* forest and woodland (DPO);

Peridium esculentum fernland (FPF); regenerating cleared land (FRG); and agricultural land (FAG) (Kitchener & Harris 2005).

Prior to this survey, limited data on the flora and fauna of the property were available in the form of an unpublished list (Lloyd unpublished), and via some records on the *Atlas of Living Australia* (Anonymous 2018). These data sources listed 120 vascular plant species, three invertebrates, three frogs, 34 birds and one reptile. Notable species previously recorded are the Critically Endangered Swift Parrot (*Lathamus discolor*) and the Endangered Chaostola Skipper (*Antipodia chaostola leucophaea*).

Expertise and timing

The project involved four botanists and three zoologists from TMAG staff, as well as two honorary zoologist researchers. The property was surveyed during 23–27 October 2017, with follow-up invertebrate sampling and trap-sample collection on 14 November and 12 December 2017, and further flora sampling on 7 March 2018 and 26 September 2018.

Site selection

Survey sites were selected in order to represent the major habitat types on the property. The sites were confined mostly to the de-stocked and regenerating portions. Areas with large infestations of Gorse (*Ulex europaeus*) and areas of primarily exotic pasture were largely excluded from the

survey. A summary of the main collecting areas is given in table 1 and plate 1. Surveys for lichens and bryophytes were based chiefly on detailed examination of three sites (Ronnies Spur; Callitris Gully and its margins; and NW Corner), supplemented by a cursory scan of some other parts of the property. Invertebrate specimens were collected from many locations across the property, although general insect trapping focused on Callitris Gully and the vicinity of Paradise.

TABLE 1 – Major collecting sites at *Wind Song*.

Site	Latitude	Longitude
Ronnies Spur	42°21'16.34"S	147°55'07.81"E
Callitris Gully	42°21'00.81"S	147°55'06.28"E
NW Corner	42°21'05.62"S	147°54'32.20"E
Paradise	42°21'22.2"S	147°54'39.8"E

Sampling methods

Specimens of vascular plants, bryophytes and lichens were collected and lodged in the Tasmanian Herbarium (HO), with limited duplicate specimens distributed to other herbaria nationally and internationally under TMAG's formal specimen exchange program. Several vascular plant taxa were recorded only by observation due to sampling difficulties (e.g., tall eucalypt trees) or lack of fertile material. All possible substrata for lichens and bryophytes, including rocks, soil, bark, wood and charcoal, were examined.

Moths were collected mainly by using ultraviolet light-traps. Both white sheets and bucket traps were used, but some were also collected from malaise traps (pl. 2A) set for general insect-sampling. Beetles, other insects and other arthropods were sampled through a mix of direct observation, hand collection, including the use of hand-nets and a beating-tray, and trapping, and as a by-product of light-trapping for moths; the traps employed were malaise traps, pitfall traps, trunk window traps and yellow pan traps (pl. 2 A–D). Molluscs were recorded through hand-searching and collection. Other invertebrates and vertebrates were recorded incidentally while searching for and collecting target taxa. Specimens were lodged in the TMAG Zoology collections, with some mollusc specimens temporarily retained in the private collection of Kevin Bonham.



PLATE 2 – Insect traps used at *Wind Song*. (A) malaise trap. (B) pitfall trap. (C) trunk window trap. (D) yellow pan trap.

Specimen information from all survey material accessioned into the TMAG collection will be made available on the *Australasian Virtual Herbarium* and/or the *Atlas of Living Australia* in due course.

Specimen identification

Most specimens were identified with the aid of standard laboratory equipment and techniques. Where required, the reference collection of TMAG was used to check identifications. Lichens were identified in the laboratory by examination using low- and high-magnification of hand-cut sections of the thallus (vegetative tissue) and apothecia (reproductive structures), mounted in water, 10% KOH, 50% HNO₃, lactophenol cotton blue, ammoniacal erythrosin and Lugol's iodine. Routine chemical analyses using thin-layer chromatography followed standard methods (Orange *et al.* 2010). Some moth specimens were identified using the reference collections of the Australian National Insect Collection (ANIC) (CSIRO, Canberra) and the Biosecurity Tasmania Insect Collection at the New Town Research Laboratories of the Department of Primary Industries, Parks, Water and the Environment.

Nomenclature and distribution

Vascular plant nomenclature follows de Salas & Baker (2017). Nomenclature of vegetation types and their acronyms follows *TASVEG* (Harris & Kitchener 2005). Nomenclature for mosses and liverworts is in accordance with the *Australian Moss Name Index* (ABRS 2018a), the *Checklist of Australian Liverworts & Hornworts* (McCarthy 2006) and *Tropicos* (Tropicos.org. 2018). Lichen nomenclature mainly follows McCarthy (2018). Nomenclature for land snails follows Stanisc *et al.* (2018). For all other vertebrate and invertebrate taxa identified to species, nomenclature follows the *Australian Faunal Directory* (ABRS 2018b).

Undescribed or new species of moths are annotated with a unique phrase-name such as, 'Phaos sp. 'BBTarkFish12''. If specimens can be associated with previously collected material, already-existing epithets are adopted. Insect specimens that could only be identified to a taxonomic level higher than species are annotated with 'unplaced'.

Moth distributions and rarity were determined, in part, by referring to specimens in ANIC.

RESULTS

Diversity

This survey resulted in 886 taxa being recorded from *Wind Song*. Sixty-three taxa (three butterflies, 48 vascular plants, 11 birds and one reptile) had been recorded previously from the property but were not observed during this expedition (Anonymous 2018, Lloyd unpublished). If these unvouchered records are included then the total number of taxa for *Wind Song* is 949 (table 2, appendix 1). Several

new species and new records for Tasmania, chiefly of lichens and invertebrates, were recorded and are detailed below.

One-hundred and three taxa were observed during this survey but were not collected. These taxa consisted of vertebrate fauna (40 birds, two frogs, five mammals and three reptiles), non-target invertebrates (39 taxa) and vascular plants (14 taxa).

Thirty-seven introduced species were recorded from the property. Twenty of these were vascular plants, five were birds and the remainder were invertebrate taxa referred to various groups.

Vegetation

The property comprises two broad habitat types – regenerating former pasture and woodland. Regenerating former pasture, once used for sheep grazing and largely devoid of trees, was typically associated with a ground cover of heavily grazed grasses and herbs, and dominated by sedges (including *Gabnia* spp., *Lepidosperma* spp., and *Lomandra longifolia*), copses of Silver Wattle (*Acacia dealbata* subsp. *dealbata*) and infestations of Gorse.

The following five vegetation communities occurred on the former pasture:

- dense sedgeland of *Lomandra longifolia* and *Lepidosperma* species with minor pasture grasses;
- Restionaceae- and Cyperaceae-dominated sedgeland in poorly drained areas containing species of *Lepidosperma*, *Gabnia*, *Juncus*, *Baumea*, *Tetraria* and *Schoenus* (pl. 3);
- pasture grassland comprising mostly exotic grasses (*Aira caryophylllea*, *Anthoxanthum odoratum* and *Vulpia* species) with occasional native species (*Themeda triandra*, *Poa labillardierei* and *Rytidosperma* species);
- *Leptospermum scoparium*-dominated sparse heathland;
- *Ulex europaeus*-dominated shrubland, in places forming an impenetrable thicket of almost 100% cover (pl. 4).

The remainder of the property consisted of *Eucalyptus*-dominated woodland with an understorey of low shrubs, tussock-forming monocotyledons and Silver Wattle, as well as small, discrete populations of Dogwood (*Pomaderris* spp.) and Oyster Bay Pine (*Callitris rhomboidea*).

Within the woodland, the following four main communities were recognised:

- *Eucalyptus globulus* and *E. viminalis* woodland, with an understorey of *Acacia dealbata* and *A. mearnsii*, occasional *Banksia*, *Allocasuarina* and *Leptospermum*, and a ground cover of *Lomandra longifolia* (pl. 5);
- *Acacia dealbata*- and *A. mearnsii*-dominated regenerating woodland with a sparse understorey and grass ground cover (one location supporting this habitat was called Paradise);
- *Eucalyptus globulus* gully woodland with a dense understorey of *Callitris rhomboidea* and *Pomaderris apetala*, occasional *P. elliptica* var. *diemenica*, *Bursaria spinosa* and *Dodonaea viscosa* subsp. *spathulata*, and a ground cover of *Lepidosperma* and *Lomandra* (the location supporting this habitat was named Callitris Gully) (pl. 6);

TABLE 2 – Overview of taxa recorded and collected from *Wind Song*.

Group	Total species	Total specimens	Introduced species
Vascular Plants	(190)	137	20
Dicotyledons	120	–	14
Gymnosperms	1	–	–
Monocotyledons	59	–	6
Pteridophytes	10	–	–
Bryophytes	(53)	58	–
Liverworts	13	–	–
Mosses	40	–	–
Lichens	170	212	–
Invertebrates – Lepidoptera	165	755	1
Invertebrates – Coleoptera	105	280	1
Invertebrates – Other Insects	(165)	414	2
Blattodea	4	–	–
Dermaptera	1	–	–
Diptera	60	–	–
Hemiptera	32	–	–
Hymenoptera	–	–	2
Mantodea	–	–	–
Mecoptera	–	–	–
Neuroptera	–	–	–
Odonata	2	–	–
Orthoptera	13	–	–
Phasmida	1	–	–
Invertebrates – Other Arthropods	(19)	–	4
Acari	1	–	1
Araneae	13	–	–
Chilopoda	1	–	–
Diplopoda	1	–	1
Isopoda	2	–	2
Scorpiones	1	–	–
Invertebrates – Gastropoda	15	30	4
Invertebrates – Other	(3)	–	–
Annelida	1	–	–
Platyhelminthes	2	–	–
Vertebrates	(63)	–	5
Birds	51	–	5
Frogs	3	–	–
Mammals	5	–	–
Reptiles	4	–	–
Total	949	1886	37

- *Eucalyptus globulus* and *E. viminalis* tall woodland, with a highly reduced understorey of *Allocasuarina littoralis* and *Exocarpos cupressiformis* and an extremely sparse vascular plant ground cover (the location supporting this habitat was called Ronnies Spur). Occasional plant fossils were found at this location (pl. 7).

Evidence of heavy grazing pressure from native marsupials was widespread, with many Bennetts Wallabies (*Macropus rufogriseus*) and abundant marsupial scats observed. Former pasture was dominated by tussocks of robust, fibrous and unpalatable sedges, whereas palatable herbaceous species

(e.g., *Lobelia anceps* and *Geranium* spp.) were largely restricted to the shelter inside tussocks or under the branches of fallen trees, where they were physically beyond the reach of grazing animals.

Gorse was by far the most common and widespread naturalised plant on the property and formed very large and dense infestations at several locations. Other widespread and common introduced plants included Sweet Vernal Grass (*Anthoxanthum odoratum*) and the herbaceous daisies, Cat's Ear (*Hypochaeris radicata*) and Hawkbit (*Leontodon saxatilis*).



PLATE 3 – Aerial view of a typical Restionaceae- and Cyperaceae-dominated sedgeland at *Wind Song*.



PLATE 4 – Formerly grazed pasture forming a mosaic of introduced grasses, *Ulex europaeus* (dark green shrubs), *Lomandra longifolia*, *Gahnia* and native grass tussocks and copses of *Acacia dealbata* subsp. *dealbata* and surrounded by neighbouring sheep grazing properties in the middleground.



PLATE 5 – *Eucalyptus globulus* and *E. viminalis* woodland with an understorey of *Acacia dealbata* and *A. mearnsii*, containing occasional *Banksia*, *Allocasuarina* and *Leptospermum* and an abundant ground cover of *Lomandra longifolia*.

PLATE 6 – View of Callitris Gully looking east with *Callitris rhomboidea* (conical trees) dominant on the south facing slope.



PLATE 7 – Aerial view of Ronnies Spur: *Eucalyptus globulus* and *E. viminalis* tall woodland featuring very little ground cover.



Lichens were well represented in the woodland communities, and especially in the *Callitris*-dominated gully. They were less abundant in sedgy and shrubby former pasture vegetation, with the exception of occasional clumps of species of *Cladonia*. However, large rock outcrops throughout the property, both in woodland and pasture, supported rich assemblages of lichens, chiefly crustose species or foliose members of the Parmeliaceae. In woodland communities, lichens colonised most available substrates except for the eucalypts. These tend to support very few species, except on their basal stockings of stable bark, or on old fire scars of bleached wood or charcoal. Open ground in woodland was colonised by patches of *Heterodea muelleri* (pl. 8A).

Two general habitats for bryophytes were identified: open, dry and exposed sites, where they were growing predominantly on soil and rock (e.g., Ronnies Spur); and damper habitats close to watercourses, where they grew mainly on soil, humus and rock (e.g., Callitris Gully). Conditions at *Wind Song* were generally too dry for epiphytic bryophytes. However, one species of moss, *Rhaphidorrhynchium amoenum* var. *amoenum*, was found on bark on the lower trunk of *Pomaderris* in a damp

area next to the creek at Callitris Gully. Another moss that usually grows as an epiphyte, *Zygodon intermedius*, was found on rock at the same location. The liverwort *Telaranea tasmanica* was the only Tasmanian endemic bryophyte recorded.

Fauna

Invertebrates – Lepidoptera (moths and butterflies)

The Lepidoptera fauna was generally typical of species found during spring in dry sclerophyll woodland. For example, *Phelotis cognata* was commonly collected. This species feeds on Native Cherry (*Exocarpos cupressiformis*), a common tree in dry sclerophyll forest and widespread at *Wind Song*. No Tasmanian endemic species were recorded, probably because the vegetation types of the property were largely typical of the more general southern Australian flora.

Two sites with a high species diversity, with around 70 taxa each, were in eucalypt woodland (community type 1, see *Vegetation*, above) at NW Corner and Paradise. Many species at these locations feed on *Eucalyptus* and *Acacia*, host plants which have strong affiliations with Australian Lepidoptera.

