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**INSECTS OF THE  
DANSEY ECOLOGICAL DISTRICT**

by

B. H. Patrick

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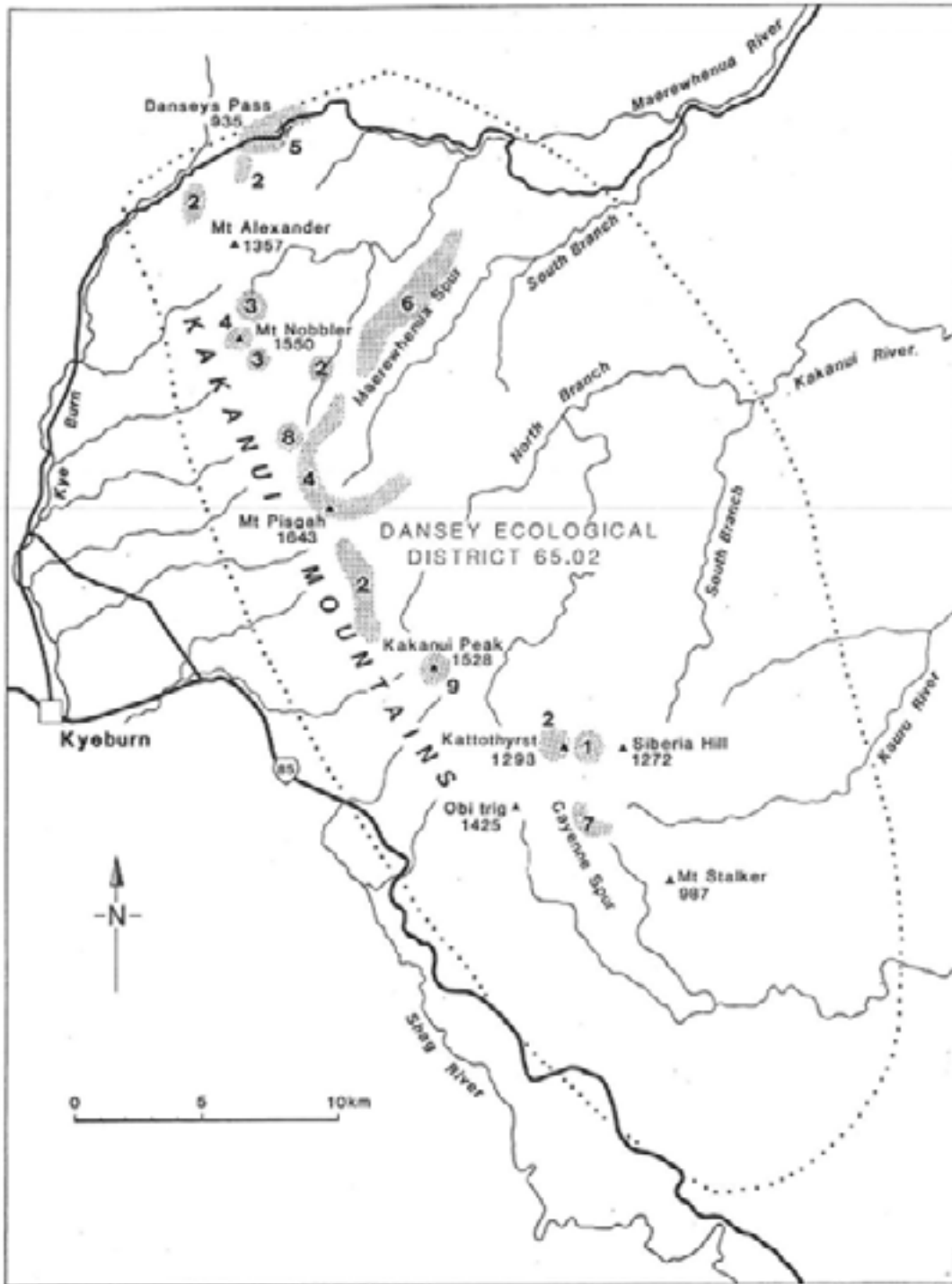


Fig. 1 Map of the Dansey Ecological District of the Kakanui Ecological Region

# INSECTS OF DANSEY ECOLOGICAL DISTRICT

by

B. H. Patrick

Conservancy Advisory Scientist, Otago Conservancy,  
Department of Conservation, Box 5244, Dunedin

## ABSTRACT

An insect survey of the Dansey Ecological District in the Kakanui Ecological Region produced 295 species in seven insect orders, with primary attention being paid to Lepidoptera. Key sites for the protection of insects in the ecological district are proposed to help in the development of the recommended areas for protection by a full Protected Natural Areas programme survey of the district. Biological and biogeographical studies of the fauna are reported on. These show the Dansey Ecological District to have a relatively diverse flora and fauna because it includes typical fauna of both South Canterbury and Central Otago.

## 1. INTRODUCTION

During the summer of 1989-1990 the Dansey Ecological District (Fig. 1) of the Kakanui Ecological Region was surveyed by a multi-disciplinary team as part of the Protected Natural Areas (PNA) Programme. A draft report was then released (Comrie 1991). To help define the proposed protected areas, I surveyed for insects, mostly Lepidoptera, and then produced a list of key sites for the district. These records were added to other data collected from over 48 expeditions to Danseys Pass, Mt Pisgah, Siberia Hill or Pisgah Spur (Patrick 1982, and unpublished material). The fauna, apart from Lepidoptera and conspicuous species of other orders, is still incompletely known, but the species list (Appendix) indicates that it is rich. No insect species is known to have its type locality in the ecological district, but a spider (*Hexathele ramsayi*) collected only at Mt Dasher Station was described by Forster and Wilton (1968). Several undescribed Lepidoptera species were first recognised on Dansey material.

The study area essentially covers the Kakanuis and their foothills. The mountains rise to 1643 m at Mt Pisgah and separate North Otago from Central Otago. Danseys Pass (935 m) separates the Kakanui Mountains from the St Marys Range to the north.

Key sites are listed in the conclusions section.

## 2. METHODS

Insects were surveyed from the high alpine areas down to the foothills. The following broad localities were covered:

- Danseys Pass to Livingstone, roadsides
- Danseys Pass to Mt Nobbler
- Maerewhenua Spur to Mt Pisgah
- Maniototo Plain to Mt Pisgah
- Livingstone to Pisgah Spur to Kakanui Peak
- Siberia Hill via Cayenne Spur and Mt Stalker
- Dunback to Pig Root Summit

Specimen collecting was mainly performed by hand collecting in the daytime with the aid of a net when appropriate. Light trapping for nocturnal species was performed only in the Danseys Pass area. Collecting in alpine areas was carried out by searching under rocks, gently beating various shrubs for larvae and adults, sweeping stream banks for aquatic insects and generally trying to disturb resting adult insects from rock faces, wetlands, cushion vegetation and grasslands. Lepidoptera larvae associated with a host were reared, where possible, to adult.

