Christchurch District Plan
Site of Ecological Significance

Site Significance Statement

Site name: Stony Beach

Site number: SES/A/27

Physical address of site: Stony Beach, Chorlton Road, Okains Bay

Summary of Significance:

This site is significant because it contains areas of rare and moderately representative vegetation. It supports an outstanding number of indigenous plant species that are nationally Threatened or At Risk and is part of an area that is considered to be the most important site for threatened tree daisies on Banks Peninsula. It supports three plant species that are uncommon within the ecological region or ecological district and another seven at their national distributional limit on Banks Peninsula. It also has eight invertebrate species that are nationally Threatened or At Risk, five that are endemic to Banks Peninsula, three that are uncommon in the ecological district and another three that are possibly new species. The site is part of an ecological network and is of particular importance in linking the high value forest patches in North-west Okains Bay and Donaldsons Bush.

Site Map

Additional Site Information

Ecological District: Akaroa

Area of SES (ha): 18.95

Central point: (NZTM): E1603998, N5164398

Site Description

This site is indigenous secondary forest, treeland and scrub on lowland hill slopes on the eastern and western slopes of Stony Beach Valley. The altitudinal range of the site extends from approximately sea level to 160 m above sea level. The aspect is north-west facing on the eastern side of Stony Beach and south and east-facing on the western side.

The main indigenous vegetation community at the site, as described by Wildland Consultants unpubl. data (2014a) is ngaio-lowland ribbonwood-kowhai/*Coprosma crassifolia- Coprosma virescens* treeland on lowland hill slopes.

The vegetation on the north-west facing slopes on the eastern side of Stony Beach comprises four patches of secondary growth hardwood treeland and forest. The majority of the vegetation consists of treeland over exotic pasture, however a narrow gully in the southern part of the site contains secondary growth forest with a denser canopy. Scattered fragrant tree daisy (*Olearia fragrantissima*) and *O. fimbriata* trees occur throughout the area and a single heart-leaved kōhūhū (*Pittosporum obcordatum*) grows here. The whole area is grazed by stock and the understorey contains relatively few native plant species and is generally quite sparse, apart from unpalatable species (Wildland Consultants unpubl. data 2014a).

The vegetation on the western side of Stony Beach consists of three patches of secondary growth treeland, forest and scrub. The land is relatively steep and contains scattered bands of small rock bluffs and outcrops. One large, emergent lowland totara (*Podocarpus totara*) grows in the northern-most patch near the beach. Five large, old fragrant tree daisy trees were found in the southern-most patch of forest-treeland. Rock outcrops provide refugia for a wide variety of native plants, including a suite of specialist species.

Indigenous birds recorded at the site during the botanical survey are bellbird (*Anthornis melanura melanura*), South Island fantail (*Rhipidura fuliginosa fuliginosa*), grey warbler (*Gerygone igata*), New Zealand kingfisher (*Halcyon sancta vagans*), paradise shelduck (*Tadorna variegata*) and silvereye (*Zosterops lateralis lateralis*) (Wildland Consultants unpubl. data 2014a).

Extent of Site of Ecological Significance

The site includes the patches of indigenous forest, treeland and scrub on the eastern and western slopes of lower Stony Beach Valley east side of Chorlton Road.

Assessment Summary

The Stony Beach Site has been evaluated against the criteria for determining significant indigenous vegetation and significant habitats of indigenous fauna listed in Appendix 3 of the Canterbury Regional Policy Statement (Environment Canterbury, 2013) (see below) referring also to the Wildland Consultants (2013) Guidelines and advice from the relevant Specialist Ecologist Groups. Under these criteria the site is ecologically significant because it meets the representativeness (criteria 1 and 2), rarity/distinctiveness (criteria 3, 4, 5 and 6), diversity and pattern (criterion 7) and ecological context criteria (criteria 8 and 10).