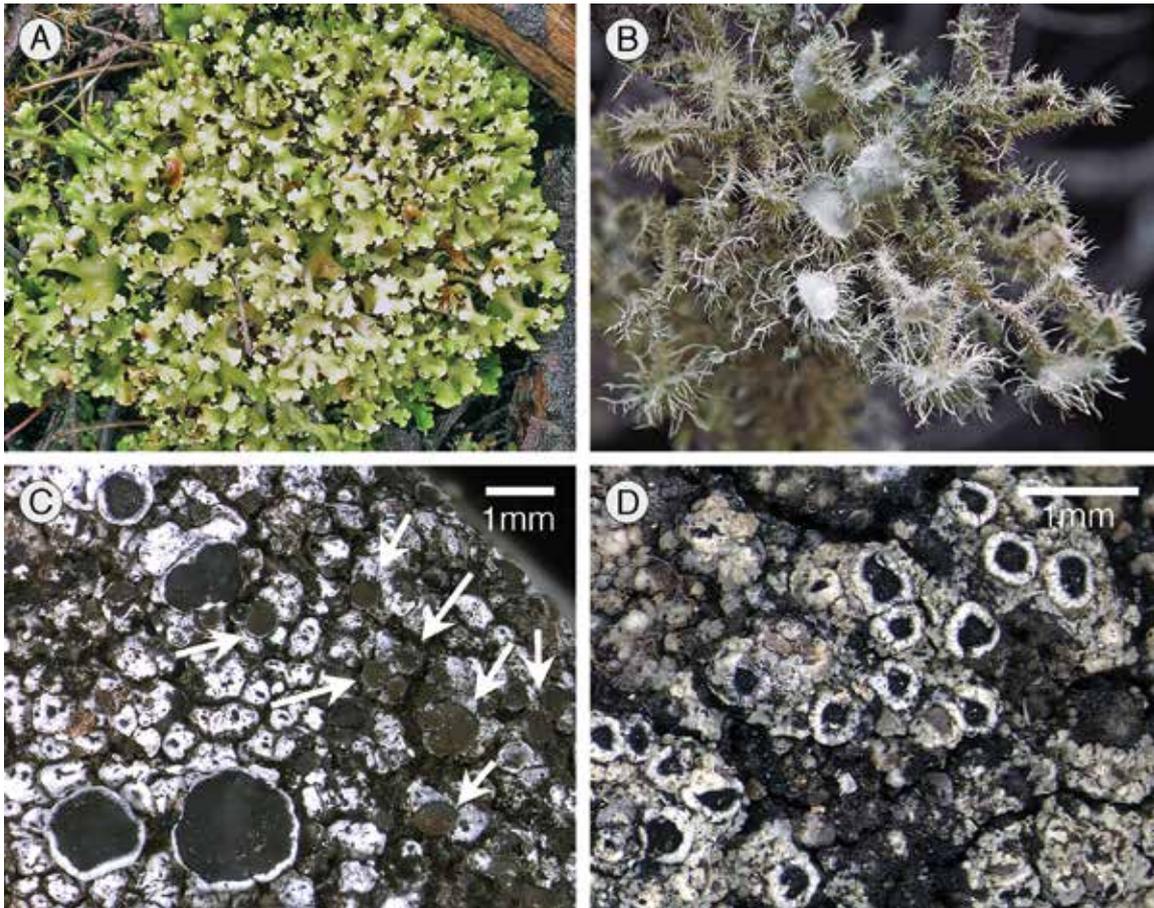


PLATE 8 – (A) *Heterodea muelleri*, a characteristic ground-dwelling lichen in dry sclerophyll woodlands with a very open understorey and ground layer. When dry, this species is difficult to spot as it appears as inconspicuous, shrivelled, brownish clumps. When moistened, its lobes unfurl to form attractive, bright green, lettuce-like growths on the forest floor. (B) *Usnea scabrata* subsp. *scabrata*, one of several species recorded for the first time for Tasmania. It grows on the twigs of Oyster Bay Pine, and is known from a few scattered locations along the East Coast. (C) *Caloplaca* sp. Seen as dull orange fruiting bodies (arrows), this remarkable find represents a species new to science. It has a unique ecology, growing as a parasite on the lichen *Tephromela atra*, seen here as the whitish thallus with large blackish apothecia with a white rim. (D) *Rinodina teniswoodiorum*, a new species discovered and described as a result of the *Wind Song* survey.

Highlights of the survey included the collection of one new species (see below under 'Novelties') and several species that are uncommon in Tasmania. The southeastern Australian micromoth *Gyphipterix cometophora*, previously known from just one specimen in Tasmania, was collected several times. Three uncommon southeastern Australian tortricid species were also collected, including *Thrinophora lignigerana* (pl. 9A). The occurrence of this species in Tasmania is otherwise only documented from Freycinet Peninsula in 1963 (ANIC). The others, *Euphonia euphonia* and *Anisogona mediana*, appear to be quite widespread in Tasmania, but have not been recorded in the state since the 1960s (ANIC), except for two records of *E. euphonia* from Bruny Island in 2016 (Byrne 2017). Collection of the undescribed crambid species *Glaucocharis* ANIC sp. 10 is noteworthy. This species is only known from collections dating from the late 1970s from Westbury (ANIC). The southeastern Australian undescribed *Philobota* sp. ANIC66 (pl. 9B) was widespread across the property. This taxon is considered widespread in Tasmania but has likewise not been collected since the 1970s (ANIC). *Lecithocera terrigena*

is one of the few members of the Lethoceridae family that occur in southern Australia. Previously it was only known from two collecting events in Tasmania (Byrne 2017), but it was collected twice from *Wind Song*. One specimen of the poorly known and uncommon *Antasia flavicapitata* was collected.

Many large flying insects appear in Tasmania as a result of being transported by strong northerly winds from mainland Australia. Two species of strong-flying moths in this category were collected during the survey. *Crioa hades* is a species of catocaline moth (underwing moths) that is not known to breed in Tasmania. The second species, *Aedia leucomelas* (eastern alchemist), is a globally ubiquitous noctuid moth. Both species are thought to be vagrants in Tasmania.

Invertebrates – Coleoptera (beetles)

Most beetle species found during this survey can be regarded as typical of dry woodland, or of associated localised habitats such as creeksides and seasonal waterbodies. Two notable leaf-beetles present on the property are the *Juncus*-associated

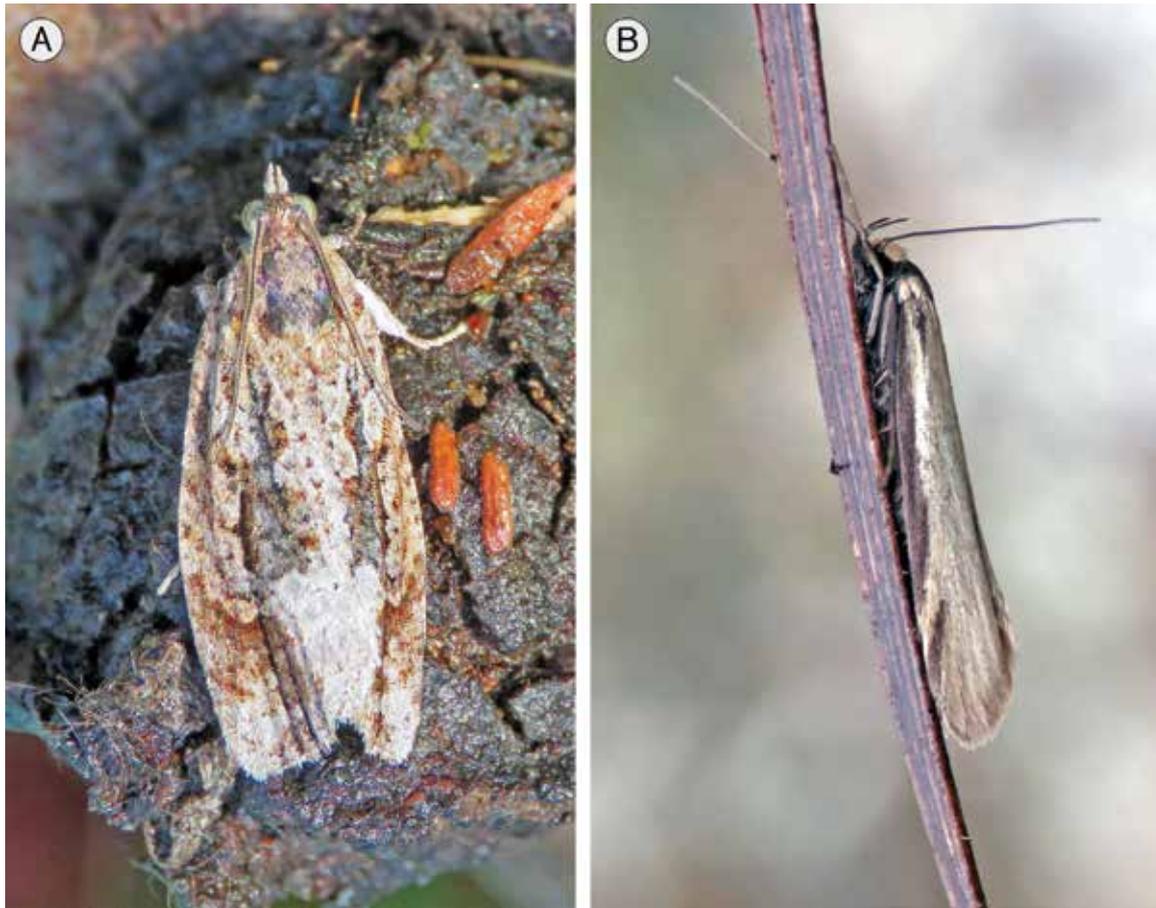


PLATE 9 – Rare species of *Lepidoptera* collected from Wind Song. (A) *Thrincochora lignigerana* (Tortricidae). (B) *Philobota* sp. ANIC 66, an undescribed species of Oecophoridae.

Euryspa albipennis (pl. 10A) and the *Acacia*-associated *Peltochema oceanica*. Several individuals of the former species were found in open pasture near a small dam close to the property's southeastern boundary on the inflorescences of their foodplant, *Juncus*. A single specimen of the latter species was swept from its foodplant, *Acacia*, in the same general area. Both species appear to be patchily distributed along the eastern seaboard of Australia but there are rather few Tasmanian records of either. One of the more common leaf-beetles on eucalypt foliage was the strikingly coloured *Paropsisterna nobilitata* (pl. 10B). The saproxylic beetle fauna, normally a significant component of woodland beetle diversity, was rather limited, presumably because of lack of available habitat. The most frequently observed species was the darkling-beetle (*Isopteron obscurum*) (pl. 10C).

Invertebrates – Other insects

Many additional invertebrates outside of the target groups were also recorded and/or collected. These include cockroaches, termites, earwigs, true flies, true bugs, ants and bees, hanging-flies, lacewings and antlions, mantises, damselflies and dragonflies, grasshoppers and crickets, and stick-insects. The saproxylic stiletto-fly species, *Agapophytus quatiens* (pl. 11A), whose larvae are thought to be predators of other insect larvae living within logs, was recorded within the reserved section of the property. The males of this species

gather in 'leks' on fallen logs, drumming their front feet as part of their display aimed at defending mating territories. Six species of bee fly were recorded in areas of woodland with extensive open ground beneath (such as Ronnies Spur). Bee fly larvae are parasitoids of other insects, particularly solitary bees and wasps. One such species, the strikingly marked *Anthrax maculatus* (pl. 11B), is saproxylic, being associated with exposed, often burnt, dead wood. The White-lined Cricket (*Trigonidium albovittata*), a species that favours lowland dry woodlands, was one of three orthopteran species found among leaf-litter (pl. 11C). The cryptically coloured groundhopper species *Paratettix argillaceus* was found among short-grazed damp grassy depressions where it is thought to graze on algae and lichens (pl. 11D).

Invertebrates – Other Arthropods

Eighteen non-insect arthropods belonging to a range of taxonomic groups were recorded from the property. These included mites, spiders, scorpions, millipedes, centipedes and slaters. The tiny ant-eating spider, *Euryopsis splendens*, was found in crevices of dry logs (pl. 12A).

Invertebrates – Gastropoda (snails and slugs)

The rather depauperate gastropod fauna, comprising eleven native and four exotic species, is consistent with the (formerly) disturbed and fragmented nature of much of the property.

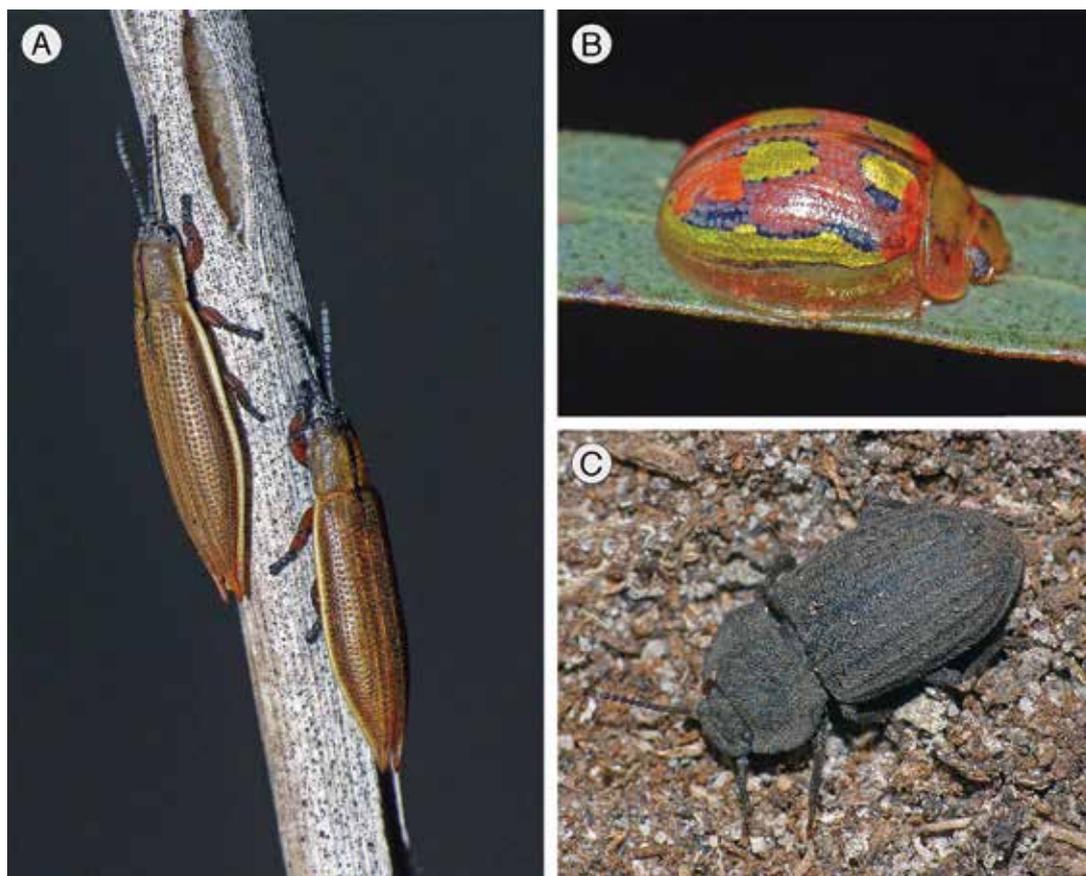


PLATE 10 – (A) The *Juncus*-associated leaf-beetle *Eurispa albipennis*. Length: 11 mm. (B) The eucalypt-associated leaf-beetle *Paropsisterna nobilitata*. (C) The saproxylic darkling-beetle *Isopteron obscurum*.