A dried collection was made of all insect species but the giant weta. These were sent live to P. Johns at Canterbury University for identification and then passed on to G. Gibbs at Victoria University for behavioural studies. The following persons identified and have retained specimens for other groups:

- A C Harris, Otago Museum: Pompilidae
- R Craw, DSIR Plant Protection: NZAC: Curculionidae
- B Barratt, MAFTech, Invermay: Balance of Coleoptera
- J Ward, Canterbury Museum: Trichoptera

I identified Lepidoptera, Cicadidae, Acrididae; specimens are stored in my private collection.

## 3. RESULTS AND DISCUSSION

The survey yielded 295 species of insect, from seven different orders. I concentrated on Lepidoptera: Not only are they taxonomically relatively well known, they are the third largest insect order in New Zealand (about 1800 species). They occupy a large range of habitats and are a very good indicator group for the possible presence of other insect taxa (Dugdale 1988). We can generalise with some validity to other insect orders from lepidopteran species diversity and biogeographic relationships.

Insect species with specialised habitat requirements were found to be present up to the highest points of the ecological district in the high alpine zone around Mt Pisgah and Pisgah Spur (Fig. 2). Both the alpine tall tussock and montane short tussock zones also were found to have characteristic faunas.

Patrick (1982) reported on the rich moth fauna of the Danseys Pass area and noted that the area had a characteristic late autumn/early winter emerging fauna. Several new species were discovered in that survey; when described, these may have Danseys Pass as their type locality. The present survey confirms the richness of the Lepidoptera fauna of the Kakanui Mountains and adds many new records, some noteworthy in being of typically western species. All insect species found in the survey are listed in the appendix by order.

There are seven main habitats in the ecological district:

### **3.1 Rock Bluffs and Tors**

A distinctive Lepidoptera fauna is present on rock bluffs and tors, usually with their larvae feeding on lichens, algae, mosses or detritus. Both *Scoriodyta suttonensis* and *Rhathamictis* n.sp. have case-bearing larvae living on rock faces in the lower parts of the study area, while higher up the cryptic *Eudonia torodes* and *Tingena lassa* abound on rocks. Three species (including one undescribed) of the genus *Dichromodes* frequent tors in the district, with their larvae feeding on various lichen species. The undescribed species is diurnal, and is green, blue and black (Fig. 6). It was found from 930-1450m on Maerewhenua Spur and Mt Stalker. It is known elsewhere from the Carrick and southern Old Man Ranges of Central Otago.

Rock bluffs at 1240 m on Cayenne Spur support an interesting vegetation assemblage. Two undescribed species of giant weevil in the genus *Lyperobius* (Fig. 9) were found together on *Aciphylla gracilis* here, but nowhere else in the study area. Both species are found in alpine areas to the north, associated with various *Aciphylla* species in similar habitat.

### **3.2 Short Tussock Grasslands and Shrubland**

In the foothills, there are large areas of modified and possibly induced short tussock grassland. Mixed shrublands persist in the gullies with matagouri often a feature of terraces. A large fauna of widespread non-forest moth species is found in these areas. The caddisfly species in the many streams are also widespread.

Uncommon moth species present include *Samana acutata*, *Cephalissia siria* and *Asaphodes recta*. The last two species have southern distributions; for *C. siria* this is the northern limit, although its host plant, *Fuchsia perscandens*, occurs much further north. Shrublands of *Coprosma*, *Rubus* and *Muehlenbeckia* support a reasonably diverse moth fauna of mainly widespread but representative species. The dry grasslands, although much modified and often dominated by exotic intertussock species, still have a residual native insect fauna, including many characteristic moths in the genera *Tmetolophota*, *Eudonia*, *Tingena* and *Orocrambus*.

### 3.3 Alpine Grasslands

The alpine grasslands of the Kakanui Mountains are dominated by *Chionochloa rigida*, but have as well a diverse assemblage of intertussock herbs, grasses and sedges; most of these are native, but introduced plants also occur. Characteristic Lepidoptera species include two species of tussock butterfly - *Argyrophenga antipodum* and *A. janitae* - and many genera of diurnal geometrid moths, of which *Aponotoreas insignis* is typical. Other Lepidoptera families conspicuous in this zone include the noctuids and crambids. The grassland cicada (*Kikibia angusta*) is ubiquitous, but an undescribed flightless chafer (*Prodontria* n.sp.) has only been found in the Danseys Pass area so far. Outside of the study area the chafer has been found on nearby Mt Buster and Mt Kyeburn. Several species of caddisfly were collected in streams within the alpine grasslands.

### 3.4 Wetlands

Small areas of sphagnum-dominated wetland are to be found at Danseys Pass. They support an autumn-emerging Lepidoptera fauna that is probably widespread across the Kakanui Mountains in that altitude range. The fauna contains undescribed genera and species of Hepialidae and Tortricidae, and including the distinctive winter-emerging *Eurythecta leucothrinca* (Patrick 1982). Elsewhere on the Kakanui Mountains wetlands occur extensively on Siberia Hill (Fig. 5), Mt Nobbler, area north-west of the Mt Pisgah, Kakanui Peak (Fig. 4) and Pisgah Spur. Some of the individual areas are quite small while those on Mt Siberia are large, but they all support a characteristic insect fauna that is representative of the study area. There were new records for several diurnal moth species typical of the Central Otago block mountain wetlands, including *Eudonia xysmatias* (Fig. 7), *Orocrambus scoparioides*, *O. lectus*, *Glyphipterix metasticta* and *Asaphodes nephelias*. The widespread but localised *Notoreas hexaleuca* was found in wetlands at each end of the Kakanui Mountains, with its larvae feeding on *Kelleria paludosa*. The moth *Scoparia pura* reaches its southern limit of distribution in the Kakanui Mountains, where it is found in upland wetlands. A distinctly-marked, narrow-winged tortricid moth, *Merophyas* sp.cf. *paraloxa* Meyrick, previously known only from the Lammermoor Range, was common on wetlands on Siberia Hill. The alpine caddisfly *Hudsonema aliena* is common in streams and seepages that cross the wetlands.

#### Figures opposite: Clockwise from top left:

**Fig. 2.** A view north over tall tussock *Chionochloa rigida* grassland to Mt Pisgah, 1643 m (centre left), with Pisgah Spur to the right. The road to Kakanui Peak can be seen descending the scree between the two peaks.

**Fig. 3.** Snowbanks of cushion plants north-west of Mt Pisgah at 1500-1550 m have many plants and insects that are characteristic of Central Otago alpine areas. *Celmisia baastii* and *Kelleria childii* are obvious in this scene.

**Fig. 4.** Moss bogs are locally common on the Kakanui Mountains, and this one on Kakanui Peak is rich in invertebrates. Typically, *Schoenus* is present (lower left).