Assessment against Significance Criteria

Representativeness

1. ***Indigenous vegetation or habitat of indigenous fauna that is representative, typical or characteristic of the natural diversity of the relevant ecological district. This can include degraded examples where they are some of the best remaining examples of their type, or represent all that remains of indigenous biodiversity in some areas.***

   The site is significant under this criterion.

   It supports distinctive plant communities that have an unusual suite of species including a high diversity of plants that are nationally Threatened or At Risk and at their distributional limits on Banks Peninsula (see criteria 4 and 5 below). It has the only population of *Olearia fimbriata* on Banks Peninsula (apart from two separate sites with single individuals) and is only the second known site for heart-leaved kōhūhū (Wildland Consultants unpubl. data 2014a). This vegetation community is likely to have been more widespread on Banks Peninsula in the past but is now probably the last remnant of this community type on Banks Peninsula. Because the whole area is grazed by stock the understorey contains relatively few native plant species and is generally quite sparse, apart from unpalatable species. Despite being degraded, this site is significant as the best (and only known) example of its type in the ecological district.

   Rock outcrops on the western side of Stony Beach provide refugia for a representative variety of indigenous plants, including a suite of specialist species such as yellow rock groundsel (*Senecio glaucophyllus subsp. basinudus*), New Zealand linen flax (*Linum monogynum*), *Chenopodium allanii, and* Banks Peninsula hebe (*Hebe strictissima*).

   The site supports an invertebrate assemblage that is representative of the distinctive vegetation assemblages at the site. There is a diverse range of both herbivores and detritivores at the site (Wildland Consultants unpubl. data 2015).

2. ***Indigenous vegetation or habitat of indigenous fauna that is a relatively large example of its type within the relevant ecological district.***

   The site is significant under this criterion.

The patches of secondary growth hardwood forest, treeland and scrub within the site are significant under this criterion because they include part of the largest population of *O. fimbriata* on Banks Peninsula (Walls 2001) and are now probably the last remnant of this community type on Banks Peninsula.

Rarity/Distinctiveness

3. Indigenous vegetation or habitat of indigenous fauna that has been reduced to less than 20% of its former extent in the Region, or relevant land environment, ecological district, or freshwater environment.

At least parts of the site are significant under this criterion.

The forest, treeland and scrub within the site is likely to be significant under this criterion. The distinctive suite of species found at this site (see criterion 6) would probably have been more widespread on Banks Peninsula before major vegetation clearance by humans. This site is possibly the last remnant of this community type in the Ecological Region.

In addition, coastal and lowland forest has been reduced to a tiny area of its former extent at the Region and ecological district scales. Banks Peninsula, including the Akaroa Ecological District, was almost entirely forested prior to the arrival of humans (Harding 2009, Wilson 2013). The present extent of all indigenous forest (excluding manuka and/or kanuka) in the ED is estimated to be 10% and the extent of all indigenous woody vegetation within the ecological district, as mapped in the New Zealand Landcover Database (Version 4), is 17.8%.

Indigenous vegetation on the higher elevation (mid to upper) slopes and broad ridges within the site are on an Acutely Threatened land environment (F3.1a) where <10% indigenous vegetation is left on this land environment nationally (Walker et al. 2007).

4. Indigenous vegetation or habitat of indigenous fauna that supports an indigenous species that is threatened, at risk, or uncommon, nationally or within the relevant ecological district.

The site is significant under this criterion.

It has nine indigenous plant species that are nationally Threatened or At Risk, and three that are uncommon within the ecological region or ecological district (Wildland Consultants unpubl. data 2014a), eight invertebrate species that are nationally Threatened or At Risk, five that are endemic to Banks Peninsula, three that are uncommon in the ecological district and another two that are possibly new species.