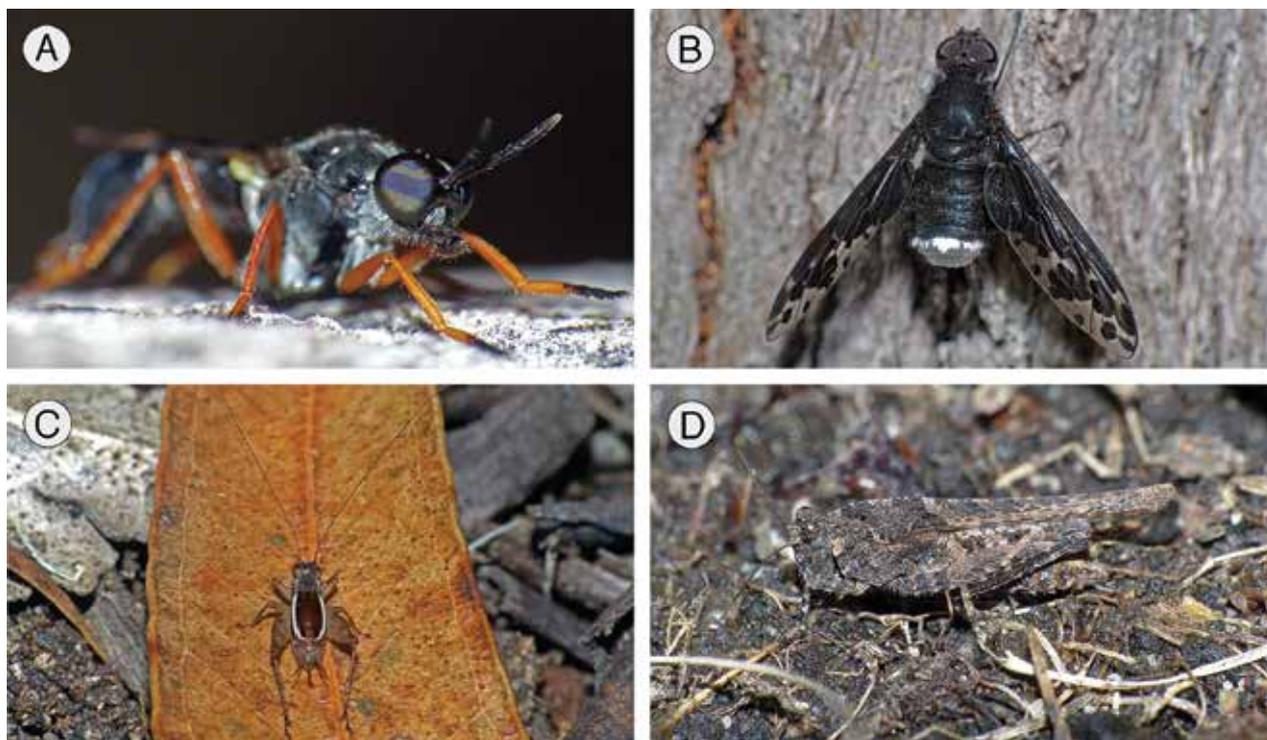


PLATE 11 – (A) The stiletto-fly *Agapophytus quatiens*. (B) The beefly *Anthrax maculatus*. (C) White-lined cricket *Trigonidium albovittata*. (D) The groundhopper *Paratettix argillaceus*.

Invertebrates – Other

Two species of terrestrial flatworm were found under rotting logs: one was provisionally identified as *Anzoplana trilineata* (pl. 12B) and the other as *Artioposthia nichollii*. Tiger Leeches (*Philaemon grandis*) were numerous in damp areas (pl. 12C).

Vertebrates

While vertebrates were not specifically targeted in this survey, many species were observed and recorded. These comprised three species of frogs, three species of lizards, five species of mammals and 40 species of birds. All three frog species had been recorded in previous surveys of the property. One species of snake and eleven species of birds had also been recorded in previous surveys but were not encountered during this survey.

Novelties

Flora

Botanical novelties were limited to the lichens, of which a significant number was recorded. These included several species new to science, two of which have been formally described: *Anisomeridium disjunctum* (McCarthy & Kantvilas 2018) and *Rinodina tenniswoodiorum* (pl. 8D) (Elix *et al.* 2019a). Further undescribed species were found in the genera *Caloplaca* (a remarkable lichenicolous species; pl. 8C), *Lecanora* and *Pertusaria*, but these

require additional research work and will be dealt with in the future.

Many lichens previously unrecorded for Tasmania (McCarthy 2018) were also collected in the course of the survey. Some proved, on further study, to have been collected previously, and resided amongst unidentified lichen specimens in the Tasmanian Herbarium, whereas others were genuine discoveries from the *Wind Song* survey. Nine such new records have been formally reported and discussed elsewhere: *Buellia inturgescens*, *B. schaereri*, *B. subadjuncta*, *B. suttonensis*, *Cyphelium trachylioides*, *Lecanora epibryon* subsp. *epibryon*, *Lepraria jackii*, *Ochrolechia africana* and *Rhizocarpon viridiatrum* (Elix *et al.* 2019b). A further ten are listed below, and additional new records that require further work for confirmation are highly likely to be found in the genera *Candelariella*, *Hertelidea*, *Schaereria*, *Schismatomma* and *Trapelia*.

Aspicilia caesiocinerea. A cosmopolitan species, collected from dolerite rocks in a dry stream bed. Classified by some authors (e.g., McCarthy 2018) in the genus *Circinaria*.

Specimen examined: Tasmania: Wind Song property, Callitris Gully, 42°21'S 147°55'E, 40 m alt., 2017, G.Kantvilas 340/17 (HO).

Bacidia stenospora. A relatively widespread epiphytic species in Tasmania, although not formally cited previously in the literature. Also known from New Zealand and Kangaroo Island, South Australia.



PLATE 12 – (A) Ant-eating spider *Euryopsis splendens*. (B) A terrestrial flatworm, provisionally identified as *Anzoplana trilineata*. (C) tiger leech *Philaemon grandis*.

Selected specimens examined: Tasmania: Chain of Lagoons river mouth, 41°40'S 148°18'E, 1973, G.C.Bratt 73/725 & J.A. Cashin (HO); southern slope of South Sister, 41°32'S 148°10'E, 640 m alt., 2004, G.Kantvilas 377/04B (HO); summit of Mt Murray, 42°28'S 147°59'E, 315 m alt., 2006, G.Kantvilas 190/06 (HO); Wind Song property, Callitris Gully, 42°21'S 147°55'E, 40 m alt., 2018, G.Kantvilas 101/18 (HO).

Caloplaca lateritia. Widely scattered and locally very common on exposed rocks in paddocks, dry sclerophyll forest and heathland, especially in low rainfall areas. Similarly widespread on the Australian mainland.

Specimens examined: Tasmania: c. 3 km E of Broadmarsh, 42°41'S 147°09'E, 60 m alt., 1993, G.Kantvilas 158/93 & J.Elix (HO); Gowan Brae, eastern side of Nive River, 42°02'S 146°25'E, 810 m alt., 2014, G.Kantvilas 124/14, 133/14 (HO); Wind Song property, northern rim of Callitris Gully, 42°21'S 147°55'E, 60 m alt., 2017, G.Kantvilas 310/17 (HO); Wind Song property, Ronnies Spur, 42°21'S 147°55'E, 30 m alt., 2017, G.Kantvilas 263/17, 268/17 (HO).

Hypocomyce tinderryensis. This species grows on eucalypt logs in dry sclerophyll forest together with the related and far more common and widespread *H. australis*. At *Wind Song* it was also found on old trunks of *Callitris rhomboidea*. Previously it was known only from mainland Australia.

Specimens examined: Tasmania: Bisdee Tier, 42°26'S 147°17'E, 640 m alt., 2009, G.Kantvilas 227/09 (HO); Wind Song property, Callitris Gully, 42°21'S 147°55'E, 40 m alt., 2018, G.Kantvilas 97/18 (CANB, HO, NY, UPS); Wind Song property, Paradise, 42°21'S 147°55'E, 30 m alt., 2018, G.Kantvilas 119/18 (HO).

Lecanora casuarinophila. Hitherto known only from mainland Australia (Lumbsch & Elix 2004) and Kangaroo Island (Kantvilas 2019), this species grows abundantly at the Wind Song property on the trunks of mature *Callitris rhomboidea*. This species may have been overlooked previously in Tasmania since apothecia occur infrequently.

Specimen examined: Tasmania: Wind Song property, Callitris Gully, 42°21'S 147°55'E, 40 m alt., 2018, G.Kantvilas 102/18 (HO).

Lecanora mobergii. Previously known from Western Australia and Kangaroo Island. This species is widespread in Tasmania on rocks in dry sclerophyll forest.

Specimens examined: Cherry Tree Hill along O Road, 41°58'S 148°08'E, 180 m alt., 2012, G.Kantvilas 330/12 (HO); Hellfire Bluff, below summit of westernmost high point, 42°44'S 147°55'E, 150 m alt., 2014, G.Kantvilas 373/14 (HO); Wind Song property, Callitris Gully, 42°21'S 147°55'E, 40 m alt., 2017, G.Kantvilas 335/17 (HO); Wind Song property, Ronnies Spur, 42°21'S 147°55'E, 30 m alt., 2017, G.Kantvilas 252/17 (HO).

Ochrolechia gyrophorica. Hitherto recorded only for mainland Australia. This species forms extensive, white, sorediate thalli on rough bark on the lower trunks of mature eucalypts. It has been collected infrequently, probably because usually it lacks fruiting bodies.

Specimens examined: Tasmania: Kellys Road, c. 1 km E of Mt Hobbs, 42°30'S 147°36'E, 520 m, 2018, G.Kantvilas 46/18 (HO); Wind Song property, Ronnies Spur, 42°21'S 147°55'E, 30 m alt., 2018, G.Kantvilas 117/18 (HO).

Ramboldia arandensis. This species is widespread on the southern Australian mainland (Elix 2009) where it grows on eucalypt wood. At *Wind Song* it was very abundant on the wood of *Callitris rhomboidea*.

Specimens examined: Tasmania: Wind Song property, Callitris Gully, 42°21'S 147°55'E, 40 m alt., 2017, G.Kantvilas 360/17, 364/17 (HO); Kellys Road, c. 1 km E of Mt Hobbs, 42°30'S 147°36'E, 520 m alt., 2018, G.Kantvilas 50/18 (HO).

Rinodia confusa. This species was previously considered endemic to South Australia. It was collected from the bark of *Callitris rhomboidea*.

Specimen examined: Tasmania: Wind Song property, Callitris Gully, 42°21'S 147°55'E, 40 m alt., 2017, G.Kantvilas 385/17 (HO).

Usnea scabrada* subsp. *scabrada. (pl. 8B) The genus *Usnea* poses many taxonomic problems in Australia and Tasmania, and the revision by Stevens (2004) did little to clarify the situation. These Tasmanian collections accord with Stevens' interpretation of *Usnea scabrada* subsp. *scabrada*, a species that lacks asexual propagules and is characterised by containing usnic acid and scabrosins. Although not recorded for Tasmania (McCarthy 2018), it has been collected several times along the East Coast in dry sclerophyll woodland and coastal scrub. Several collections are associated with *Callitris rhomboidea*, as is the collection from *Wind Song*.

Specimens examined: Tasmania: Point Meredith, 42°05'S 148°13'E, 10 m alt., 2002, G.Kantvilas 317/02 (HO); Yellow Sandbanks, Moulting Lagoon, 42°05'S 148°11'E, 2 m alt., 2004, G.Kantvilas 403/04 (HO); summit of Mt Murray, 42°28'S 147°59'E, 315 m alt., 2006, G.Kantvilas 183/06 (HO); Buxton River at the old weir, 42°15'S 147°59'E, 25 m alt., 2008, G.Kantvilas 136/08 (HO); S of Orford, 42°35'S 147°53'E, 130 m alt., 2011, G.Kantvilas 238/11 (HO); Wind Song property, Callitris Gully, 42°21'S 147°55'E, 40 m alt., 2017, G.Kantvilas 390/17 (HO).

Fauna

Many insect specimens collected remain unidentified or only partially identified (e.g., to family or genus level). It is possible that some of these represent undescribed species, but to determine this would require a significant amount of research, some with external collaborators. In addition to the three putative new taxa collected during the survey, eight species of Lepidoptera known to be undescribed were recorded.

Pateena* sp. nr *polymitarior. The specimens of this tiny jumping soil-bug (pl. 13) represent a putatively undescribed species not previously collected (Lionel Hill pers. comm.). Several specimens of this taxon were extracted from yellow pan-traps in Callitris Gully. *Pateena* species are generally associated with higher altitudes or much wetter habitats, so their presence at *Wind Song* is surprising (Lionel Hill pers. comm.).

Specimens examined: Tasmania: Wind Song property, Callitris Gully, 42°21'S 147°55'E, 40 m alt., 2017, S.J. Grove, F47315, F47316, F47317 & F47318 (TMAG).

***Agriophara* BYRNE 'Wind Song sp. 01' (Oecophoridae: Stenomatinae).** This species of moth is likely to be new to science and was recorded from only one site. The larvae of many *Agriophara* species feed between joined leaves, mostly of *Eucalyptus*.

Specimens examined: Tasmania, Wind Song property, NW sector, 42°21'15.5''S 147°54'20.9''E, 2017, C.J. Byrne, F58472 (TMAG).

***Tasmathera* sp.** This apparently undescribed species of charopid snail is the most significant mollusc species recorded. It was recorded on the basis of a single long-dead and very damaged shell, so its identity could not be confirmed. The shell has an unusually wide and deep umbilicus and does not resemble other east-coast *Tasmathera* specimens; indeed, it seems closest to *T. legrandi* (Cox, 1868) from western-shore Hobart dry forests. Charopid snails are more environmentally sensitive than other native snails overall, so this specimen may be a relict from a population that has since become extinct. Further sampling of other more intact areas nearby will be required to confirm its status as a new species.

Specimens examined: Specimens of various *Tasmathera* species in K. Bonham's private collection; not yet registered into TMAG collections.

Threatened species

No formally listed threatened species of vascular plants, bryophytes or lichens were collected from *Wind Song*, although many of the non-vascular species are considered uncommon and could well qualify for listing.