**Fig. 5.** The broad wetlands on the volcanic Siberia Hill at 1200 m, showing Kattothyrst to the left, Mt Dasher in the middle and (in the far background) Kakanui Peak, with Mt Pisgah/Pisgah Spur to the right.





**Fig. 2**



**Fig. 3**



**Fig. 4**



**Fig. 5**

### 3.5 Snowbanks

Snowbanks are not a common feature of the Kakanui Mountains; in contrast, they are abundant on the mountains of Central Otago. A few small ones occur on the eastern side of Mt Pisgah and several kilometres north-west of Mt Pisgah at around 1550 metres (Fig. 3). They contain not only some of the characteristic plant species of such sites in Central Otago but some Lepidoptera also, including the small diurnal *Notoreas ortholeuca*, with larvae feeding on *Kelleria childii*, and two species of pompilid wasp previously recorded from Danseys Pass (Harris 1987).

### 3.6 Upland Shrubland

Shrublands dominated by *Leonobebe* (previously *Hebe*) *odora* (Scrophulariaceae) and *Coprosma* species occur at a modest number of places on the Kakanui Mountains. On Maerewhenua Spur, at 900 m, there is a site where shrublands are well developed. The insect fauna contains the black cicada *Maoricicada clamitans*, and several caddisflies, including *Hydrobiosis kiddi*, frequent the adjacent streams. Notable moth species present include *Austrocidaria stricta*, which was previously thought to be restricted to western alpine areas. The larvae of species in this genus feed on the leaves of *Coprosma* species. Cryptic lepidopterous larvae of the genus *Pasiphila* were found feeding on *Gaultheria crassa* flowers at this site, but as the adults have not yet emerged, specific identification is not yet possible. The diurnal tortricid species *Gelophaula* sp.cf. *praecipitalis* is also common here. These upland shrublands are important insect sites, containing a relatively diverse fauna that includes many local species.

### 3.7 High Alpine Fellfield and Herbfield

This occurs most extensively around Mt Pisgah and includes Pisgah Spur, Maerewhenua Spur and peaks north-west of Mt Pisgah, as well as a small area on Mt Nobbler. The insect fauna at this altitude has more in common with mountain ranges to the north and west than to Central Otago as is shown by the presence of the giant weta *Deinacrida connectens*, the grasshopper *Brachaspis nivalis*, and the diurnal moth *Notoreas ischnocyma*. These species are typical of Canterbury and the North Otago mountains. Also in this category is the alpine black butterfly *Percnodaimon merula*, which is locally common in the vicinity of Mt Pisgah. Elsewhere, it is known from the greywacke mountains further north or from western Otago and Southland.

Moths found in these high alpine areas of the Kakanui Mountains include the large and fast dayflier *Dasyuris hectori*, the blue and orange *Scoparia sideraspis*, *Orocrambus melampetrus*, *Notoreas* n.sp. and *Scoparia nomeutis*. The *Notoreas* species is also known from the Dunstan Mountains, Hawkdun Range and the St Marys Range. A new species of *Trachypepla* was found on Mt Nobbler in *Dracophyllum muscoides* cushionfield. It is also known from a site in the adjacent St Marys Ecological District. Interestingly, *Trachypepla* is generally a genus characteristic of forests.

#### 4. NEW DISTRIBUTIONAL RECORDS

Many insect species not found in the Rock and Pillar/Lammermoor/Rough Ridge alpine zone to the south of the Kakanui Mountains, but widely distributed in alpine areas farther north such as the Ida, St Marys and Kirkliston ranges, were found during this survey. For these species this is a significant extension in their known range, and the Kakanui Mountains becomes their south-east distributional limit.

Both of the alpine black cicada species recorded in the Mt Pisgah area represent new eastern records, although *Maoricicada clamitans* was recorded by Dugdale and Fleming (1978) from Danseys Pass. Bigelow (1967) had recorded the grasshoppers *Sigaus campestris* and *S. australis* from Danseys Pass but believed *Brachapsis nivalis* to be absent from that area. The present survey found *B. nivalis* to be common in high alpine fellfield of the Kakanui Mountains. The giant weta *Deinacrida connectens* (Fig. 8) and the alpine black butterfly *Percnodaimon merula* had both been unknown in the study area (Gibbs 1980), although suitable habitat obviously existed. Significant extensions of known range are also recorded for the moths *Ichneutica dione*, *Austrocidaria stricta*, as all three were only previously recorded from localities much farther west in the South Island.

For both undescribed species in the genus *Merophyas* and the one *Dichromodes*, the records on the Kakanui Mountains represent significant extensions of known range. One *Merophyas* had only been known from the Lammermoor Range, while the other two species had been discovered in the western part of Central Otago, in the Old Man and Carrick ranges. Several Central Otago species were found on the Kakanui Mountains for the first time, including *Notoreas chioneres*, *N. ortholeuca*, *Eudonia xysmatias* (Fig. 7), *Orocrambus lectus* and *Asaphodes nephelias*. Very rare or extremely localised species found included *Notoreas regilla*, *Asaphodes cosmadora* and *Ichneutica notata*.

**Figures opposite: Clockwise from top left:**

**Fig. 6.** The cryptically patterned undescribed species of *Dichromodes* was found around tors on Maerewhenua Spur and the Mt Stalker area. Wingspan = 25 mm.

**Fig. 7.** *Eudonia xysmatias* is a diurnal species that inhabits various wetlands. The species is characteristic of the Central Otago block mountains. Length = 13 mm.

**Fig. 8.** The giant weta *Deinacrida connectens* was locally common around Mt Pisgah (1643 m) under larger rocks in fellfield areas. The females were 72 mm long, with 50 mm antennae.

**Fig. 9.** Two undescribed species of the giant weevil *Lyperobius* were found together on a single *Aciphylla gracilis* plant on Cayenne Spure, Siberia Hill at 1240 m. Larger weevil is 24 mm.



**Fig. 6**



**Fig. 7**



**Fig 8.**



**Fig. 9**

## 5. FEATURES OF THE FAUNA

Several features of the Kakanui Mountain's insect fauna are noteworthy. First, many genera are represented by a large number of species – *Orocrambus*, *Eudonia*, *Scoparia* (Crambidae), *Glyphipterix* (Glyphipterigidae), *Gelophaula* (Tortricidae), *Asaphodes* and *Notoreas* (Geometridae). Barratt and Patrick (1987) noted this from their study area at the Great Moss Swamp and attributed it to the strategic location of the site and the resulting mixing of faunae from adjacent areas. The same conclusions are probably valid for the Kakanui Mountains as well, as although geologically mapped as Haast Schist group they represent a hybrid zone of semischists and metagreywackes (Lillie 1980). The strategic location of the Kakanui Mountains, in a transition zone between the greywackes of Canterbury and metamorphic schists of Otago, combined with the present-day ecological diversity of the range, probably explains the fact that the fauna is a mixture of typically Canterbury and typically Central Otago insects. When groups of species characteristic of each of these two areas are brought together, as they are on the Kakanui Mountains, then the result is - as noted - a large total number of genera.