Plants

Nationally Threatened and At Risk species (de Lange et al. 2013) recorded from the site (Wildland Consultants unpubl. data 2014a) are:

- Heart-leaved kōhūhū (*Pittosporum obcordatum*) (Threatened - Nationally Vulnerable) – single shrub. This species is only known from one other (nearby) location on Banks Peninsula.
- *Olearia fimbriata* (Threatened - Nationally Vulnerable) - 10 adult trees, no juveniles. This species is very rare on Banks Peninsula, and is only known from two other sites nearby (Walls 2001).
- Fragrant tree daisy (*Olearia fragrantissima*) (At Risk - Declining) – 8 adult trees, no juveniles
- *Coprosma virescens* (At Risk - Declining) – frequent throughout the site
- *Hebe strictissima* (At Risk - Naturally Uncommon, endemic to Banks Peninsula)
- Banks Peninsula button daisy (*Leptinella minor*) (At Risk - Naturally Uncommon, endemic to Banks Peninsula) – one patch
- Fierce lancewood (*Pseudopanax ferox*) (At Risk - Naturally Uncommon) - four trees, three adults and 1 juvenile.
- *Chenopodium allanii* (At Risk - Naturally Uncommon)
- yellow rock groundsel (*Senecio glaucophyllus subsp. basinudus*) (At Risk - Naturally Uncommon) – on rock outcrops

Plant species recorded from the site (Wildland Consultants unpubl. data 2014a) that are "uncommon to rare or very local" on Banks Peninsula (Wilson 2013) are:

- Shining broadleaf (*Griselinia lucida*) - two trees on rock outcrops where they are inaccessible to stock
- Leatherleaf fern (*Pyrrosia eleagnifolia*)
- Climbing shore spinach (*Tetragonia implexicoma*) – uncommon on rock outcrops

Invertebrates

Nationally Threatened and At Risk invertebrate species recorded from the site (Wildland Consultants unpubl. data 2015) are:

- *Declana toreuta* (Threatened - Nationally Vulnerable)
- *Pseudocoremia cineracia* (Threatened - Nationally Vulnerable)
- *Stathmopoda endotherma* (At Risk - Naturally uncommon)
- *Zelleria sphenota* (At Risk – Declining)
- *Declana griseata* (At Risk – Declining)
- *Tatosoma agrionata* (At Risk – Declining)
- Banks Peninsula ground beetle (*Megadromus guerenii*) (At Risk – Declining, endemic)
- *Meterana exquisita* (At Risk –Relict)

Endemic invertebrate species recorded from the site (Wildland Consultants unpubl. data 2015) are:

- A flatworm (*New Zelandia sp. nr moseleyi*)
- *Kikihia 'new species'*
- Great giant scale (*Coelostomidia ?zealandica*)
- *Celatoblatta peninsularis* Banks Peninsula cockroach

Invertebrates recorded from the site (Wildland Consultants unpubl. data 2015) that are uncommon in the Akaroa Ecological District are:

- *Phycomorpha metachrysa*
- *Tingena nsp.* (first record for Banks Peninsula BP)
- *Stathmopoda nsp. "olearia"* (first record for Banks Peninsula BP)

Three invertebrate species recorded from the site (Wildland Consultants unpubl. data 2015) are possible new species:

- A chafer (*Odontria 'large'*)
- Stag beetle (*Ceratognathus sp.*)
- *Thelyphassa nr. brouni*

5. The site contains indigenous vegetation or an indigenous species at its distribution limit within Canterbury Region or nationally.

The site is significant under this criterion.

It has six species at their southern national or regional limits on Banks Peninsula and one at its northern national limit on Banks Peninsula (Wildland Consultants unpubl. data 2014a). These species are:

- Shining spleenwort (*Asplenium oblongifolium*) (southern national limit)
- Titoki (*Alectryon excelsus*) (southern national limit)
- Akeake (*Dodonaea viscosa*) (southern national limit)
- Shining broadleaf (*Griselinia lucida*) (southern regional limit)
- Fragrant tree daisy (*Olearia fragrantissima*) (northern national limit)
- Native passion vine (*Passiflora tetrandra*) (southern national limit)
- Kawakawa (*Piper excelsum*) (southern national limit)

6. Indigenous vegetation or an association of indigenous species that is distinctive, of restricted occurrence, occurs within an originally rare ecosystem, or has developed as a result of an unusual environmental factor or combinations of factors.