The most notable threatened species observed during the survey was the Swift Parrot (*Lathamus discolor*), a species listed as Critically Endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act* (1999) and as Endangered under the *Tasmanian Threatened Species Protection Act* (1995). Individuals were seen or heard flying overhead on several occasions; they were also heard foraging in flowering Blue Gum (*Eucalyptus globulus*) trees on the property. It might nest on the property, although higher-quality nesting habitat probably exists elsewhere in the vicinity. The Wedge-tailed Eagle (*Aquila audax*) was also observed and may well nest on the property towards the eastern edge of the main woodland block where a nest was observed. This species is listed as Endangered under both Commonwealth and Tasmanian legislation.

The butterfly species of most note at *Wind Song* is the Chaostola Skipper (*Antipodia chaostola leucophaea*) which had been recorded previously through larval searches by Dr Phil Bell (pers. comm. Jane Tenniswood). Since 2010, the species has been listed as Endangered under both Commonwealth and Tasmanian laws. Regrettably, no adults of this species were found, despite the first sampling period coinciding with the usual adult flight period; this is not atypical for populations of this species. However, the habitat appeared suitable, at least in places; the butterfly is associated with warm, open-grown but sheltered stands of *Gabnia* sedges chiefly *G. radula* (probably the larval food plant), generally on sandy soils. During the December visit, a small number of the Tasmanian Silky Hairstreak Butterfly (*Pseudalmenus chlorinda chlorinda*) (pl. 14) were found on older Silver Wattles (*Acacia dealbata*) within the main woodland block. This species is listed as Rare under the Tasmanian legislation.



PLATE 13 – The minute jumping-bug *Pateena* sp. nr. *polymitarior*. Length: 1 mm.



PLATE 14 – Tasmanian silky hairstreak butterfly *Pseudalmenus chlorinda chlorinda*.

Exotic and pest species

The introduced vascular plants recorded for *Wind Song* consisted of species common to agricultural and urban areas of Tasmania. Two species, Gorse (*Ulex europaeus*) and Creeping Thistle (*Cirsium arvense* var. *arvense*) (pl. 15A), are declared weeds under the Tasmanian *Weed Management Act* (1999). These and the other species of introduced plants recorded are likely to have originated from the previous agricultural activities conducted on the property.

Several exotic insects, snails and other invertebrates were recorded: 11-spotted Ladybird (*Coccinella undecimpunctata*), European Honeybee (*Apis mellifera*), European Wasp (*Vespa germanica*), Cabbage White Butterfly (*Pieris rapae*), Cabbage Moth (*Plutella xylostella*), Gorse Spider-mite (*Tetranychus lintearius*) (pl. 15B), Portuguese Millipede (*Ommatoiulus moreleti*), European slaters (*Armadillidium vulgare* and *Porcellio scaber*), Hedgehog Slug (*Arion intermedius*), Garden Snail (*Cornu aspersum*), Striped Field-slug (*Lehmannia nyctelia*) and Garlic Snail (*Oxychilus alliarius*). Exotic birds recorded were: European Skylark (*Alauda arvensis*), European Goldfinch (*Carduelis carduelis*), Laughing Kookaburra (*Dacelo novaeguineae novaeguineae*, introduced to Tasmania from mainland Australia), Common Starling (*Sturnus vulgaris*) and European Blackbird (*Turdus merula merula*).

Ten native moth species considered to be agricultural pests were collected during the survey: Painted Apple Moth (*Orgyia anartoides*) (pl. 15C), *Pantylia sparsa*, Cherry Looper Moth (*Chloroclystis approximata*), Twig Looper (*Ectropis excursaria*), Brown Cutworm (*Agrotis munda*), Variable Cutworm (*Agrotis porphyricollis*), Eastern Alchemist (*Aedia leucomelas*), Lightbrown Apple Moth (*Epiphyas postvittana*), *Epiphyas xyloides* and *Acropolitis rudisana*. The presence of such a high number of lepidopteran pests is most likely a result of the modified agricultural environment prevalent in this area.

DISCUSSION

Typical species

The broader characteristics of the flora (including bryophytes and lichens) and fauna of *Wind Song* were found to be consistent with past land use, where clearing, grazing, wood-cutting and frequent fires have rendered much of the site relatively species-poor and supporting only widespread, generally ecologically tolerant taxa. This applied particularly to non-wooded areas previously cleared for pasture, where the vascular flora was dominated by exotic weedy species, and unpalatable tussocks of native monocots and where 'native' constituents, for example the lichens, were restricted to outcropping boulders, small stones, and the intervening consolidated soil, or to remnant trees, stumps and wood fragments.

In general, all groups of fauna found at *Wind Song* constituted species typical of dry woodland or of associated localised habitats such as creek verges and seasonal waterbodies, such as occur widely in eastern Tasmania and south-eastern Australia. The seasonal lepidopteran fauna was typical of those species found during spring in dry sclerophyll woodland. This collection included approximately 16% of Tasmania's known lepidopteran fauna, and equates to high species diversity for this area. However, any interpretations of diversity should be tempered with caution as comparative data on similar surveys are scarce. Also, surveys such as these can only account for a fraction of the fauna because moths and butterflies are seasonal, and only some spring-flying species were captured. Furthermore, weather has a large effect on the appearance of species; most lepidopteran adults will not fly during cold and/or windy conditions, as was the case for the first three days of the survey. The rather depauperate gastropod fauna is consistent with the disturbed and fragmented nature of much of the property.



PLATE 15 – Introduced species recorded from *Wind Song*. (A) Creeping Thistle (*Cirsium arvense* subsp. *arvense*). (B) Webs of Gorse Spider-Mite (*Tetranychus lintearius*). (C) Painted Apple Moth (*Orgyia anartoides*) (Lepidoptera: Erebiidae).

Species-rich areas

Two of the areas studied during the survey were of particular interest. The first, Callitris Gully, is a corridor of standing, mature Oyster Bay Pine (*Callitris rhomboidea*) with numerous fallen logs. While Oyster Bay Pine is a widespread tree on Tasmania's East Coast, 'stands' in which this species dominates are seen far less commonly. The stand at *Wind Song* is small and degraded, but was nevertheless of sufficient size to retain an interesting complement of lichen species on the oldest trunks and on some of the fallen logs. One of the new species described, *Anisomeridium disjunctum*, was found at this locality, as were several of the species newly recorded, notably the hitherto South Australian endemic, *Rinodina confusa*, as well as *Buellia schaeveri*, *Ramboldia arandensis* and *Usnea scabrida* subsp. *scabrida*. Several of the lichens collected from this area are generally found in old-growth forest, not usually in dry sclerophyll communities. More than half of the moss species, and one third of the liverwort species, were found growing on rocks or soil in the damp conditions provided by the Gully. The tiny jumping soil-bug *Pateena* sp. nr *polymitarior* was also collected from this site. The *Callitris*-feeding geometrid moth *Corula geometroides* was also abundant at this site. This was also the main collecting locality for the following uncommon moths: *Glyphipteryx cometophora*, *Lecithocera terrigena* and *Anisogona mediana*. More than one-third of the Lepidoptera fauna was collected at this location.

The second locality of high biodiversity was the dry *Eucalyptus* woodland at Ronnies Spur. This site features outcrops of tertiary laterites that provided habitat for a surprisingly large number of ground-dwelling bryophytes and saxicolous lichens. The newly described lichen species, *Rinodina teniswoodiorum*, was collected here.

Management implications

Much of the *Wind Song* property has a history of extensive tree-clearing and grazing, and even the remnant areas retain a vegetation structure and species composition consistent with this past land-use. More recent fencing of the main blocks of woodland will have alleviated some of the grazing pressure from domestic stock; however, wallabies, occurring in high population densities within these fenced areas, have taken up much of the slack arising from de-stocking. Their abundance may be the chief reason for the relative lack of recent regeneration and recolonisation, particularly of palatable plant species. In turn, this limits the range of available feeding and nesting habitats and refugia for insects, birds (including Swift Parrot) and other animals. Historical firewood collection, involving the removal of fallen dead wood and the felling of dead or dying trees, also impacts on availability of present-day habitats. Dead wood, both on the ground and standing, is currently much sparser than would be the case in a less-impacted woodland, and this is reflected in the relatively depauperate associated fauna. The ecological recovery of these woodland blocks would be greatly aided by reducing the density of wallabies and by ceasing or limiting extraction of firewood. Further

control of Gorse – at least limitation of its spread, and, if possible, its local eradication, is also highly recommended if considered feasible.

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APPENDIX 1

Flora and fauna of *Wind Song* (Taxa marked with * were observed during the survey but not collected; i signifies a taxon that is introduced in Tasmania; e signifies a taxon that is endemic in Tasmania; \$ signifies a taxon not recorded during this survey but recorded in past surveys).

Appendix 1.1: Vascular plant taxa of *Wind Song*

PTERIDOPHYTES		\$	<i>Pauridia vaginata</i> (Schltdl.) Snijman & Kocyan var.
ADIANTACEAE			<i>vaginata</i> (Schltdl.) Snijman & Kocyan
\$	<i>Adiantum aethiopicum</i> L.		<i>Thysanotus patersonii</i> R.Br.
	<i>Cheilanthes austrotenuifolia</i> H.M.Quirk & T.C.Chambers	\$	<i>Wurmbea dioica</i> (R.Br.) F.Muell. subsp. <i>dioica</i>
ASPLENIACEAE			ORCHIDACEAE
	<i>Asplenium flabellifolium</i> Cav.		<i>Cyrtostylis reniformis</i> R.Br.
BLECHNACEAE		\$	<i>Diuris pardina</i> Lindl.
	<i>Blechnum nudum</i> (Labill.) Mett. ex Luerss.	*	<i>Diuris sulphurea</i> R.Br.
\$	<i>Blechnum wattsii</i> Tindale		<i>Eriochilus cucullatus</i> (Labill.) Rchb.f.
DENNSTAEDTIACEAE			<i>Glossodia major</i> R.Br.
	<i>Hypolepis glandulifera</i> Brownsey & Chinnock	\$	<i>Microtis parviflora</i> R.Br.
	<i>Pteridium esculentum</i> (G.Forst.) Cockayne subsp. <i>esculentum</i>		<i>Pterostylis pedunculata</i> R.Br.
GLEICHENIACEAE			<i>Pterostylis curta</i> R.Br.
	<i>Gleichenia microphylla</i> R.Br.		POACEAE
LINDSAEACEAE		i	<i>Agrostis parviflora</i> R.Br.
	<i>Lindsaea linearis</i> Sw.	i	<i>Aira caryophyllea</i> L. subsp. <i>caryophyllea</i>
SELAGINELLACEAE			<i>Anthoxanthum odoratum</i> L.
	<i>Selaginella uliginosa</i> (Labill.) Spring		<i>Austrostipa pubinodis</i> (Trin. & Rupr.) S.W.L.Jacobs & J.Everett
GYMNOSPERMS		\$i	<i>Echinopogon ovatus</i> (G.Forst.) P.Beauv.
CUPRESSACEAE		i	<i>Dactylis glomerata</i> L.
	<i>Callitris rhomboidea</i> R.Br. ex Rich. & A.Rich.		<i>Holcus lanatus</i> L.
MONOCOTYLEDONS			<i>Lachnagrostis filiformis</i> (G.Forst.) Trin.
CENTROLEPIDACEAE		i	<i>Microlaena stipoides</i> (Labill.) R.Br. var. <i>stipoides</i>
	<i>Centrolepis fascicularis</i> Labill.	\$	<i>Phalaris aquatica</i> L.
CYPERACEAE			<i>Poa labillardierei</i> Steud. var. <i>acris</i> Vickery
	<i>Baumea acuta</i> (Labill.) Palla		<i>Poa labillardierei</i> Steud. var. <i>labillardierei</i>
	<i>Baumea juncea</i> (R.Br.) Palla		<i>Poa rodwayi</i> Vickery
	<i>Baumea tetragona</i> (Labill.) S.T.Blake		<i>Rytidosperma pilosum</i> (R.Br.) Connor & Edgar
	<i>Carex breviculmis</i> R.Br.		<i>Rytidosperma racemosum</i> (R.Br.) Connor & Edgar var. <i>racemosum</i>
	<i>Gahnia radula</i> (R.Br.) Benth.	*	<i>Tetrarrhena distichophylla</i> (Labill.) R.Br.
	<i>Lepidosperma concavum</i> R.Br.		<i>Themeda triandra</i> Forssk.
	<i>Lepidosperma elatius</i> Labill.	i	<i>Vulpia bromoides</i> (L.) Gray
e	<i>Lepidosperma globosum</i> Labill.		RESTIONACEAE
	<i>Lepidosperma gunnii</i> Boeckeler		<i>Apodasmia brownii</i> (Hook.f.) B.G.Briggs & L.A.S.Johnson
e	<i>Lepidosperma inops</i> F.Muell. ex Rodway	\$	<i>Baloskion australe</i> (R.Br.) B.G.Briggs & L.A.S.Johnson
	<i>Lepidosperma laterale</i> R.Br.		<i>Empodisma minus</i> (Hook.f.) L.A.S.Johnson & D.F.Cutler
	<i>Lepidosperma longitudinale</i> Labill.	\$	<i>Hypolaena fastigiata</i> R.Br.
	<i>Schoenus apogon</i> Roem. & Schult.		<i>Leptocarpus tenax</i> (Labill.) R.Br.
	<i>Tetraria capillaris</i> (F.Muell.) J.M.Black		XANTHORRHOEACEAE
IRIDACEAE			<i>Lomandra longifolia</i> Labill.
	<i>Diplarrena moraea</i> Labill.		DICOTYLEDONS
	<i>Patersonia fragilis</i> (Labill.) Asch. & Graebn.		APIACEAE
JUNCACEAE			<i>Hydrocotyle hirta</i> R.Br. ex A.Rich.
\$	<i>Juncus gregiflorus</i> L.A.S.Johnson		ASTERACEAE
	<i>Juncus kraussii</i> Hochst. subsp. <i>australiensis</i> (Buchenau) Snogerup		<i>Brachyscome spathulata</i> Gaudich.
	<i>Juncus pallidus</i> R.Br.		<i>Cassinia aculeata</i> (Labill.) R.Br. subsp. <i>aculeata</i>
	<i>Juncus subsecundus</i> N.A.Wakef.	*	<i>Chrysocephalum apiculatum</i> (Labill.) Steetz subsp. <i>apiculatum</i>
LILIACEAE		i	<i>Cirsium arvense</i> (L.) Scop. var. <i>arvense</i>
\$	<i>Arthropodium milleflorum</i> (DC.) J.F.Macbr.	*i	<i>Cirsium vulgare</i> (Savi) Ten.
\$	<i>Dianella revoluta</i> R.Br. var. <i>revoluta</i>	\$	<i>Coronidium scorpioides</i> (Labill.) Paul G.Wilson
	<i>Hypoxis hygrometrica</i> Labill. var. <i>hygrometrica</i>	\$e	<i>Craspedia glauca</i> (Labill.) Spreng.