Another feature of the fauna of the Kakanui Mountains is the number of diurnal species in normally nocturnal groups, particularly the larentine moths. The majority of the Geometridae recorded in this study are in the subfamily Larentiinae; Common's (1990) observation for upland Australian larentines that they are either diurnal or readily flushed from vegetation during the daytime, many have orange hindwings and are conspicuous in flight is relevant here, too. Many of the Tortricidae, Choreutidae, Crambidae and a few members of the Noctuidae are diurnal as well.

Finally, the fauna has a strong autumn-emerging element, which is characteristic of the eastern South Island. This element is also characterised by many species of Hepialidae, Tortricidae, Crambidae and Geometridae. It is surprising but not uncommon to find the insects flying about in the sunshine in May and early June, when snow may cover half the ground. The diurnal species *Eurythecta leucothrinca* is often locally abundant in grasslands in the late autumn to early winter. Many of these are undescribed, as they were only detected within the last decade (Patrick 1982, Barratt and Patrick 1987). Most are found in or close to damp areas including sphagnum wetlands where several are known to breed (Grehan and Patrick 1984).

## 6. CONCLUSIONS AND LIST OF KEY SITES

The Dansey Ecological District contains a predominantly native insect fauna at all altitudes, despite increasing modification at lower altitudes. This fauna has high conservation value both for its relatively high diversity (as shown by the number of different Lepidoptera) and for its quality, which reflects the quality of habitats present. The native insect fauna, particularly grasshoppers and the polyphagous larvae of many moths may play an important role in maintaining the integrity of alpine ecosystems against invading exotic plants by eating the seedlings and therefore not allowing the invader to become established, as in Australia (McQuillan 1986). Useful research could be directed at confirming this situation for New

Zealand because of the impending threat to alpine ecosystems here from invasive weeds such as stonecrop, hawkweeds and browntop. The fauna is important too for the presence of nationally rare species such as the moths *Cephalissia siria*, *Notoreas regilla* and *Scoparia pura*.

Biogeographically the fauna is composite, with a strong Central Otago element and an increasingly strong northern (St Marys Range, South Canterbury, etc.) element as altitude increases. No species of insect is known to be exclusively confined to the ecological district, although many as yet undescribed species were first discovered within it. Some of the insects are characteristic of the Dansey Ecological District, even though they can be found just outside it as well.

Using the above information and taking into account the need to identify the best-quality and most representative insect communities of the district, I consider the following sites as "the key sites in the Dansey Ecological District for the conservation of insects". Locations which can be specifically identified are marked on the map (Fig. 1).

- 1 - extensive wetlands on Siberia Hill extending to Kattothyrst
- 2 - shrublands at the south end of Maerewhenua Spur, summit ridge south of Mt Pisgah, below Siberia Hill, Danseys Pass area and on the slopes of Kattothyrst. Combine with montane rock bluffs if practical.
- 3 - wetlands both north and south of Mt Nobbler
- 4 - high alpine fellfield, cushionfield and herbfield on Mt Pisgah, Mt Nobbler, Maerewhenua and Pisgah Spurs
- 5 - grassland/herbfield/wetland at Danseys Pass summit
- 6 - rock tors on Maerewhenua Spur
- 7 - steep rock bluffs of Cayenne Spur.
- 8 - snowbanks at head of Maerewhenua Spur and below Mt Pisgah
- 9 - wetlands and grasslands on Kakanui Peak

In addition to the areas marked on the map, all snowbank areas and alpine grasslands, especially those on the eastern faces and spurs of the range, should be identified.

All of these areas should be immediately identified as areas of major conservation importance. Their value must be taken into account in future planning for this area.

## **7. ACKNOWLEDGEMENTS**

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**APPENDIX I : LIST OF SPECIES REPORTED  
FROM THE DANSEY ECOLOGICAL DISTRICT**

**LEPIDOPTERA** (258 species)

**NEPTICULIDAE**

<i>Stigmella ilsea</i> Donner & Wilkinson	-	900 m	larvae mine <i>Olearia rugosa</i>
<i>Stigmella oriastra</i> (Meyrick)	-	900-950 m	larvae mine <i>Celmisia densiflora</i>
<i>Stigmella progonopsis</i> (Meyrick)	-	900 m	larvae mine <i>Gaultheria crassa</i>

**MNESARCHAEIDAE**

<i>Mnesarchaea paracosma</i> Meyrick	Dec-Jan	950 m	common
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**HEPIALIDAE**

<i>Aorata</i> n.sp.1	Mar-Apr	950-1300 m	large, nocturnal; together at Danseys
Pass			
<i>Aorata</i> n.sp.2	Mar	950-1300 m	
<i>Dioxycanus fuscus</i> (Philpott)	Dec	1100 m	crepuscular
<i>Wiseana cervinata</i> (Walker)	Sep-Dec	<600 m	-
<i>Wiseana mimica</i> (Philpott)	Dec	1260 m	Siberia Hill
<i>Wiseana umbraculata</i> (Guenée)	Oct-Jan	to 950 m	-
Oxycaninae n.gen. et sp.	Apr	900-1300 m	larvae in sphagnum bogs

**PSYCHIDAE**

<i>Mallobathra crataea</i> Meyrick	Jan	950 m	-
<i>Orophora unicolor</i> (Butler)	-	950-1300 m	larvae and cases only
<i>Rhabdamictis</i> n.sp.	-	250-600 m	case larvae on cliffs
<i>Scoriodyta suttonensis</i> Hättenschwiler	-	250 m	case larvae on cliffs

**GRACILLARIIDAE**

<i>Caloptilia</i> n.sp.	Mar-Apr	950 m	larvae on <i>Gaultheria depressa</i>
<i>Caloptilia elaeas</i> (Meyrick)	Oct-Jun	<1150 m	larvae on <i>Coriaria</i>
<i>Caloptilia linearis</i> (Butler)	Nov	500 m	larvae on <i>Coriaria</i>

**YPONOMEUTIDAE**

<i>Orthenches chlorocoma</i> (Meyrick)	Jan-Dec	<800 m	larvae on <i>Carmichaelia</i>
<i>Orthenches similis</i> (Philpott)	Dec-Mar	950 m	larvae on <i>Dracophyllum</i>
<i>Phylacodes cauta</i> Meyrick	Sep	950 m	larvae on sedges
<i>Plutella antiphona</i> Meyrick	Mar-Apr	<500 m	larvae on crucifers
<i>Plutella xylostella</i> (L.)	Jan-Dec	<500 m	larvae on crucifers
<i>Protosynaema quaestuosa</i> Meyrick	Apr	950 m	larvae on <i>Carex</i>