The site is significant under this criterion.

The plant communities within the site are very distinctive because of the unusual suite of species present and diversity of species at their southern distributional limit (perhaps influenced by a warm microclimate in combination with clay soils). This is the only population of *Olearia fimbriata* on Banks Peninsula (apart from two separate sites with single individuals), and only the second known site for heart-leaved kōhūhū. The presence of these species on north-facing slopes is also rather unusual. However, these species would probably have been more widespread on Banks Peninsula in the past (before major vegetation clearance by humans), and Stony Beach probably reflects the last remnants of this community type on Banks Peninsula.

The invertebrate assemblage at the site is also distinctive reflecting the distinctive plant communities present at the site. The moth, beetle and bug fauna associated with *Olearia fimbriata,* (which includes four moth species that are new records for Banks Peninsula, three of which are nationally Threatened) is the only assemblage of its type known from Banks Peninsula. Also the moth *Phycomorpha metachrysa,* for which small-leaved milk tree (*Streblus*

heterophyllus) is the plant host, is only one of two populations known on Banks Peninsula (Wildland Consultants unpubl. data 2015).

Diversity and Pattern

7. Indigenous vegetation or habitat of indigenous fauna that contains a high diversity of indigenous ecosystem or habitat types, indigenous taxa, or has changes in species composition reflecting the existence of diverse natural features or ecological gradients.

The site is significant under this criterion.

Despite having a high number of nationally Threatened and At Risk plant species relative to other sites, and a number of species at their distributional limits on Banks Peninsula, the site does not support a high diversity of indigenous ecosystem or habitat types or plant taxa. However, it does support a high diversity of invertebrates, particularly moths, as indicated by high diversity in certain genera (*Declana* (5 species), *Tingena* (7 species), *Stathmopoda* (5 species) and *Meterana* (7 species)) (Wildland Consultants unpubl. data 2015).

Ecological Context

8. Vegetation or habitat of indigenous fauna that provides or contributes to an important ecological linkage or network, or provides an important buffering function.

The site is significant under this criterion.

The indigenous vegetation within the site, in conjunction with other similar patches in the wider area, is part of a network that is important for the movement and dispersal of indigenous fauna and potentially in providing a corridor for the expansion of rare plant species such as heart-leaved kōhūhū and *Olearia fimbriata*. Of particular importance is its role in linking the forest patches in North-west Okains Bay and Donaldsons Bush that are of very high ecological value. The secondary growth hardwood forest-treeland-scrub on the western side of Stony Beach connects Donaldsons Bush and the coast.

9. A wetland which plays an important hydrological, biological or ecological role in the natural functioning of a river or coastal system.

The site is not significant under this criterion. There are no wetlands within the site.

10. Indigenous vegetation or habitat of indigenous fauna that provides important habitat (including refuges from predation, or key habitat for feeding, breeding, or resting) for indigenous species, either seasonally or permanently.

The site is significant under this criterion.

It provides important habitat for populations of indigenous invertebrates, including a high proportion of nationally Threatened and At Risk and endemic species. It is also important as a stronghold for specialist invertebrates associated with small-leaved milk tree and *Olearia fimbriata*.

Site Management

Existing Protection Status

The site is not legally protected.