Appendix 1.1 cont.

- Euchiton japonicus* (Thunb.) Holub
 i *Hypochaeris radicata* L.
Lagenophora stipitata (Labill.) Druce
 i *Leontodon saxatilis* Lam.
Leptorhynchos squamatus (Labill.) Less. subsp. *squamatus*
 e *Olearia phlogopappa* (Labill.) DC. subsp. *gunniana* (DC.)
 Messina
 \$ *Olearia stellulata* (Labill.) DC.
 \$ *Senecio minimus* Poir.
 \$i *Sonchus asper* (L.) Hill
 i *Taraxacum officinale* F.H. Wigg.
 BORAGINACEAE
 \$ *Cynoglossum australe* R.Br.
 CAMPANULACEAE
Lobelia anceps L.f.
Wahlenbergia gracilis (G.Forst.) A.DC.
 CARYOPHYLLACEAE
Scleranthus biflorus (J.R.Forst. & G.Forst.) Hook.f.
 i *Spergularia marina* (L.) Griseb.
 CASUARINACEAE
Allocasuarina littoralis (Salisb.) L.A.S.Johnson
Allocasuarina verticillata (Lam.) L.A.S.Johnson
 CHENOPODIACEAE
Einadia nutans (R.Br.) A.J.Scott subsp. *nutans*
 CLUSIACEAE
Hypericum gramineum G.Forst.
 CONVOLVULACEAE
Dichondra repens J.R.Forst. & G.Forst.
 CRASSULACEAE
Crassula sieberiana (Schult. & Schult.f.) Druce
 DILLENIACEAE
 \$ *Hibbertia hirsuta* (Hook.) Benth.
Hibbertia prostrata Hook.
Hibbertia riparia (R.Br. ex DC.) Hoogland
 DROSERACEAE
Drosera auriculata Backh. ex Planch.
 \$ *Drosera peltata* Thunb.
Drosera pygmaea DC.
 EPACRIDACEAE
 \$ *Acrotiche serrulata* (Labill.) R.Br.
 * *Astroloma humifusum* (Cav.) R.Br.
 \$ *Brachyloma ciliatum* (R.Br.) Benth.
 \$ *Epacris impressa* Labill.
Epacris lanuginosa Labill.
 \$ *Leucopogon collinus* (Labill.) R.Br.
Leucopogon virgatus (Labill.) R.Br. var. *virgatus*
Lissanthe strigosa (Sm.) R.Br. subsp. *subulata* (R.Br.)
 J.M.Powell
 \$ *Styphelia adscendens* R.Br.
 EUPHORBIACEAE
 \$ *Amperea xiphoclada* (Sieber ex Spreng.) Druce var.
xiphoclada
 \$ *Beyeria viscosa* (Labill.) Miq.
Poranthera microphylla Brongn.
 FABACEAE
 \$ *Bossiaea cinerea* R.Br.
Bossiaea prostrata R.Br.
 \$ *Daviesia ulicifolia* Andrews subsp. *ulicifolia*
 \$ *Glycine clandestina* J.C.Wendl.
 \$ *Gompholobium huegelii* Benth.
Hovea heterophylla A.Cunn. ex Hook.f.
 \$ *Indigofera australis* Willd. subsp. *australis*
 \$ *Kennedia prostrata* R.Br.
Pultenaea dentata Labill.
 \$ *Pultenaea juniperina* Labill.
Pultenaea pedunculata Hook.
Sphaerolobium minus Labill.
 i *Ulex europaeus* L.
 GENTIANACEAE
 *i *Centaureum erythraea* Rafn
 i *Cicendia filiformis* (L.) Delarbré
 GERANIACEAE
Geranium potentilloides L'Hér. ex DC. var. *potentilloides*
 \$ *Geranium solanderi* Carolin
 GOODENIACEAE
Goodenia lanata R.Br.
 HALORAGACEAE
Gonocarpus micranthus Thunb. subsp. *micranthus*
Gonocarpus tetragynus Labill.
 \$ *Gonocarpus teucroides* DC.
 LINACEAE
Linum marginale A.Cunn.
 MIMOSACEAE
Acacia dealbata Link subsp. *dealbata*
Acacia mearnsii De Wild.
Acacia melanoxylon R.Br.
 e *Acacia mucronata* Willd. ex H.L.Wendl. subsp. *mucronata*
 \$ *Acacia myrtifolia* (Sm.) Willd.
 \$ *Acacia terminalis* (Salisb.) J.F.Macbr.
 \$ *Acacia verticillata* (L'Hér.) Willd. subsp. *verticillata*
 MYRTACEAE
 e *Eucalyptus amygdalina* Labill.
 * *Eucalyptus globulus* Labill. subsp. *globulus*
 * *Eucalyptus ovata* Labill. var. *ovata*
 e* *Eucalyptus pulchella* Desf.
 e *Eucalyptus viminalis* Labill. subsp. *viminalis*
Leptospermum lanigerum (Sol. ex Aiton) Sm.
Leptospermum scoparium J.R.Forst. & G.Forst.
 \$ *Melaleuca gibbosa* Labill.
 e *Melaleuca virens* Craven
 ONAGRACEAE
Epilobium billardioreanum Ser. ex DC. subsp.
billardioreanum
 OXALIDACEAE
 * *Oxalis perennans* Haw
Oxalis rubens Haw
 PITTOSPORACEAE
Bursaria spinosa Cav. subsp. *spinosa*
 \$ *Rhytidosporum procumbens* (Hook.) F.Muell.
 PLANTAGINACEAE
 i *Plantago coronopus* L. subsp. *coronopus*
Plantago varia R.Br.
 POLYGALACEAE
Comesperma volubile Labill.
 PRIMULACEAE
 i *Lysimachia arvensis* (L.) U.Manns & Anderb.
 PROTEACEAE
Banksia marginata Cav.
 e* *Lomatia tinctoria* (Labill.) R.Br.
 RANUNCULACEAE
 \$e *Clematis gentianoides* DC.
 RHAMNACEAE
Pomaderris apetala Labill. subsp. *apetala*
 e *Pomaderris elliptica* Labill. var. *diemenica* N.G.Walsh &
 Coates
 \$ *Pomaderris pilifera* N.A.Wakef. subsp. *pilifera*
 ROSACEAE
 \$ *Acaena novae-zelandiae* Kirk
Acaena ovina A.Cunn.
 \$ *Rubus parvifolius* L.

Appendix 1.1 cont.

		SCROPHULARIACEAE	
		<i>Mazus pumilio</i> R.Br.	
		*i <i>Verbascum thapsus</i> L.	
		\$ <i>Veronica calycina</i> R.Br.	
		<i>Veronica gracilis</i> R.Br.	
		STYLIDIACEAE	
		* <i>Stylidium graminifolium</i> Sw.	
		THYMELAEACEAE	
		\$ <i>Pimelea linifolia</i> Sm.	
		<i>Pimelea humilis</i> R.Br.	
		URTICACEAE	
		i <i>Urtica urens</i> L.	
		VIOLACEAE	
		<i>Viola hederacea</i> Labill. subsp. <i>hederacea</i>	
RUBIACEAE			
* <i>Coprosma quadrifida</i> (Labill.) B.L.Rob.			
<i>Galium australe</i> DC.			
<i>Galium gaudichaudii</i> DC. subsp. <i>parviflorum</i> I.Thomps.			
RUTACEAE			
<i>Zieria arborescens</i> Sims subsp. <i>arborescens</i>			
SANTALACEAE			
<i>Exocarpos cupressiformis</i> Labill.			
\$ <i>Exocarpos strictus</i> R.Br.			
<i>Leptomeria drupacea</i> (Labill.) Druce			
SAPINDACEAE			
<i>Dodonaea viscosa</i> Jacq. subsp. <i>spatulata</i> (Sm.) J.G.West			

Appendix 1.2: Bryophyte taxa of Wind Song

MOSESSES

BARTRAMIACEAE

Breutelia affinis (Hook.) Mitt.
Breutelia sp.

BRYACEAE

Bryum clavatum (Schimp.) Müll.Hal.
Bryum microrhodon Müll.Hal.
Orthodontium lineare Schwägr.
Rosulabryum billardierei (Schwägr.) J.R.Spence
Rosulabryum torquescens (De Not.) J.R.Spence

DICRANACEAE

Campylopus insititius Hook.f. & Wilson
Campylopus introflexus (Hedw.) Brid.
Campylopus torquatus Mitt.
Dicranoloma billardierei (Brid.) Paris

DITRICHACEAE

Ceratodon purpureus (Hedw.) Brid.
Eccremidium pulchellum (Hook. & Wilson) Müll.Hal.

FISSIDENTACEAE

Fissidens oblongifolius Hook.f. & Wilson
Fissidens taylorii Müll.Hal.
Fissidens tenellus Hook.f. & Wilson

FUNARIACEAE

Entosthodon subnudus (Taylor) Fife var. *gracilis* (Hook.f. & Wilson) Fife

GRIMMIACEAE

Grimmia pulvinata (Hedw.) Sm. var. *africana* (Hedw.) Hook.f. & Wilson
Grimmia trichophylla Grev.
Schistidium apocarpum (Hedw.) Bruch & Schimp.

HEDWIGIACEAE

Hedwigia ciliata (Hedw.) P.Beauv.
Hedwigidium integrifolium (P.Beauv.) Dixon

HYPNACEAE

Hypnum cupressiforme Hedw.

LEMBOPHYLLACEAE

Lembophyllum clandestinum (Hook.f. & Wilson) Lindb. ex Paris

ORTHOTRICHACEAE

Zygodon intermedius Bruch & Schimp.

POLYTRICHACEAE

Polytrichum juniperinum Hedw.

POTTIACEAE

Barbula calycina Schwägr.
Syntrichia antarctica (Hampe) R.H.Zander

Triquetrella papillata (Hook.f. & Wilson) Broth.

Triquetrella tasmanica (Broth.) Granzow

Weissia sp.

PTYCHOMITRIACEAE

Ptychomitrium acutifolium Hook.f. & Wilson
Ptychomitrium mittenii A.Jaeger

PTYCHOMNIACEAE

Ptychomnion aciculare (Brid.) Mitt.

RACOPILACEAE

Racopilum cuspidigerum (Schwägr.) Ångstr. var. *convolutaceum* (Müll.Hal.) Zanten & Dijkstra

SEMATOPHYLLACEAE

Rhaphidorrhynchium amoenum (Hedw.) M.Fleisch. var. *amoenum*

Sematophyllum jolliffii (Hook.f.) Dixon

SPHAGNACEAE

Sphagnum novozelandicum Mitt.

THUIDIACEAE

Thuidiopsis furfurosa (Hook.f. & Wilson) M.Fleisch.

Thuidiopsis sparsa (Hook.f. & Wilson) Broth.

LIVERWORTS

ANEURACEAE

Riccardia sp.

AYTONIACEAE

Asterella drummondii (Hook.f. & Taylor) R.M.Schust. ex D.G.Long

CEPHALOZIELLACEAE

Cephalozia hirta (Steph.) R.M.Schust.

FRULLANIACEAE

Frullania falciloba Taylor ex Lehm.

Frullania probosciphora Taylor

GEOCALYCEAE

Chiloscyphus novae-zelandiae (Lehm. & Lindenb.)

J.J.Engel & R.M.Schust.

Chiloscyphus perpusillus (Hook.f. & Taylor) J.J.Engel

Chiloscyphus semiteres (Lehm. & Lindenb.) Lehm. & Lindenb.

Heteroscyphus ammophilus (Colenso) R.M.Schust.

Heteroscyphus knightii (Steph.) Grolle

LEPIDOZIACEAE

Kurzia sp.

Telaranea centipes (Taylor ex Gottsche, Lindenb. & Nees)

R.M.Schust.