**GLYPHIPTERIGIDAE**

<i>Glyphipterix achlyoessa</i> (Meyrick)	Oct-Dec	<500 m	larvae bore <i>Juncus</i>
<i>Glyphipterix acrotecta</i> (Meyrick)	Oct-Dec	600 m	-
<i>Glyphipterix barbata</i> (Philpott)	Oct-Dec	<800 m	grasslands
<i>Glyphipterix cionophora</i> (Meyrick)	Feb-Mar	<600 m	-
<i>Glyphipterix erastis</i> Meyrick	Dec-Jan	<1100 m	-
<i>Glyphipterix iocheaera</i> Meyrick	Nov-Dec	<600 m	-
<i>Glyphipterix metasticta</i> Meyrick	Feb	1200 m	wetlands
<i>Glyphipterix nephoptera</i> Meyrick	Dec-Mar	<500 m	-
<i>Glyphipterix oxymachaera</i> (Meyrick)	Nov-Jan	1400 m	short grassland

**LYONETIDAE**

<i>Leucoptera spartifoliella</i> (Hübner)	-	500 m	on <i>Cytisus</i>
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**GELECHIIDAE**

<i>Kiwaia aerobatis</i> (Meyrick)	Jan	950 m	-
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<i>Megacraspedus calamogonus</i> Meyrick	Jan-Dec	to 1100 m	larvae in <i>Chionochoa</i> seed heads
<b>MOMPHIDAE</b>			
<i>Zapyrastra</i> n.sp.	-	250 m	on <i>Haloragis erecta</i> mining leaves
<b>OECOPHORIDAE</b>			
<i>Tingena lassa</i> (Philpott)	Nov	to 1100 m	rock faces
<i>Tingena paratrimma</i> (Meyrick)	Dec	1400 m	herbfield
<i>Izatha convulsella</i> (Walker)	Dec	1100 m	rock faces
<i>Gymnobathra parca</i> (Butler)	Nov	250-500 m	-
<i>Gymnobathra philadelphia</i> Meyrick	Jan	250-500 m	-
<i>Gymnobathra sarcoxantha</i> Meyrick	Oct-Mar	<1200 m	larva in cases under <i>Cyatbodes colensoi</i>
<i>Oxythecta austrina</i> (Meyrick)	Oct-Nov	1200-1400 m	larvae associated with <i>Leucopogon fraseri</i>
<i>Trachypepla</i> n.sp.	Feb	1500 m	cushionfield Mt Nobbler
<b>ELACHISTIDAE</b>			
<i>Cosmiotes</i> n.sp.	Jan	1100 m	grasslands
<i>Elachista thallopbor</i> Meyrick	Oct-Dec	500-950 m	wetlands
<i>Cosmiotes ombrodoca</i> (Meyrick)	Oct-Dec	300-1240 m	-
<b>CHOREUTIDAE</b>			
<i>Asterivora chatuidea</i> (Clarke)	Sep-Oct	250-500 m	larvae on <i>Helicbrysum aggregatum</i>
<i>Asterivora marmarea</i> (Meyrick)	Dec-Feb	980-1300 m	larvae on <i>Celmisia gracilentia</i>
<i>Asterivora microlitha</i> (Meyrick)	Dec	800-900 m	larvae on <i>Helicbrysum bellidioides</i>
<i>Asterivora symbolaea</i> (Meyrick)	Jan-Mar	950 m	larvae on <i>Celmisia densiflora</i>
<b>TORTRICIDAE</b>			
<i>"Capua" semiferana</i> (Walker)	Jan-Dec	<600 m	-
<i>Cnephasia ochnosema</i> Meyrick	April	600-900 m	-
<i>Ctenopseustis obliquana</i>	Jan-Feb	<500 m	polyphagous
<i>Epichorista aspistiana</i> (Meyrick)	Jan	1100 m	larvae on <i>Acaena</i>
<i>Epichorista hemionana</i> (Meyrick)	Feb-Mar	<1100 m	larvae on <i>Acaena</i>
<i>Epichorista lindsayi</i> (Philpott)	Feb	1100-1450 m	-
<i>Epichorista</i> cf. <i>siriana</i> (Meyrick)	Feb	1200 m	wetlands
<i>Epiphyas postvittana</i> (Walker)	Jan-Dec	<500 m	polyphagous
<i>Eurythecta phaeoxyla</i> Meyrick	Feb	930 m	larvae on herbs
<i>"Eurythecta" leucothrinca</i> (Meyrick)	Apr-Jun	950 m	brachypterous female
<i>Gelophaula aridella</i> Clarke	Dec-Jan	1600 m	Mt Pisgah only
<i>Gelophaula praecipitalis</i> Meyrick	Dec-Feb	900 m	larvae in <i>Celmisia lyallii</i>
<i>Gelophaula tributaria</i> (Philpott)	Jan	1100 m	-
<i>Gelophaula</i> n.sp.1	Nov-Feb	950-1000 m	larvae in <i>Celmisia densiflora</i> rosettes
<i>Gelophaula</i> n.sp.2	Jan-Feb	1100-1300 m	larvae in <i>Celmisia brevifolia</i> rosettes
<i>Harmologa oblongana</i> (Walker)	Feb	<500 m	larvae on <i>Muehlenbeckia</i>
<i>Harmologa sisyrana</i> Meyrick	Feb-Mar	<600 m	larvae on <i>Cassinia</i>
<i>Merophyas</i> n.sp.1	Feb	1000 m	Danseys Pass only
<i>Merophyas</i> n.sp.2	Dec	1200 m	Siberia Hill wetlands
<i>Merophyas leucantiana</i> (Walker)	Oct-Apr	<600 m	polyphagous
<i>Protilbona fugitivana</i> Meyrick	Dec	1520 m	larvae on <i>Potamogeton</i>
<i>Planotortrix excessana</i> (Walker)	Jan-Dec	<600 m	polyphagous
<i>Pyrrotis plagiatana</i> (Walker)	Jan-Dec	<600 m	polyphagous
gen. et sp. indet.	Mar-Jun	400-1200 m	brachypterous female; white stripes;
<b>PTEROPHORIDAE</b>			
<i>Platyptilia repletalis</i> (Walker)	Feb-Apr	<950 m	larvae on <i>Plantago</i>
<i>Stenoptilia orites</i> Meyrick	Feb-May	950-1200 m	larvae in <i>Brachyglottis bellidioides</i> flowers