Threats and risks	Management recommendations	Support package options
· Stock. The site is grazed and there is very little regeneration of native plant species (Wildland Consultants unpubl. data 2014a).	· If feasible, consider light sheep grazing to maintain ecological values and encourage recruitment of shrublands. · Consider fencing the higher value areas of forest and treeland. High priority areas are those with more mature forest and areas and that support heart-leaved kōhūhū, *Olearia fimbriata* and fragrant tree daisy (see recommendations below regarding management of *Olearia*).	· Discussion with landowners about advantages to biodiversity and options for stock management, and assistance where appropriate · Collaboration with agencies and other groups about assistance with fencing if landowners opt for it.
· Biodiversity pest plants. Few of the exotic plant species within the site are ecological weeds. Pigs ear (*Cotyledon orbiculata*) has invaded some rock outcrops on the western side of the valley. This species is a threat to native plants which grow in the same habitats. Sweet briar (*Rosa rubiginosa*) is rare on the western side of the valley (Wildland Consultants unpubl. data 2014a).	· Consider controlling pigs ear to protect rock out crop communities with the aim of containing it to the coastal cliffs. · Consider controlling sweet briar.	· Advice and guidance to landowners about pest plant monitoring and control. · Assistance where appropriate.
· Pest animals. Rabbits were recorded from the site (Wildland Consultants unpubl. data 2014a).	· Consider monitoring rabbit numbers and controlling them if densities increase.	· Advice and guidance for landowners about monitoring and control of pest animals.
· Lack of recruitment of *Olearia fimbriata* or fragrant tree daisy. No	· Consider installing stock-proof (and ideally rabbit-proof) fencing around the	· Discussion with landowner about advantages to

seedlings or juveniles of either *Olearia* species were found, and all the trees appear to be very old. It appears that the numbers of plants of both species have declined since Walls' (2001) survey (Wildland Consultants unpubl. data 2014a). Recruitment of this species is important for the survival of host-specific invertebrates.	forest/scrub in the southern gully and other areas with *Olearia fimbriata* (priority) or fragrant tree daisy. · Monitor recruitment. · Supplementary planting of progeny raised from seed collected from the site into appropriate and fenced habitats could be considered to maintain these populations.	biodiversity and options for land management. · Collaboration with agencies and other groups about assistance with fencing if landowner opts for it. · Encourage collaboration with ecologists / universities for seed collection and possible planting.

References

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Assessment completed by: Scott Hooson
Date: 26 January 2015

Statement completed by: Scott Hooson
Date: 26 January 2015

Statement updated by: Debbie Hogan
Date: 6 June 2017
Update purpose: Site map updated to show boundary as amended through Decision 50 (Natural and Cultural Heritage (Part) – 9.1 Indigenous Biodiversity) of the Independent Hearings Panel on the Christchurch Replacement District Plan

PLEASE NOTE THIS STATEMENT IS BASED ON INFORMATION AVAILABLE AT THE TIME OF WRITING. DUE TO THE DYNAMIC NATURE OF ECOSYSTEMS, FUTURE REASSESSMENT OF THE SITE MAY BE NECESSARY TO REFLECT ANY CHANGES IN KNOWLEDGE OF ITS ECOLOGICAL SIGNIFICANCE.

Appendix 1: Plant Species List

Sourced from Wildland Consultants unpubl. data (2014a).

Scientific Name	**Common Name(s)**
Indigenous species	
Alectryon excelsus	titoki
Arthropodium candidum	grass lily, repehinapapa
Asplenium flabellifolium	necklace fern
Asplenium oblongifolium	shining spleenwort, huruhuruwhenua
Calystegia tuguriorum	NZ bindweed, pōwhiwhi
Carmichaelia australis	native broom, common broom
Cardamine species	bittercress
Chenopodium allanii	
Clematis afoliata	leafless clematis
Coprosma crassifolia	thick-leaved coprosma, mikimiki
Coprosma virescens	mikimiki
Cordyline australis	cabbage tree, tī kōuka
Corokia cotoneaster	korokio
Crassula sieberiana	stonecrop
Dichondra repens	Mercury Bay weed, dichondra
Dodonaea viscosa	akeake
Fuchsia excorticata X perscandens	shrubby fuchsia
Geranium aff. microphyllum	native geranium
Griselinia lucida	shining broadleaf, puka
Hebe strictissima	Banks Peninsula hebe
Helichrysum lanceolatum	niniao
Hydrocotyle heteromeria	pennywort
Hydrocotyle moschata	pennywort
Ileostylus micranthus	green mistletoe
Juncus distegus	wiwi
Juncus edgariae	leafless rush, wi
Korthalsella lindsayi	dwarf mistletoe
Kunzea robusta	kānuka, mānuka, kopuka
Leptinella minor	Banks Peninsula button daisy
Linum monogynum	NZ linen flax
Lophomyrtus obcordata	rōhutu, NZ myrtle
Melicytus ramiflorus	māhoe, whiteywood
Melicope simplex	poataniwha
Microsorum pustulatum	hounds tongue, kōwaowao
Muehlenbeckia australis	large-leaved pōhuehue
Muehlenbeckia complexa	scrub pōhuehue, wire vine
Myoporum laetum	ngaio
Myrsine divaricata	weeping matipo, weeping māpou
Olearia fimbriata	
Olearia fragrantissima	fragrant tree daisy
Olearia paniculata	akiraho
Oxalis exilis	yellow oxalis
Parsonsia capsularis	native jasmine, akakaikiore
Parietaria debilis	NZ pellitory