e *Telaranea tasmanica* (Steph.) J.J.Engel & G.L.Sm.Merrill

Appendix 1.3: Lichen taxa of *Wind Song*

- Acarospora veronensis* A.Massal.
Anisomeridium disjunctum P.M.McCarthy & Kantvilas
Arthonia sp. [HO 589535]
Aspicilia caesiocinerea (Nyl. ex Malbr.) Arnold
Austroparmelina conlabrosa (Hale) A.Crespo, Divakar & Elix
Austroparmelina labrosa (Zahlbr.) A.Crespo, Divakar & Elix
Austroparmelina pseudorelicina (Jatta) A.Crespo, Divakar & Elix
Bacidia bagliettoana (A.Massal. & De Not.) Jatta
Bacidia stenospora C. Knight
Bacidia sp. [HO 591827]
Baculifera xylophila (Malme) Marbach
Bapalmia buchananii (Stirt.) Kalb & Lücking
Bryobilimbia australis (Kantvilas & Messuti) Fryday, Printzen & Ekman
Buellia austera Elix & Kantvilas
Buellia disciformis (Fr.) Mudd.
Buellia dissa (Stirt.) Zahlbr.
Buellia homophylia (C.Knight) Zahlbr.
Buellia inturgescens Müll.Arg.
Buellia mesospora Elix & Kantvilas
Buellia reagenella Elix
Buellia procellarum A.Massal.
Buellia schaeferi De Not.
Buellia subadjuncta Elix & Kantvilas
Buellia suttonensis Elix & Knight
Buellia xanthonica (Elix) Elix
Byssoloma adpersum Malcolm & Vězda
Calicium glaucellum Ach.
Calicium victorianum (F.Wilson) Tibell subsp. *victorianum*
Caloplaca bartlettii S.Y.Kondr. & Kärnefelt
Caloplaca erythrostickta (Taylor) Zahlbr.
Caloplaca lateritia (Taylor) Zahlbr.
Caloplaca rexilsonii S.Y.Kondr. & Kärnefelt
Caloplaca wilsonii S.Y.Kondr. & Kärnefelt
Caloplaca sp. [HO 590022]
 ? *Caloplaca* sp. [HO 590079]
Candelariella sp. [HO 589624]
Candelariella vitellina (Hoffm.) Müll.Arg.
Candelariella xanthostigmoides (Müll.Arg.) R. W.Rogers
Carbonea latypizodes (Müll.Arg.) Knoph & Rambold
Carbonicola foveata (Timdal) Bendiksby & Timdal
Chrysothrix xanthina (Vain.) Kalb
Cladia aggregata (Sw.) Nyl.
Cladia schizopora (Nyl.) Nyl.
Cladonia capitellata (Hook.f. & Taylor) var. *capitellata*
Cladonia capitellata var. *squamatica* A.W.Archer
Cladonia confusa R.Sant.
Cladonia corniculata Ahti & Kashiw.
Cladonia floerkeana (Fr.) Flörke
Cladonia humilis (With.) J.R.Laundon var. *humilis*
Cladonia merochlorophaea Asahina
Cladonia neozelandica Vain. var. *wilsonii* (A.W.Archer) Kantvilas
Cladonia paeminosa A.W.Archer
Cladonia pleurota (Flörke) Schaer.
Cladonia praetermissa A.W.Archer var. *praetermissa*
Cladonia pyxidata (L.) Hoffm.
Cladonia ramulosa (With.) J.R.Laundon
Cladonia rigida (Hook.f. & Taylor) Hampe var. *rigida*
Cladonia tenerrima (Ahti) S.Hammer
Cladonia verticillata (Hoffm.) Schaer.
Cyphelium trachyloides (Nyl.) Erichsen ex Keissel.
Diploschistes sticticus (Körb.) Müll.Arg.
Flavoparmelia haysomii (C.W.Dodge) Hale
Flavoparmelia rutidota (Hook.f. & Taylor) Hale
Halecania subsquamosa (Müll.Arg.) van den Boom & H.Mayrhofer
Hertelidea sp. [HO 589588]
Hertelidea pseudobotryosa R.C.Harris, Ladd & Printzen
Heterodea muelleri (Hampe) Nyl.
Hypocatomyce australis Timdal
Hypocatomyce scalaris (Ach.) M.Choisy
Hypocatomyce tinderryensis Elix
Hypogymnia billardierei (Mont.) Filson
Hypogymnia pulverata (Nyl.) Elix
Hypotrachyna revoluta (Flörke) Hale
Lecanora casuarinophila Lumbsch
Lecanora epibryon (Ach.) Ach. subsp. *epibryon*
Lecanora epibryon subsp. *broccha* (Nyl.) Lumbsch
Lecanora farinacea Fée
Lecanora galactiniza Nyl.
Lecanora mobergiana Lumbsch & Elix
Lecanora saligna (Schrad.) Zahlbr.
Lecanora wilsonii Müll.Arg.
Lecanora sp. [HO 589520]
Lecidea atomorio C.Knight
Lecidea capensis Zahlbr.
Lecidea fuscoatrula Nyl.
Lecidea ochroleuca Pers.
Lecidella flavovirens Kantvilas & Elix
Lecidella sublapicida (C.Knight) Hertel
Lecidella xylogena (Müll.Arg.) Kantvilas & Elix
Lepraria caesioalba (de Lesd.) J.R.Laundon
Lepraria finkii (B. de Lesd.) R.C.Harris
Lepraria jackii Tønsberg
Lepraria sp. [HO 590136]
Leptogium pecten F.Wilson
Leptogium victorianum F.Wilson
Megalania grossa (Pers. ex Nyl.) Hafellner
Megalania melaloma (C.Knight) Kantvilas
Menegazzia subpertusa P.James & D.J.Galloway
Micarea cf. intersociella (Stirt.) Coppins
Micarea melaneida (Nyl.) Coppins
Monerolechia badia (Fr.) Kalb
Mycocalicium victoriae (C.Knight ex F.Wilson) Tibell
Neophyllis melacarpa (F.Wilson) F.Wilson
Ochrolechia africana Vain.
Ochrolechia blandior (Nyl.) Darb.
Ochrolechia gyrophorica (A.W.Archer) A.W.Archer & Lumbsch
Pannoparmelia angustata (Pers.) Zahlbr.
Pannoparmelia wilsonii (Räsänen) D.J.Galloway
Parapropidia leptocarpa (C.Bab. & Mitt.) Hertel & Rambold
Parmelia erumpens Kurok.
Parmeliella nigrocinctata (Mont.) Müll.Arg. *s. lat.*
Parmelinopsis afrorevoluta (Krog & Swinscow) Elix & Hale
Parmotrema perlatum (Huds.) M.Choisy
Parmotrema reticulatum (Taylor) M.Choisy
Pertusaria lophocarpa Körb.
Pertusaria pertractata Stirt.
Pertusaria sp. [HO 590069]
 ? *Pertusaria* sp. [HO 598371]
Physcia neonubila Elix
 ? *Placidium* sp. [HO 589330]
Porpidia soledizodes (Lamy) Knoph, Hertel & Rambold
Pseudocyphellaria neglecta (Müll.Arg.) H.Magn.
Psora crystallifera (Taylor) Müll.Arg.
Punctelia pseudocoralloidea (Gyeln.) Elix & Kantvilas
 “*Ramalodium*” sp. [HO 590067]
Ramboldia arandensis (Elix) Kalb, Lumbsch & Elix
Ramboldia blastidiata Kantvilas & Elix
Ramboldia brunneocarpa Kantvilas & Elix
Ramboldia laeta (Stirt.) Kalb, Lumbsch & Elix
Ramboldia petraeoides (Nyl. ex C.Bab & Mitt.) Kantvilas & Elix
Ramboldia plicatula (Müll.Arg.) Kantvilas & Elix

Appendix 1.3 cont.

Ramboldia sorediata Kalb
Ramboldia stuartii (Hampe) Kantvilas & Elix
Ramboldia subnexa (Sirt.) Kantvilas & Elix
Rhizocarpon geographicum (L.) DC.
Rhizocarpon reductum Th.Fr.
Rhizocarpon viridiatrum (Wulfen) Körb.
Rinodina asperata (Shirley) Kantvilas
Rinodina confusa H.Mayrhofer & Kantvilas
Rinodina obscura Müll.Arg.
Rinodina tenniswoodiorum Elix & Kantvilas
Rinodina thiomela (Nyl.) Müll.Arg.
Schaereria sp. [HO 594256]
Schismatomma aff. *rediuntum* (Hasse) Tehler [HO 591822, 591824]
Schismatomma occultum (C.Knight & Mitt.) Zahlbr.
Tephromela alectoronica Kalb
Tephromela atra (Huds.) Hafellner
Tephromela granularis Kantvilas
Tephromela sorediata Kalb & Elix

Trapelia glebulosa (Sm.) J.R.Laundon
Trapelia lilacea Kantvilas & Elix
Trapelia sp. [HO 589519]
Trapeliopsis flexuosa (Fr.) Coppins & P.James
Trapeliopsis granulosa (Hoffm.) Lumbsch
Usnea cornuta Körb.
Usnea rubrotincta Stirt.
Usnea scabrida Taylor subsp. *scabrida*
Verrucaria tasmanica P.M.McCarthy
Xanthoparmelia amplexula (Stirt.) Elix & J.Johnst.
Xanthoparmelia digitiformis (Elix & P.Armstr.) Filson
Xanthoparmelia elixii Filson
Xanthoparmelia flavescens Gyeln. (D.J.Galloway)
Xanthoparmelia microcephala Elix & Kantvilas
Xanthoparmelia mougeotina (Nyl.) D.J.Galloway
Xanthoparmelia neotinctina (Elix & J.Johnst.)
Xanthoparmelia scabrosa (Taylor) Hale
Xanthoparmelia segregata Elix & J.Johnst.
Xanthoparmelia subprolixa (Nyl. ex Kremp.) O.Blanco *et al.*
Xanthoparmelia tasmanica (Hook.f. & Taylor) Hale
Xanthoparmelia verrucella (Essl.) O.Blanco *et al.*

Appendix 1.4: Invertebrate taxa of Wind Song

ARTHROPODS

BLATTODEA (COCKROACHES AND TERMITES)

BLABERIDAE (COCKROACHES)

Calolampira unplaced

BLATTIDAE (COCKROACHES)

Platyzosteria melanaria (Erichson, 1842)

ECTOBIIDAE (COCKROACHES)

Ectobiidae unplaced

TERMITOIDAE (TERMITES)

Termitoidae unplaced

COLEOPTERA (BEETLES)

ADERIDAE (ANT-LIKE LEAF-BEETLES)

Aderidae unplaced

BELIDAE (BELID WEEVILS)

Rhinotia bimaculata (Pascoe, 1871)

Rhinotia haemoptera Kirby, 1819

BUPRESTIDAE (JEWEL-BEETLES)

Agrilus assimilis australis Thomson, 1879

CANTHARIDAE (SOLDIER-BEETLES)

Chauliognathus lugubris (Fabricius, 1801)

Chauliognathus tricolor (Castelnau, 1840)

Heteromastix unplaced

CARABIDAE (GROUND-BEETLES)

Adelotopus unplaced

Agonocheila unplaced

Anomotarus illawarrae (Macleay, 1873)

Hypharpax peronii (Castelnau, 1867)

Notiobia quadricollis (Chaudoir, 1878)

Sarothrocrepis unplaced

Scopodes unplaced

CERAMBYCIDAE (LONGHORN-BEETLES)

Ancita crocogaster (Boisduval, 1835)

Bethelium diversicorne (White, 1846)

Cerambycidae unplaced

Stenoderus concolor W.S. Macleay, 1826

Tessaromma undatum Newman, 1840

CHRYSOMELIDAE (LEAF-BEETLES)

Arsipoda TFIC sp. 02

Cadmus crucicollis (Boisduval, 1835)

Ditropidus subaeneus Chapuis, 1875

Eboo viridula (Erichson, 1842)

Eurispia albipennis (Germar, 1848)

Monolepta cribriceps Lea, 1923

Monolepta unplaced

Paropsisterna nobilitata (Erichson, 1842)

Peltochema De Little sp.3

Peltochema hamadryas (Stål, 1860)

Peltochema oceanica (Boisduval, 1835)

Peltochema orphana (Erichson, 1842)

CLERIDAE (CHECKERED-BEETLES)

Blackburniella hilaris (Westwood, 1849)

Eleale aspera Newman, 1841

Eunatalis porcata (Fabricius, 1787)

Lemidia cicatricosa Lea, 1907

Lemidia nitens (Newman, 1841)

Lemidia subaenea Gorham, 1877

Pylus bicinctus (Newman, 1842)

COCCINELLIDAE (LADYBIRDS)

Coccinella transversalis Fabricius, 1781

i *Coccinella undecimpunctata* Linnaeus, 1758

Harmonia conformis (Boisduval, 1835)

Rhyzobius TFIC sp. 09

Rhyzobius unplaced

CORYLOPHIDAE (MINUTE HOODED-BEETLES)

Corylophidae unplaced

CRYPTOPHAGIDAE (SILKEN FUNGUS-BEETLES)

Cryptophagidae unplaced

CURCULIONIDAE (WEEVILS)

Curculionidae unplaced

Gonipterus scutellatus Gyllenhal, 1833

Gonipterus unplaced

Melaemosaccus ocularis (Pascoe, 1873)

Merimnetes oblongus (Blanchard, 1853)

Orthorhinus klugii Boheman, 1835

Poropterus TFIC sp. 04

Scotasmus carinirostris Boheman, 1842

Scotasmus litoralis (Lea, 1911)

ELATERIDAE (CLICK-BEETLES)

Agrypnus impressicollis (Elston, 1924)

Agrypnus pictipennis (Candèze, 1857)

Conoderus basalis (Gyllenhal, 1817)

Conoderus erubescens (Candèze, 1859)

Conoderus unplaced

Elateridae unplaced TFIC sp. 10

Elateridae unplaced

Appendix 1.4 cont.

- EROTYLIDAE (PLEASING FUNGUS-BEETLES)
Thallis vinula Erichson, 1842
- LATRIDIIDAE (MINUTE BROWN SCAVENGER-BEETLES)
Corticariinae unplaced
- LEIODIDAE (ROUND FUNGUS-BEETLES)
Zeadolopus unplaced
- MELANDRYIDAE (FALSE DARKLING-BEETLES)
Orchesia minuta Lea, 1908
Orchesia TFIC sp. 01
- MORDELLIDAE (PINTAILED BEETLES)
Hoshihananomia leucosticta (Germar, 1848)
Mordella TFIC sp. 04
Mordellidae unplaced TFIC sp. 04
Mordellidae unplaced
- NITIDULIDAE (SAP-BEETLES)
Carpophilus TFIC sp. 02
- OEDEMERIDAE (FALSE BLISTER-BEETLES)
Dobrnia miranda Newman, 1851
- PHALACRIDAE (SHINING FLOWER-BEETLES)
Phalacridae unplaced TFIC sp. 05
Phalacridae unplaced
Phalacrus uniformis (Blackburn, 1891)
- PTINIDAE (DEATHWATCH-BEETLES)
Deltocryptus unplaced
Lasioderma serricornis (Fabricius, 1792)
Ptinus exulans Erichson, 1842
Ptinidae unplaced
- SALPINGIDAE (NARROW-WAISTED BARK-BEETLES)
Neosalpingus hybridus (Erichson, 1842)
- SCARABAEIDAE (SCARAB-BEETLES)
Automolius depressus (Blanchard, 1850)
Diphucephala colaspoides (Gyllenhal, 1817)
Heteronyx hirtuosus Blackburn, 1890
Heteronyx unplaced
Liparetrus convexus Boisduval, 1835
Onthophagus australis Guérin-Méneville, 1838
Onthophagus fuliginosus Erichson, 1842
Onthophagus pronus Erichson, 1842
- SCRAPTIIDAE (FALSE FLOWER-BEETLES)
Scraptiidae unplaced
- SILPHIDAE (CARRION-BEETLES)
Ptomaphila lacrymosa (Schreibers, 1802)
- STAPHYLINIDAE (ROVE-BEETLES)
Aleocharinae unplaced
Oxytelinae unplaced
Paederus unplaced
Phloeocharinae unplaced
Pselaphinae unplaced
Tachyporinae unplaced
- TENEBRIONIDAE (DARKLING-BEETLES)
Adelium brevicorne Blessig, 1861
Atoichus bicolor (Blackburn, 1893)
Coripera deplanata (Boisduval, 1835)
Isopteron obscurum (Erichson, 1842)
Lepispilus sulcicollis (Boisduval, 1835)
Meneristes australis (Boisduval, 1835)
Pemanoa tasmanica (Carter, 1915)
- THROSCIDAE (FALSE CLICK-BEETLES)
Aulonothroscus elongatus (Bonvouloir, 1859)
- TROGOSITIDAE (BARK-GNAWING BEETLES)
Leperina decorata (Erichson, 1842)

DERMAPTERA (EARWIGS)

LABIDURIDAE

- Labidura riparia*
- (Pallas, 1773)