<i>Pterophorus innotatalis</i> Walker	Dec	to 1500 m	larvae on <i>Dichondra brevifolia</i>
<b>LYCAENIDAE</b>			
<i>Lycaena boldenarum</i> White	-	<1300 m	larvae on <i>Muelbenbeckia axillaris</i>
<i>Lycaena salustius</i> (Fabricius)	-	<1000 m	larvae on <i>Muehlenbeckia complexa</i>
<i>Zizina otis oxleyi</i> (Felder)	-	-	on clovers
<b>NYMPHALIDAE</b>			
<i>Argyropbenga antipodum</i> Doubleday	Oct-Apr	<1300 m	larvae on <i>Chionochloa</i>
<i>Argyropbenga janitae</i> Craw	Nov-Feb	1000-1300 m	larvae on <i>Chionochloa</i>
<i>Bassaris gonerilla</i> (Fabricius)	Oct-May	<1600 m	larvae on tree nettle
<i>Bassaris itea</i> (Fabricius)	Oct-May	<1600 m	larvae on introduced nettle
<i>Cynthia kershawi</i> McCoy	Oct, Jan	1200-1300 m	vagrant to area
<i>Pernodaimon merula</i> (Hewittson)	Dec-Feb	>1200 m	larvae on <i>Poa colensoi</i>
<b>PIERIDAE</b>			
<i>Pieris rapae</i> (L.)	Oct-Apr	to 1300 m	larvae on crucifers
<b>CRAMBIDAE</b>			
<i>Glaucobaris elaina</i> (Meyrick)	Nov-Mar	<500 m	cliff sites
<i>Glaucobaris epiphaea</i> (Meyrick)	Dec-Jan	950 m	-
<i>Glaucobaris helioctypa</i> (Meyrick)	Dec-Feb	950-1350 m	wetlands
<i>Glaucobaris interrupta</i> (Felder)	Feb	900 m	shrublands
<i>Glaucobaris pyrsophanes</i> (Meyrick)	Dec	<600 m	
<i>Orocrambus aethonellus</i> (Meyrick)	Oct-Jan	<1450 m	wet grasslands
<i>Orocrambus apicellus</i> (Zeller)	Dec	to 600-1000 m	wetlands
<i>Orocrambus corruptus</i> (Butler)	Sep-Jan	<1200 m	dry grassland/ herbfield
<i>Orocrambus crenaeus</i> (Meyrick)	Dec-Jan	950-1400 m	<i>Chionochloa</i> areas
<i>Orocrambus cyclopicus</i> (Meyrick)	Feb-Apr	<600 m	-
<i>Orocrambus dicrenellus</i> (Meyrick)	Dec-Feb	950-1200 m	<i>Chionochloa</i> areas
<i>Orocrambus encoborus</i> (Meyrick)	Jan-May	<500 m	
<i>Orocrambus flexuosellus</i> (Doubleday)	Dec	<1500 m	exotic grasses
<i>Orocrambus lectus</i> (Philpott)	Dec	1270 m	wetlands
<i>Orocrambus lewisi</i> Gaskin	Oct-Apr	<500 m	on <i>Poa cita</i>
<i>Orocrambus machaeristes</i> Meyrick	Jan	1300-1600 m	short grasses
<i>Orocrambus melampetrus</i> Purdie	Jan	1100-1420 m	scree
<i>Orocrambus philpotti</i> Gaskin	Dec-Jan	900 m	
<i>Orocrambus ramosellus</i> (Doubleday)	Nov-May	<500 m	exotic grasses
<i>Orocrambus scoparioides</i> Philpott	Dec	1350 m	wetlands
<i>Orocrambus tritonellus</i> (Meyrick)	Nov-Jan	600-1200 m	<i>Chionochloa</i> areas
<i>Orocrambus vittellus</i> (Doubleday)	Dec-Mar	<950 m	-
<i>Orocrambus vulgaris</i> (Butler)	Feb-Apr	<600 m	dry grasslands
<i>Orocrambus xanthogrammus</i> (Meyrick)	Jan	to 950 m	riverbed areas
<i>Musotima nitidalis</i> (Walker)	Jan	<500 m	ferns
<i>Deana hybreasalis</i> (Walker)	Nov-May	<500 m	<i>Ranunculus</i>
<i>Diasemia grammalis</i> Doubleday	Oct-Mar	<1200 m	dry herbfield
<i>Heliothela atra</i> (Butler)	Jan	1000 m	dry short-sward sites
<i>Mnesictena adversa</i> (Philpott)	Mar-Apr	400-950 m	-
<i>Mnesictena flavidalis</i> (Doubleday)	Oct-May	<1100 m	-
<i>Proteroeca comastis</i> Meyrick	Dec	c. 1100 m	herbfield
<i>Eudonia</i> n.sp.1	Dec	1500 m	-
<i>Eudonia</i> n.sp.2	Apr-Jun	950 m	-
<i>Eudonia aspidota</i> (Meyrick)	Dec	<600 m	-
<i>Eudonia asterisca</i> (Meyrick)	Jan	<500 m	-
<i>Eudonia atmogramma</i> (Meyrick)	Feb-Apr	<500 m	-
<i>Eudonia axena</i> (Meyrick)	Dec	950-1450 m	-
<i>Eudonia cataxesta</i> (Meyrick)	Nov-Mar	<500 m	-

<i>Eudonia cbalara</i> (Meyrick)	Nov-Dec	500-1100 m	-
<i>Eudonia critica</i> (Meyrick)	Dec	900-1000 m	rock tors
<i>Eudonia declavata</i> Meyrick	Jan	1200 m	-
<i>Eudonia deltophora</i> Meyrick	Feb-Apr	950-1050 m	-
<i>Eudonia epicremna</i> (Meyrick)	Dec-Feb	950 m	wetlands
<i>Eudonia feredayi</i> Knaggs	Oct-May	<1100 m	-
<i>Eudonia luminatrix</i> Meyrick	Dec	<950 m	-
<i>Eudonia melanaegis</i> Meyrick	Jan	<950 m	-
<i>Eudonia niphospora</i> Meyrick	Feb-Mar	1200 m	-
<i>Eudonia octophora</i> (Meyrick)	Mar-Apr	<950 m	-
<i>Eudonia oculata</i> Philpott	Feb	1200 m	-
<i>Eudonia organaea</i> Meyrick	Dec-Feb	950-1450 m	-
<i>Eudonia philerga</i> Meyrick	Oct-Apr	500-930 m	-
<i>Eudonia psammitis</i> (Meyrick)	Dec	1350 m	-
<i>Eudonia sabulosella</i> (Walker)	Sep-Dec	<950 m	-
<i>Eudonia steropaea</i> Meyrick	Nov-Feb	<1000 m	-
<i>Eudonia torodes</i> (Meyrick)	Nov-Jan	1100 m	rocky areas
<i>Eudonia trivirgata</i> (Felder)	Nov-Jan	<1200 m	-
<i>Eudonia xysmatias</i> (Meyrick)	Dec	1200-1300 m	wetlands
<i>Scoparia autocbroa</i> Meyrick	Dec-Jan	900-1350 m	-
<i>Scoparia claranota</i> Howes	Dec	1200 m	-
<i>Scoparia ejuncida</i> Knaggs	Feb-Mar	1000 m	-
<i>Scoparia ergatis</i> Meyrick	Dec	1100-1350 m	-
<i>Scoparia exilis</i> Knaggs	Oct-Mar	<1100 m	-
<i>Scoparia nomeutis</i> (Meyrick)	Dec	1300-1580 m	herbfield
<i>Scoparia pallidula</i> Philpott	Dec	900 m	local
<i>Scoparia petrina</i> (Meyrick)	Feb-Mar	900 m	-
<i>Scoparia pura</i> Philpott	Nov-Dec	1200 m	wetlands, local
<i>Scoparia rotuella</i> (Felder)	Apr	<500 m	-
<i>Scoparia sideraspis</i> Meyrick	Jan-Feb	1100-1200 m	scree areas