Passiflora tetrandra	native passion vine
Pellaea rotundifolia	round-leaved fern, tarawera
Pennantia corymbosa	kaikōmako, ducks foot
Piper excelsum	kawakawa
Pittosporum obcordatum	heart-leaved kōhūhū
Plagianthus regius	lowland ribbonwood, mānatu
Poa imbecilla	weak poa
Podocarpus totara	lowland tōtara
Polystichum oculatum	shield fern
Pseudopanax ferox	fierce lancewood
Pyrrosia eleagnifolia	leatherleaf fern
Rubus squarrosus	leafless bush lawyer, tātarāmoa
Scandia geniculata	climbing aniseed
Senecio glaucophyllus subsp. *basinudus*	yellow rock groundsel
Solanum laciniatum	poroporo
Sophora microphylla	small-leaved kōwhai
Streblus heterophyllus	small-leaved milk tree, tūrepo
Tetragonia implexicoma	climbing shore spinach
Urtica ferox	ongaonga, tree nettle
Wahlenbergia gracilis	NZ harebell
Exotic species	
Agrostis capillaris	brown top
Anthriscus caucalis	beaked parsley
Anthoxanthum odoratum	sweet vernal
Bellis perennis	daisy
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft brome
Carduus tenuiflorus	winged thistle
Cerastium glomeratum	chickweed
Cirsium arvense	Californian thistle
Cirsium vulgare	Scotch thistle
Claytonia perfoliata	miners lettuce
Cotula australis	common cotula, soldiers button
Cotyledon orbiculata	pig's ear, elephant's ear
Cupressus macrocarpa	macrocarpa, Monterey cypress
Dactylis glomerata	cocksfoot
Digitalis purpurea	foxglove
Euphorbia peplus	petty spurge, milkweed
Fumaria muralis	scrambling fumitory
Galium aparine	cleavers
Geranium dissectum	cut-leaved cranesbill
Geranium molle	dovesfoot cranesbill
Juncus bufonius	toad rush
Lolium perenne	ryegrass
Marrubium vulgare	horehound
Medicago arabica	spotted bur medick
Plantago lanceolata	narrow-leaved plantain
Ranunculus parviflorus	small-flowered buttercup
Ribes uva-crispa	gooseberry
Rosa rubiginosa	sweet briar, briar rose

Sherardia arvensis	field madder
Sisymbrium officinale	hedge mustard
Solanum nigrum	black nightshade
Sonchus oleraceus	puha, smooth sow thistle
Stellaria media	chickweed
Trifolium dubium	suckling clover
Trifolium repens	white clover
Trifolium subterraneum	subterranean clover
Urtica urens	nettle
Veronica arvensis	field speedwell
Vicia sativa	vetch
Vittadinia gracilis	purple fuzzweed

Appendix 2: Invertebrate Species List

Sourced from Wildland Consultants unpubl. data (2015)