DIPTERA (TRUE FLIES)

ACROCERIDAE (SPIDER-FLIES)

- Ogcodes flavescens*
- White, 1914

ASILIDAE (ROBBERFLIES)

- Cabasa pulchella*
- (Macquart, 1846)
-
- Cerdistus*
- unplaced
-
- Daptolestes limbipennis*
- (Macquart, 1846)
-
- Laphria rufifemorata*
- Macquart, 1846
-
- Leptogaster*
- unplaced
-
- Neoscleropogon*
- unplaced
-
- Zosteria alcetas*
- (Walker, 1849)

BOMBYLIIDAE (BEEFLIES)

- Aleucosia atherix*
- (Newman, 1841)
-
- Anthrax maculatus*
- Macquart, 1846
-
- Docidomyia puellaris*
- White, 1916
-
- Exechohypopion*
- unplaced
-
- Staurostichus*
- unplaced
-
- Villa fuscicostata*
- (Macquart, 1846)

CALLIPHORIDAE (BLOWFLIES)

- Calliphora stygia*
- (Fabricius, 1782)
-
- Calliphora*
- unplaced
-
- Calliphorinae unplaced

CHLOROPIDAE (FRIT-FLIES)

- Gaurax*
- unplaced

DITOMYIIDAE (DITOMYIID FUNGUS-GNATS)

- Ditomyiidae unplaced

DOLICHOPODIDAE (LONG-LEGGED FLIES)

- Heteropsilopus cingulipes*
- (Walker, 1835)
-
- Heteropsilopus ingenuus*
- (Erichson, 1842)
-
- Medetera*
- unplaced
-
- Narabeenia spinipes*
- Bickel, 1994
-
- Dolichopodidae unplaced

DROSOPHILIDAE (VINEGAR-FLIES)

- Drosophilidae unplaced

HYBOTIDAE (DANCE-FLIES)

- Hybotidae unplaced

EPHYDRIDAE (SHORE-FLIES)

- Ephydridae unplaced

FANNIIDAE (LESSER HOUSEFLIES)

- Fanniidae unplaced

KEROPLATIDAE (KEROPLATID FUNGUS-GNATS)

- Keroplatidae unplaced

LAUXANIIDAE (LAUXANIID FLIES)

- Lauxaniidae unplaced

LIMONIIDAE (LIMONIID CRANEFLIES)

- Gynoplistia*
- unplaced

MUSCIDAE (HOUSEFLIES)

- Helina*
- unplaced
-
- Pygophora apicalis*
- Schiner, 1868
-
- Muscidae unplaced

NEMESTRINIDAE (TANGLE-VEINED FLIES)

- *
- Trichophthalma*
- unplaced

PIPUNCULIDAE (BIG-HEADED FLIES)

- Pipunculidae unplaced

PLATYSTOMATIDAE (SIGNAL-FLIES)

- Duomyia decora*
- (Macquart, 1846)
-
- Rivellia*
- unplaced

RHAGIONIDAE (SNIPE-FLIES)

- Atherimorpha vernalis*
- White, 1914
-
- Rhagionidae unplaced

SARCOPHAGIDAE (FLESH-FLIES)

- Metopia nudibasis*
- (Malloch, 1930)

STRATIOMYIDAE (SOLDIER-FLIES)

- Boreoides tasmanensis*
- Bezzi, 1922
-
- Lecomymia caerulea*
- (White, 1914)
-
- Odontomyia*
- unplaced

Appendix 1.4 cont.

SYRPHIDAE (HOVERFLIES)

- Eumerus argyrogaster* Ferguson, 1926
Eumerus latipes Macquart, 1846
Melangyna viridiceps (Macquart, 1847)
Psilota unplaced

TABANIDAE (MARCH-FLIES)

- Dasybasis* unplaced

TACHINIDAE (BRISTLE-FLIES)

- Chaetophthalmus similis* (Walker, 1853)
Heterometopia argentea Macquart, 1846
Rutilia unplaced
Senostoma unplaced
Trigonospila unplaced
Tachinidae unplaced

THEREVIDAE (STILETTO-FLIES)

- Agapophytus quatiens* (White, 1916)
Anabarhynchus unplaced
Ectinorhynchus unplaced

TIPULIDAE (TIPULID CRANE-FLIES)

- Tipulidae unplaced

HEMIPTERA (TRUE BUGS)

ALYDIDAE (BROAD-HEADED BUGS)

- Mutusca brevicornis* (Dallas, 1852)

CICADELLIDAE (CICADELLID LEAFHOPPERS)

- Deltocephalinae unplaced
Ledromorpha planirostris (Donovan, 1805)
Penthimiini unplaced
Putoniessa nigra (Walker, 1862)
Rhotidus teliformis (Walker, 1851)
Tartessinae unplaced
Cicadellidae unplaced

CICADIDAE (CICADAS)

- Diemeniana euronotiana* (Kirkaldy, 1909)

CIXIIDAE (CIXIID LEAFHOPPERS)

- Cixiinae unplaced

CLASTOPTERIDAE (CLASTOPTERID LEAFHOPPERS)

- Pectinariophyes stalii* (Spångberg, 1878)

CYDNIDAE (BURROWING-BUGS)

- Adrisa atra* (Dallas, 1851)

FLATIDAE (FLATID LEAFHOPPERS)

- Siphanta tasmanica* Fletcher, 1985
Siphanta cf. *hebes* (Walker, 1851)

MIRIDAE (MIRID PLANT-BUGS)

- Deraeocoris* unplaced
Pseudopantilius australis (Walker, 1873)
Miridae unplaced

OCHTERIDAE (SHORE-BUGS)

- Ochterus* unplaced

PENTATOMIDAE (STINK-BUGS)

- Dictyotus caenosus* (Westwood, 1837)
Diemenia rubromarginata (Guérin, 1831)
Omyta centrolineata (Westwood, 1837)
Pentatomidae unplaced

PIESMATIDAE (ASH-GREY LEAF-BUGS)

- Mcateella* unplaced

PSYLLIDAE (PSYLLID BUGS)

- Psyllidae unplaced

REDUVIIDAE (ASSASSIN-BUGS)

- Coranus trabeatus* Horváth, 1902
Empicoris rubromaculatus (Blackburn, 1889)
Gminatus australis (Erichson, 1842)
Peirates fuliginosus (Erichson, 1842)
Peirates unplaced

* *Ptilocnemus* unplaced

RHYPAROCHEMIDAE (DIRT-COLOURED SEED-BUGS)

- Euander lacertosus* (Erichson, 1842)

SCHIZOPTERIDAE (JUMPING SOIL-BUGS)

- Pateena* sp. nr *polymitarior* Hill, 1980

HYMENOPTERA (ANTS, BEES AND WASPS)

AMPULICIDAE (COCKROACH-WASPS)

- Ampulicidae unplaced

APIDAE (HONEYBEES AND ALLIES)

- i *Apis mellifera* Linnaeus, 1758
Exoneura bicolor Smith, 1854

BETHYLIDAE (BETHYLID WASPS)

- Bethylidae unplaced

BRACONIDAE (BRACONID WASPS)

- Braconinae unplaced
Braconidae unplaced

CHRYSIDIDAE (CUCKOO-WASPS)

- Chrysidinae unplaced
Chrysididae unplaced

COLLETIDAE (PLASTERER-BEES)

- Hylaeus perhumilis* (Cockerell, 1914)

CRABRONIDAE (CRABRONID WASPS)

- Bembix furcata* Erichson, 1842
Crabroninae unplaced
Pison unplaced
Podagritus unplaced

- Sphodrotes* unplaced

- Tachysphex* unplaced

- Crabronidae unplaced

EVANIIDAE (HATCHET-WASPS)

- Evaniidae unplaced

FORMICIDAE (ANTS)

- * *Amblyopone australis* Erichson, 1842
Anonychomyrma biconvexa (Santschi, 1928)
Anonychomyrma nitidiceps (E. André, 1896)
* *Camponotus consobrinus* (Erichson, 1842)
Camponotus hartogi Forel, 1902
Camponotus unplaced
Hypoconerina unplaced
Myrmecia forficata (Fabricius, 1787)
Myrmecia pilosula Smith, 1858
Pheidole unplaced
Polyrhachis unplaced
Rhytidoponera tasmaniensis Emery, 1898

- Formicidae unplaced

GASTERUPTIIDAE (GASTERUPTIID WASPS)

- Gasteruptiidae unplaced

ICHNEUMONIDAE (ICHNEUMON-WASPS)

- Echthromorpha intricatoria* (Fabricius, 1804)
Hyposoter unplaced
Ichneumon promissorius (Erichson, 1842)

- Netelia* unplaced

- Ophioninae unplaced

- Ichneumonidae unplaced

MUTILLIDAE (VELVET-ANTS)

- Odontomyrme cordatiformis* Lelej, 1983

POMPILIDAE (SPIDER-HUNTING WASPS)

- Turneromyia*
Ageniellini unplaced
Ctenostegus unplaced
Pompilidae unplaced

SPHECIDAE (THREAD-WAISTED WASPS)

- Prionyx* unplaced

TIPHIIDAE (FLOWER-WASPS)

- Diamma bicolor* Westwood, 1835
Tachynomyia abdominalis (Guérin-Ménéville, 1842)
Thynnoides mesopleuralis Turner, 1912

VESPIDAE (POTTER-WASPS AND SOCIAL WASPS)

- Australozethus tasmaniensis* Giordani Soika, 1969

Appendix 1.4 cont.

- Paralastor* unplaced
 i *Vespula germanica* (Fabricius, 1793)
- LEPIDOPTERA (MOTHS AND BUTTERFLIES)**
ANTHELIDAE (AUSTRALIAN LAPPET MOTHS)
Anthela cnecias Turner, 1921
Anthela repleta (Walker, 1855)
CARPOSINIDAE (FRUITWORM MOTHS)
 Carposinidae unplaced
COSMOPTERIGIDAE (COSMET MOTHS)
 Cosmopterigidae unplaced
Limnaecia unplaced
Macrobathra sp. Flinders CB10
Macrobathra unplaced
CRAMBIDAE (GRASS MOTHS)
 Crambidae unplaced
Eudonia cleodoralis (Walker, 1859)
Eudonia unplaced
Glaucocharis ANIC sp. 10
Nacoleia rhoealis (Walker, 1859)
Parapoinx euryscia (Meyrick, 1885)
Ptochostola microphaeellus (Walker, 1866)
Scoparia exhibitilis Walker, 1866
Scoparia plagiotis Meyrick, 1887
ELACHISTIDAE (GRASS-MINER MOTHS)
 Elachistidae unplaced
EREBIDAE
Crioa hades (Lower, 1903)
Halone sejuncta (R. Felder & Rogenhofer, 1875)
Orgyia anartoides (Walker, 1855)
Pantylidia sparsa Guenée, 1852
Philenora spectalella (Walker, 1864)
Praxis edwardsii Guenée, 1852
Praxis porphyretica Guenée, 1852
Rhapsa suscitatalis (Walker, 1859)
Sandava scitissignata (Walker, 1862)
Spilosoma glatignyi (Le Guillou, 1841)
Thallarcha jocularis (Rosenstock, 1885)
Trigonistis asthenopa Meyrick, 1902
GELECHIIDAE (TWIRLER MOTHS)
Anarsia unplaced
GEOMETRIDAE (LOOPERS, INCHWORMS)
Anachloris uncinata (Guenée, 1857)
Antasia flavicapitata (Guenée, 1857)
Arhodia lasiocamparia Guenée, 1858
Capusa senilis Walker, 1857
Casbia farinalis (Rosenstock, 1885)
Casbia melanops Rosenstock, 1885
Chloroclystis approximata (Walker, 1869)
Chloroclystis filata (Guenée, 1858)
Chlorocoma dichloraria (Guenée, 1857)
Chlorocoma externa (Walker, 1861)
Chlorocoma vertumnaria (Guenée, 1857)
Chrysolarentia leptophrica (Turner, 1922)
Circopetes obtusata (Walker, 1860)
Corula geometroides Walker, 1856
Crypsiphona oculartaria (Donovan, 1805)
Cyneoterpna wilsoni (Felder & Rogenhofer, 1875)
Dichromodes confluaria (Guenée, 1857)
Dichromodes stilbiata (Guenée, 1857)
Didymoctenia exsuperata (Walker, 1860)
Dissomorphia australiaria (Guenée, 1857)
Ectropis bispinaria (Guenée, 1857)
Ectropis despicata (Walker, 1860)
Ectropis excursaria (Guenée, 1857)
Ectropis fractaria (Guenée, 1857)
Casbia tetramera Lower, 1894
Epidesmia hypenaria (Guenée, 1857)
Epyaxa subidaria (Guenée, 1857)
Gastrina cristaria Guenée, 1857
Gastrinodes bitaeniaria (Le Guillou, 1841)
 Hydriomenini unplaced nr *severata* (Guenée, 1857)
 Hydriomenini unplaced *severata* (Guenée, 1857)
Idiodes apicata Guenée, 1857
Melanodes anthracitaria Guenée, 1857
Microdes diplodonta Turner, 1904
Microdes squamulata Guenée, 1858
Microdes unplaced
Nisista serrata (Walker, 1857)
Oenochroma vetustaria (Walker, 1860)
Oenochroma vinaria Guenée, 1857
Phelotis cognata (Walker, 1860)
Prasinocyma semicrocea (Walker, 1861)
Psilosticha mactaria (Guenée, 1857)
Rhinodia rostraria Guenée, 1857
Rhynchopsota delogramma Lower, 1903
Scioglyptis lyciaria (Guenée, 1857)
Scioglyptis sp. CB02
Scopula optivata (Walker, 1861)
Syneora cheleuta (Meyrick, 1892)
GLYPHIPTERIGIDAE (SEDGE MOTHS)
Glyphipteryx cometophora (Meyrick, 1880)
GRACILLARIIDAE (LEAF BLOTCH MINER MOTHS)
 Gracillariidae unplaced
Polysoma eumetalla (Meyrick, 1880)
HELIOZELIDAE (SHIELD BEARER MOTHS)
 Heliozelidae unplaced
HESPERIIDAE (SKIPPERS)
 \$ *Antipodia chaostola leucophaea* (Couchman, 1946)
Hesperilla donmya aurantia Waterhouse, 1927
Pasma tasmanica (Miskin, 1889)
 \$ *Taractrocera papyria* (Boisduval, 1832)
Trapezites lutea glaucus Hübner, 1819
HYPERTROPHIDAE (TWIG MOTHS)
Eupselia carpocapsella (Walker, 1864)
 Hypertrophidae unplaced
LASIOCAMPIDAE (SNOUT MOTHS)
Pararguda nasuta (Lewin, 1805)
Pararguda rufescens (Walker, 1855)
Pernattia pusilla (Donovan, 1805)
LECITHOCERIDAE (LONG-HORNED MOTHS)
Lecithocera terrigena (Meyrick, 1904)
LIMACODIDAE (CUP MOTHS)
Donatifera pinguis (Walker, 1855)
LYCAENIDAE (COPPER, HAIRSTREAK AND BLUE BUTTERFLIES)
 * *Paralucia aurifer* (Blanchard, 1848)
 * *Pseudalmenus chlorinda chlorinda* (Blanchard, 1848)
NOCTUIDAE (OWLET MOTHS, CUTWORMS, ARMYWORMS)
Aedia leucomelas (Linnaeus, 1758)
Agrotis munda Walker, 1857
Agrotis porphyricollis Guenée, 1852
Bathytricha truncata (Walker, 1856)
Dasygaster sp. ANIC01
 Hadenini unplaced species inquirenda *dictyota* Lower, 1902
 Hadenini unplaced species inquirenda *ligniplena* Walker, 1857
Leucania uda Guenée, 1852
 Noctuidae unplaced
Proteuxoa bistrigula (Walker, 1857)
Proteuxoa sp. nr *flexirena* (Walker, 1865)
NOLIDAE (TUFT MOTHS)
Elesma BYRNE 'Wind Song sp. 01'
Nola pleurosema (Turner, 1944)
Nola unplaced
Uraba lugens Walker, 1863
NOTODONTIDAE (PROMINENTS)
Hobartina amblyiodes (Turner, 1931)

Appendix 1.4 cont.