#### GEOMETRIDAE

<i>Gellonia pannularia</i> (Guenée)	Jan	< 600 m	-
<i>Pseudocoremia indistincta</i> (Butler)	Dec-Jan	<600 m	on <i>Muehlenbeckia</i>
<i>Pseudocoremia melinata</i> (Felder)	Jan	300-500 m	on <i>Carmichaelia</i>
<i>Pseudocoremia suavis</i> Butler	Jan-Dec	<600 m	polyphagous
<i>Sestra flexata</i> (Walker)	Oct-Dec	<500 m	larvae on ferns
<i>Ischalis fortinata</i> (Guenée)	Nov	<500 m	larvae on <i>Polystichum</i>
<i>Arctesthes calayrrba</i> Butler	Dec-Mar	1200-1400 m	larvae on herbs
<i>Asaphodes abrogata</i> (Walker)	Mar-Apr	<600 m	larvae on <i>Plantago</i>
<i>Asaphodes chlamydota</i> (Meyrick)	Oct	<500 m	-
<i>Asaphodes clarata</i> (Walker)	Feb-Mar	900-1300 m	larvae on herbs
<i>Asaphodes cosmadora</i> (Meyrick)	Jan-Feb	1000-1300 m	
<i>Asaphodes helias</i> (Meyrick)	Jan-Feb	1100-1300 m	larvae on herbs
<i>Asaphodes nephelias</i> (Meyrick)	Feb-Mar	1200 m	wetlands
<i>Asaphodes omichlias</i> (Meyrick)	Feb	1200 m	-
<i>Asaphodes prasinius</i> (Meyrick)	Dec	<600 m	-
<i>Asaphodes recta</i> (Philpott)	Mar-Apr	<600 m	-
<i>Austrocidaria callichlora</i> (Butler)	Jan	to 600 m	larvae on <i>Coprosma</i>
<i>Austrocidaria gobiata</i> (Felder)	Oct-Apr	<500 m	larvae on <i>Coprosma</i>
<i>Austrocidaria stricta</i> (Philpott)	Feb-Mar	900 m	larvae on <i>Coprosma</i>
<i>Cephalissa stria</i> Meyrick	Oct	1300 m	larvae on <i>Fuchsia perscandens</i>
<i>Chloroclystis nereis</i> Meyrick	Jan-Feb	950-1200 m	in <i>Celmisia</i> flowers
<i>Dasyuris anceps</i> (Butler)	Jan-Apr	950-1300 m	larvae on <i>Anisotome</i>
<i>Dasyuris austrina</i> Philpott	Jan-Feb	1000-1300 m	larvae on <i>Anisotome</i>
<i>Dasyuris bectori</i> (Butler)	Dec-Jan	1600-1643 m	on <i>Anisotome</i>
<i>Dasyuris leucobathra</i> Meyrick	Nov	950 m	larvae on <i>Anisotome</i>

<i>Dasyuris partheniata</i> Guenée	Oct	<950 m	larvae on <i>Aciphylla</i>
<i>Dasyuris transaurea</i> Howes	Oct-Nov	950-1300 m	larvae on <i>Anisotome</i>
<i>Elvia glaucata</i> Walker	Jan	<600 m	larvae on <i>Rubus</i>
<i>Epicyme rubropunctaria</i> (Doubleday)	Aug-Apr	<500 m	larvae on <i>Haloragis erecta</i>
<i>Epiphryne verriculata</i> (Felder)	Nov, May	<500 m	larvae on <i>Cordyline</i>
<i>Epyaxa lucidata</i> Walker	Mar-May	<500 m	-
<i>Helastia christinae</i> Craw	Oct-Dec	to 600 m	-
<i>Helastia cinerearia</i> (Doubleday)	Sep-May	<800 m	larvae on mosses
<i>Helastia corcularia</i> (Guenée)	Sep-Apr	<950 m	larvae on lichens and herbs
<i>Helastia cryptica</i> Craw	Nov-Dec	600 m	larvae on <i>Melicactus alpinus</i>
<i>Helastia tripbragma</i> (Meyrick)	Dec-Jan	<600 m	-
" <i>Hydriomena</i> " <i>deltoidata</i> (Walker)	Jan-Feb	to 500 m	-
" <i>Hydriomena</i> " <i>rixata</i> (Felder)	Nov-Feb	<600 m	larvae on <i>Epilobium</i>
" <i>Xanthorhoe</i> " <i>occulta</i> Philpott	Oct-Jan	600-1100 m	larvae will eat flowers in captivity
<i>Xanthorhoe orophylla</i> (Meyrick)	Jan-Feb	1100-1300 m	larvae on herbs: <i>Cardamine</i> ,
<i>Lagenifera</i>			
<i>Xanthorhoe semifissata</i> (Walker)	Feb-Apr	<600 m	larvae on herbs: <i>Cardamine</i>
<i>Aponotoreas anthracias</i> (Meyrick)	Jan-Feb	1100-1300 m	larvae on <i>Dracophyllum</i> , <i>Leucopogon colensoi</i>
<i>Aponotoreas insignis</i> (Butler)	Jan-Mar	950-1300 m	larvae on <i>Chionochloa</i>
<i>Paranotoreas brephosata</i> (Walker)	Nov-Mar	950-1300 m	larvae on <i>Epilobium</i>
<i>Paranotoreas ferox</i> (Butler)	Dec-Feb	1000-1200 m	larvae eat <i>Brachyglottis bellidioides</i> in captivity
<i>Paranotoreas zopyra</i> (Meyrick)	Nov-Mar	900-1300 m	larvae on <i>Helicbrysum bellidioides</i>
<i>Notoreas</i> n.sp.	Jan-Mar	1100-1600 m	on <i>Kelleria villosa</i>
<i>Notoreas chioneres</i> Prout	Dec-Feb	1400-1640 m	larvae on <i>K. villosa</i>
<i>Notoreas galaxias</i> Hudson	Feb-Mar	950-1100 m	on <i>Kelleria</i> spp.
<i>Notoreas hexaleuca</i> (Meyrick)	Nov-Jan	950-1500 m	larvae on <i>Kelleria</i> spp.
<i>Notoreas ischnocyma</i> Meyrick	Dec-Jan	1600-1640 m	-
<i>Notoreas ortholeuca</i> Hudson	Feb-Mar	1500 m	larvae on cushion <i>Kelleria</i> in snowbanks
<i>Notoreas paradelpa</i> Meyrick	Nov-Jan	950-1250 m	larva on <i>Pimelea</i> , <i>Kelleria</i>
<i>Notoreas perornata</i> (Walker)	Nov-Feb	950-1200 m	larvae on <i>Pimelea</i> spp.
<i>Notoreas regilla</i> Philpott	Feb	1100 m	larvae on <i>Pimelea</i> sp.
<i>Pasiphila</i> n.sp.	Oct-Nov	to 1200 m	larvae on flowers of <i>Celmisia</i> ,
<i>Brachyglottis</i> , <i>Leonobebe</i>			
<i>Pasiphila bilineolata</i> (Walker)	Dec	to 1000 m	larvae on <i>Hebe</i> spp.
<i>Pasiphila rubella</i> (Philpott)	Feb-Mar	1200 m	larvae on <i>Leonobebe</i>
<i>Pasiphila</i> sp.	-	900 m	larvae on <i>Gaultheria crassa</i> flowers
<i>Dichromodes gypsotis</i> Meyrick	Oct-Nov	<700 m	larvae on lichens
<i>Dichromodes sphaeriata</i> (Felder)	Oct-Feb	<950m	larvae on lichens
<i>Dichromodes</i> n.sp.	Dec	930-1450 m	larvae on lichens
<i>Scopula rubraria</i> (Doubleday)	Oct-May	<600 m	on <i>Plantago</i>
<i>Samana acutata</i> Butler	Jan	600 m	larvae on <i>Carmichaelia</i>
<b>ARCTIIDAE</b>			
<i>Metacrias strategica</i> (Hudson)	Dec	900-1200 m	larvae on herbs and grasses, Siberia
Hill			
<i>Metacrias buttoni</i> (Butler)	-	1260 m	Kattothyrst
<i>Nyctemera annulata</i> (Boisduval)	Oct-Mar	<700 m	larvae on <i>Senecio</i> spp.
<b>NOCTUIDAE</b>			
<i>Celama parvitis</i> (Howes)	Dec	250-600 m	on <i>Helicbrysum aggregatum</i>
<i>Bityla defigurata</i> (Walker)	Jan-Dec	to 950 m	on <i>Muehlenbeckia australis</i>
<i>Rictonis comma</i> (Walker)	Oct-Mar	<950 m	on grasses and herbs
<i>Agrotis ipsilon anietuma</i> (Walker)	Nov-May	<950 m	-
<i>Aletia cuneata</i> Philpott	Jan-Feb	1200 m	larvae on herbs