Order	Family	Scientific Name	Common
Indigenous species			
TUBELLARIA	Geoplanidae	*New Zelandia sp. near moseleyi*	
BLATTODEA	Blattidae	*Celatoblatta peninsularis*	BP cockr
PSEUDOSCORPIONES		*indet. species*	Pse
MEGALOPTERA	Corydalidae	*Archichauliodes diversus*	
NEUROPTERA	Hemerobiidae	*Drepanacra binocula*	
		Micromus tasmaniae	
HEMIPTERA	Tibicinidae	*Amphipsalta strepitans*	rc
		Kikihia new species	
	Margarodidae	*Coelostomidia ?zealandica*	grea
	Pentatomidae	*Oncacontias vittatus*	
	Miridae	*Bipuncticoris species*	
	Reduvidae	*?Empicoris sp.*	t
ORTHOPTERA	Tettigoniidae	*Conocephalus bilineatus*	
	Rhaphidophoridae	*Pleioplectron simplex*	
	Gryllidae	*Pteronemobius bigelowi*	
Diptera			fruit fly
	Acrididae	*Phaulacridium marginale*	gr
below to check			
COLEOPTERA	Carabidae	*Megadromus guerenii*	BP g
		Demetridia dieffenbachii	
	Cerambycidae	*Prionoplus reticularis*	
	Cleridae	*Phymatopoca sp. 1 indet.*	
		Phymatopoca sp. 2 indet.	
	Coccinellidae	*Coccinella leonina*	
		species indet.	
	Curculionidae	*Pentathrum sp.*	

	Scarabaeidae	*Costelytra zelandica*	Comm
		Odontria striata	str
		Odontria 'pale'	
		Odontria 'large'	
	Lucanidae	*Ceratognathus sp.*	s
	Oedemeridae	*Thelyphassa nr. brouni*	
	Anobidae	*Ptinus tectus*	sp
		Ptininae Indet. sp. 1	
		Ptininae Indet. sp. 2	
	Lathridiidae	*Lithostygnus sp.*	
	Corylophidae	*Anisomeristes sp.*	
	Dermestidae	*Trogoderma ?antimale*	
	Scirtidae	*sp. indet.*	
	Zopheridae	*Colydiinae indet.*	
		Pycnomerus sp. indet.	
HYMENOPTERA	Formicidae	*Monomorium antarcticum*	
	Ichneumonidae	*Netelia producta*	ichne
	Vespulidae	*Vespula vulgaris*	cor
LEPIDOPTERA	Hepialidae	*Wiseana copularis*	p
		Wiseana cervinata	p
		Wiseana umbraculata	stripe
	Nepticulidae	*Stigmella ilsea*	
	Tineidae	*Erechthias fulguritella*	
		Sagephora phortigera	
	Psychidae	*Liothula omnivora*	c
	Elachistidae	*Cosmiotes ombrodoca*	
	Yponomeutidae	*Zelleria sphenota*	
	Plutellidae	*Plutella antiphona*	
	Carposinidae	*Heterocrossa gonosemana*	
	Copromorphidae	*Phycomorpha metachrysa*	
	Gelechiidae	*Anisoplaca achyrota*	
		Kiwaia monophragma	
		Kiwaia schematica	
	Oecophoridae	*Phaeosaces apocrypta*	
		Phaeosaces coarctatella	