Neola semiaurata Walker, 1855
Psolidostetha banksiae (Lewin, 1805)
Sorana bicolor Walker, 1855

NYMPHALIDAE (ADMIRAL AND BROWN BUTTERFLIES)

- * *Geitoneura klugii* (Guérin-Méneville, 1830)
 - Heteronympha merope* (Fabricius, 1775)
 - * *Junonia villida* (Fabricius, 1787)
 - \$ *Vanessa itea* (Fabricius, 1775)
 - * *Vanessa kershawi* (McCoy, 1868)
- OECOPHORIDAE (CONCEALER MOTHS)
- Agriophara* BYRNE 'Wind Song sp. 01'
Agriophara unplaced
Barea unplaced
Euchaetis inceptella (Walker, 1864)
Eulechria melesella (Newman, 1856)
Ocystola crystallina Meyrick, 1885
Oecophoridae unplaced
Oecophorinae genus nr *Poliorhabda* unplaced
Oecophorinae sp. 01 CB Wind Song
Oecophorinae unplaced
Oxytecta hieroglyphica Meyrick, 1885
Philobota sp. ANIC66
Philobota unplaced
Phryganeutis unplaced
Stathmopoda cephalaea Meyrick, 1897
Stathmopoda chalcotypa Meyrick, 1897
Stathmopodinae unplaced
Thalerotricha mylicella Meyrick, 1884
Zacorus unplaced

PIERIDAE (WHITE BUTTERFLIES)

- *i *Pieris rapae* (Linnaeus, 1758)

PLUTELLIDAE (DIAMONDBACK MOTHS)

Plutella xylostella (Linnaeus, 1758)

PYRALIDAE (SNOUT MOTHS, GRASS MOTHS)

Ctenomeristis almella (Meyrick, 1879)
Galleriinae unplaced
Gauna aegusalis (Walker, 1859)
Phycitinae unplaced
Pyralidae unplaced

SATURNIIDAE (EMPEROR MOTHS)

Opodiphthera helena (White, 1843)

SPHINGIDAE (HAWK MOTHS)

Hippotion scrofa (Boisduval, 1832)

TINEIDAE (FUNGUS MOTHS)

Tineinae unplaced

TORTRICIDAE (LEAFROLLER MOTHS)

Acropolitis rudisana (Walker, 1863)
Anisogona mediana (Walker, 1863)
Asthenoptycha unplaced
Capua sp. AT21
Constrictana constrictana (Walker, 1866)
Epiphyas postvittana (Walker, 1863)
Epiphyas xylodes (Meyrick, 1910)
Epitymbia isoscelana (Meyrick, 1881)
Eucosmini unplaced
Euphona euphona (Meyrick, 1910)
Holocola triangulana Meyrick, 1881
Holocola unplaced
Olethreutinae unplaced
Thrincochora lignigerana (Walker, 1863)
Tortricidae unplaced
Tortricinae unplaced

YPONOMEUTIDAE (ERMINE MOTHS)

Yponomeutinae unplaced

ZYGAENIDAE (FORESTERS)

Pollanisus viridipulverulenta (Guérin-Méneville, 1839)

MANTODEA (PRAYING MANTISES)

MANTIDAE

- * *Tenodera australasiae* (Leach, 1814)

MECOPTERA (HANGING-FLIES AND ALLIES)

BITTACIDAE

Harpobittacus australis (Klug, 1838)

NEUROPTERA (LACEWING AND ANTLIONS)

HEMEROBIIDAE (HEMEROBIID LACEWINGS)

Hemerobiidae unplaced

MYRMELEONTIDAE (ANTLIONS)

Myrmeleon acer Walker, 1853

ODONATA (DRAGONFLIES AND DAMSELFLIES)

LESTIDAE (SPREAD-WINGED DAMSELFLIES)

- * *Austrolestes psyche* (Hagen, 1862)

LIBELLULIDAE (SKIMMER DRAGONFLIES)

- * *Orthetrum caledonicum* (Brauer, 1865)

ORTHOPTERA (GRASSHOPPERS AND CRICKETS)

ACRIDIDAE (GRASSHOPPERS)

Austroicetes vulgaris (Sjöstedt, 1931)

- * *Goniaea australasiae* (Leach, 1814)
 - Phaulacridium vittatum* (Sjöstedt, 1920)
 - Tasmaniocris tasmaniensis* (Bolívar, 1898)
- Acrididae unplaced

GRYLLACRIDIDAE (RASPY-CRICKETS)

Kinermania ambulans (Erichson, 1842)

RHAPHIDOPHORIDAE (CAMEL-CRICKETS)

Parvotettix domesticus Richards, 1970

TETRIGIDAE (GROUNDHOPPERS)

Paratettix argillaceus (Erichson, 1842)

Tetrigidae unplaced

TETTIGONIIDAE (BUSH-CRICKETS OR KATYDIDS)

Caedicia simplex (Walker, 1869)

Zaprochilus australis (Brullé, 1835)

TRIGONIDIIDAE (SWORD-TAIL CRICKETS)

Bobilla unplaced

Trigonidium albovittata (Chopard, 1951)

PHASMIDA (STICK-INSECTS)

PHASMATIDAE

- * *Ctenomorpha marginipennis* Gray, 1833

OTHER ARTHROPODS

ACARI (MITES)

TETRANYCHIDAE (SPIDER-MITES)

- *i *Tetranychus lintearius* Dufour, 1832

ARANEAE (SPIDERS)

ARANEIDAE (ORB-WEAVING SPIDERS)

- * *Dolophones conifera* (Keyserling, 1886)
- * *Eriophora pustulosa* (Walckenaer, 1842)
- * *Plebs bradleyi* (Keyserling, 1887)

DESIDAE (HOUSE-SPIDERS)

- * *Badumna insignis* (L. Koch, 1872)

LYCOSIDAE (WOLF-SPIDERS)

- * *Tasmanicosa godeffroyi* (L. Koch, 1865)

SALTICIDAE (JUMPING-SPIDERS)

- * *Myrmarachne luctuosa* (L. Koch, 1879)

SPARASSIDAE (HUNTSMAN SPIDERS)

- * *Delena cancerides* Walckenaer, 1837

- * *Neosparassus diana* (L. Koch, 1875)

TETRAGNATHIDAE (LONG-JAWED SPIDERS)

- * *Tetragnatha* unplaced

THERIDIIDAE (COMB-FOOTED SPIDERS)

- * *Ariamnes patersoniensis* Hickman, 1927

- * *Euryopsis splendens* (Rainbow, 1916)

Appendix 1.4 cont.

THOMISIDAE (CRAB-SPIDERS)

- * *Diaea* species
- * *Hedana valida* L. Koch, 1875

SCORPIONES (SCORPIONS)

BOTHRIURIDAE

- * *Cercophonijs squama* (Gervais, 1844)

DIPLOPODA (MILLIPEDES)

JULIDAE

- *_i *Ommatoiulus moreleti* (Lucas, 1860)

CHILOPODA (CENTIPEDES)

SCOLOPENDRIDAE

- * *Cormocephalus westwoodi* (Newport, 1844)

ISOPODA (SLATERS)

ARMADILLIDIIDAE

- *_i *Armadillidium vulgare* (Latreille, 1804)

PORCELLIONIDAE

- *_i *Porcellio scaber* Latreille, 1804

MOLLUSCA (SNAILS AND SLUGS)

RHYTIDIDAE

Tasmaphena ruga (Legrand, 1871)

Prolesophanta nelsonensis (Brazier, 1871)

CARYODIDAE

Caryodes dufresnii (Leach, 1815)

PUNCTIDAE

Paralaoma hobarti (Cox, 1868)

Paralaoma cf. morti (Cox, 1864)

Paralaoma mucoides (Tenison-Woods, 1879)

Gratilaoma sp. “Knocklofty”

Laomavix collisi (Brazier, 1877)

Punctidae sp. “Micro Cripps” (genus undetermined)

CHAROPIDAE

Tasmathera sp. (possibly new)

ARIONIDAE

*_i *Arion intermedius* Normand, 1852

HELICARIONIDAE

Helicarion cuvieri Ferussac, 1821

HELICIDAE

*_i *Cornu aspersum* (Muller, 1774)

LIMACIDAE

i *Lehmannia nyctelia* (Bourguignat, 1861)

OXYCHILIDAE

i *Oxychilus alliaris* (Miller, 1822)

OTHER INVERTEBRATES

ANNELIDA (LEECHES AND EARTHWORMS)

DOMANIBDELLIDAE

* *Philaemon grandis* Ingram, 1957

PLATYHELMINTHES (FLATWORMS)

GEOPLANIDAE

* *Anzoplana trilineata* Winsor, 2006

* *Australopacifica nichollsi* (Dendy, 1915)

Appendix 1.5: Vertebrate taxa of Wind Song

FROGS

- * *Crinia signifera* Girard, 1853
- * *Limnodynastes dumerilii insularis* Parker, 1940
- * *Litoria ewingii* (Duméril & Bibron, 1841)

REPTILES

- \$ *Austrelaps superbus* (Günther, 1858)
- * *Niveoscincus metallicus* (O’Shaughnessy, 1874)
- * *Rankinia diemensis* (Gray, 1841)
- * *Tiliqua nigrolutea* (Quoy & Gaimard, 1824)

MAMMALS

- * *Macropus rufogriseus rufogriseus* (Desmarest, 1817)
- * *Tachyglossus aculeatus setosus* (Geoffroy, 1803)
- * *Thylogale billardieri* (Desmarest, 1822)
- * *Trichosurus vulpecula fuliginosus* (Ogilby, 1831)
- * *Vombatus ursinus tasmaniensis* (Spencer & Kershaw, 1910)

BIRDS

- \$ *Acanthiza chrysorrhoa* (Quoy & Gaimard, 1830)
- * *Acanthiza pusilla diemenensis* Gould, 1838
- \$ *Acanthorhynchus tenuirostris* (Latham, 1801)
- \$ *Anthochaera chrysoptera* (Latham, 1801)
- \$ *Anthus richardi* Vieillot, 1818
- *_i *Alauda arvensis* Linnaeus, 1758
- * *Anas castanea* (Eyton, 1838)
- * *Anthochaera chrysoptera tasmanica* (Mathews, 1912)
- * *Aquila audax* (Latham, 1801)
- * *Artamus cyanopterus cyanopterus* (Latham, 1801)
- * *Cacomantis flabelliformis* (Latham, 1801)
- * *Cacomantis pallidus* (Latham, 1801)
- * *Calyptrorhynchus funereus xanthanotus* Gould, 1838
- *_i *Carduelis carduelis* (Linnaeus, 1758)
- * *Chrysococcyx basalis* (Horsfield, 1821)

- * *Chrysococcyx lucidus plagosus* (Latham, 1801)
- * *Colluricincla harmonica harmonica* (Latham, 1801)
- * *Coracina n. novaehollandiae* (Gmelin, 1789)
- * *Corvus tasmanicus* Mathews, 1912
- * *Cracticus tibicen hypoleuca* Gould, 1837
- * *Cracticus torquatus cinereus* (Gould, 1837)
- *_i *Dacelo novaeguineae novaeguineae* (Hermann, 1783)
- * *Egretta novaehollandiae* (Latham, 1790)
- * *Epthianura albifrons* (Jardine & Selby, 1828)
- * *Falco berigora tasmanica* (Mathews, 1916)
- \$ *Glossopsitta concinna* (Shaw, 1791)
- \$ *Haliaeetus leucogaster* Gmelin, 1788
- * *Hirundo neoxena* (Gmelin, 1789)
- * *Lathamus discolor* (Shaw, 1790)
- * *Malurus cyaneus cyaneus* (Ellis, 1782)
- * *Manorina melanocephala melanocephala* (Latham, 1801)
- \$ *Meliphreptus affinis* (Lesson, 1839)
- \$ *Myiagra cyanoleuca* (Vieillot, 1818)
- * *Ninox novaeseelandiae leucopsis* (Gould, 1838)
- * *Pardalotus punctatus punctatus* (Shaw, 1792)
- * *Pardalotus striatus striatus* (Gmelin, 1789)
- * *Petrochelidon nigricans nigricans* (Vieillot, 1817)
- * *Petroica boodang leggii* (Sharpe, 1879)
- * *Petroica phoenicea* Gould, 1837
- * *Phalacrocorax carbo novaehollandiae* Stephens, 1826
- * *Phaps chalcoptera* (Latham, 1790)
- \$ *Phylidonyris novaehollandiae* (Latham, 1790)
- * *Platycercus caledonicus* (Gmelin, 1788)
- * *Platycercus eximius* (Shaw, 1792)
- * *Podargus strigoides strigoides* (Latham, 1801)
- * *Rhipidura albiscapa albiscapa* Gould, 1840
- * *Strepera versicolor arguta* Gould, 1846
- *_i *Sturnus vulgaris* Linnaeus, 1758
- *_i *Turdus merula merula* Linnaeus, 1758
- \$ *Vanellus miles* (Boddaert, 1783)
- \$ *Zosterops lateralis* (Latham, 1801)