		Gymnobathra omphalota	
		Gymnobathra parca	
		Hierodoris s-fractum	
		Izatha copiosella	
		Izatha katadiktya	
		Izatha convulsella	
		Leptocroca scholaea	
		Tingena chloradelpha	
		Tingena siderodeta	
		Tingena melanamma	
		Tingena melinella	
		Tingena plagiatella	
		Tingena paula	
		Tingena nsp.	
		Trachypepla conspicuella	
	Stathmopodidae	*Stathmopoda endotherma*	
		Stathmopoda horticola	
		Stathmopoda nsp. "olearia"	
		Stathmopoda aposema	
		Stathmopoda holochra	
	Pterophoridae	*Platyptilia repletalis*	hebe
	Tortricidae	*Apoctena orthropis*	
		Capua intractana	
		Capua semiferana	
		Cnephasia jactatana	
		Ctenopseustis obliquana	
		Catamacta gavisana	
		Dipterina imbriferana	
		Harmologa amplexana	
		Harmologa scoliastes	
		Harmologa nsp.	
		Merophyas leucaniana	
		Planotortrix excessana	
		Prothlymna antiquana	
		New genus and species	
	Crambidae	*Deana hybreasalis*	
		Eudonia aspidota	
		Eudonia manganeutis	
		Eudonia steropaea	
		Eudonia philerga	
		Eudonia leptalea	
		Eudonia sabulosella	
		Eudonia submarginalis	
		Gadira acerella	
		Glaucocharis chrysochyta	
		Glaucocharis elaina	
		Hygraula nitens	
		Orocrambus flexuosellus	
		Orocrambus ramosellus	
		Orocrambus vittellus	
		Orocrambus vulgaris	
		Scoparia chalicodes	

		Scoparia halopis	
		Scoparia ustimacula	
		Udea flavidalis	
		Udea marmarina	
		Uresiphita maorialis	ko
	GEOMETRIDAE	*Asaphodes aegrota*	
		Asaphodes chlamydota	
		Austrocidaria callichlora	
		Austrocidaria gobiata	
		Austrocidaria similata	
		Chloroclystis inductata	
		Chloroclystis sphragitis	
		Cleora scriptaria	
		Declana griseata	
		Declana floccosa	
		Declana niveata	
		Declana junctilinea	
		Declana toreuta	
		Elvia glaucata	
		Epiphyrne verriculata	
		Epyaxa lucidata	
		Epyaxa rosearia	
		Epyaxa venipunctata	
		Gellonia dejectaria	
		Gellonia pannularia	
		Horisma suppressaria	
		Homodotis megaspilata	
		Helastia cinerearia	
		Helastia corcularia	
		Helastia triphragma	
		Pasiphila muscosata	
		Pasiphila sandycias	
		Pasiphila urticae	
		Poecilasthena schistaria	
		Pseudocoremia cineracia	
		Pseudocoremia indistincta	
		Pseudocoremia leucelaea	
		Pseudocoremia pergrata	
		Pseudocoremia suavis	
		Scopula rubraria	
		Tatosoma agrionata	
		Xanthorhoe semifissata	
	Noctuidae	*Agrotis ipsilon*	
		Bityla defigurata	
		Feredayia graminosa	
		Graphania beata	
		Graphania disjungens	
		Graphania infensa	
		Graphania insignis	
		Graphania lithias	
		Graphania mutans	
		Graphania plena	
		Graphania ustistriga	
		Meterana coeleno	
		Meterana decorata	

		Meterana diatmeta	
		Meterana exquisita	
		Meterana levis	
		Meterana ochthistis	
		Meterana stipata	
		Persectania aversa	
		Proteuxoa comma	
		Tmetolophota unica	
	Erebidae	*Nyctemera annulata*	m
		Rhapsa scotoscialis	
	Lycaenidae	*Lycaena "common copper"*	com
	Nymphalidae	*Vanessa gonerilla*	re
		Vanessa itea	yel
PHASMIDA	Phasmidae	*Clitarchus hookeri*	s
Exotic species			
LEPIDOPTERA	Tineidae	*Monopis ethelella*	
	Geometridae	*Chloroclystis filata*	
	Pieridae	*Pieris rapae*	wh
ARANEAE	Lycosidae	*Anoteropsis hilaris*	
	Gnaphosidae	*Zelanda kaituna*	
	Araneidae	*Cryptaranea albolineata*	
	Idiopidae	*Cantuaria sp. (probably C. dendyi)*	Trapdoor