<i>Aletia longstaffi</i> (Howes)	Mar-Apr	950-1100 m	adults on <i>Dracophyllum</i> flowers; larvae on <i>Dracophyllum</i> and herbs
<i>Aletia moderata</i> (Walker)	Nov-Feb	to 500 m	-
<i>Aletia obsecrata</i> Meyrick	Jan	1200 m	-
<i>Aletia virescens</i> (Butler)	Feb-Apr	600-1000 m	larvae on <i>Epilobium</i> and other herbs
<i>Grabantia agorastis</i> (Meyrick)	Dec-Jan	to 950 m	-
<i>Grabantia disjungens</i> (Walker)	Dec-Jan	<950 m	-
<i>Grabantia insignis</i> (Walker)	Jan-Dec	<600 m	larvae on herbs
<i>Grabantia litbias</i> (Meyrick)	Dec-Feb	600-1000 m	larvae on <i>Melicytus alpinus</i>
<i>Grabantia morosa</i> (Butler)	Jan-Feb	to 600 m	larvae on grasses
<i>Grabantia mutans</i> (Walker)	Jan-Dec	<600 m	larvae on herbs
<i>Grabantia nullifera</i> (Walker)	Dec-Apr	1000 m	larvae in <i>Aciphylla</i>
<i>Grabantia omoplaca</i> (Meyrick)	Oct-Dec	<800 m	larvae on Poaceae
<i>Grabantia phricias</i> (Meyrick)	Oct,Jan,Apr	to 950 m	larvae on <i>Discaria toumatou</i>
<i>Grabantis plena</i> (Walker)	Jan-Dec	<600 m	larvae on herbs
<i>Grabantia rubescens</i> (Butler)	Feb	<700 m	on introduced grasses
<i>Grabantia ustistriga</i> (Walker)	Aug-Apr	<600 m	larvae on herbs and shrubs
<i>Ichneutica ceraunias</i> Meyrick	Nov-Jan	700-1200 m	larvae on <i>Chionochloa</i>
<i>Ichneutica dione</i> Hudson	Jan	1000 m	-
<i>Ichneutica homerica</i> Howes	Nov-Jan	950 m	-
<i>Ichneutica nervosa</i> Hudson	Dec	1260 m	-
<i>Ichneutica notata</i> Salmon	Jan	950 m	larvae on grasses
<i>Meterana meyricki</i> Hampson	Feb-Apr	900 m	larvae on <i>Pimelea</i> spp.
<i>Persectania aversa</i> (Walker)	Sep-May	<950 m	larvae on grasses
<i>Tmetolophota acontistis</i> (Meyrick)	Dec	950 m	-
<i>Tmetolophota arotis</i> (Meyrick)	Dec-Jan	<950 m	-
<i>Tmetolophota atristriga</i> (Walker)	Dec-Mar	<600 m	larvae on grasses
<i>Tmetolophota toroneura</i> (Meyrick)	Dec-Jan	300-600 m	-
<i>Tmetolophota propria</i> (Walker)	Jan-Apr	<600 m	larvae on grasses
<i>Tmetolophota unica</i> (Walker)	Dec	600-800 m	-
<i>Rhapsa scotosialis</i> Walker	Oct-Apr	<600 m	larvae on dead leaves

## SPECIES IN THE FOLLOWING ORDERS WERE COLLECTED INCIDENTALLY IN THE COURSE OF SURVEYING THE LEPIDOPTERA

### ORTHOPTERA (4 species)

#### STENOPELMATIDAE (Wetas)

*Deinacrida connectens* Ander - 1550-1600 m Mt Pisgah area

#### ACRIDIDAE (Grasshoppers)

*Sigaus australis* (Hutton) - 800-1630 m common in low to high alpine

*Sigaus campestris* (Hutton) - 960-1100 m grasslands common and widespread, grasslands

*Brachaspis nivalis* (Hutton) - 1500-1630 m common on alpine screes

### DICTYOPTERA (1 species)

#### BLATTIDAE (Cockroaches)

*Celatoblatta quinquemaculata* Johns - - the common cockroach of alpine

Central Otago

### HEMIPTERA (3 species)

**CICADIDAE**

<i>Maoricicada clamitans</i> Dugdale & Fleming Spurs,	-	900-1250 m	Pisgah and Maerewhenua shrubland
<i>Maoricicada phaeoptera</i> Dugdale & Fleming	-	1280-1640 m	common in alpine herbfields Kattothyrst and Mt Pisgah area
<i>Kikibia angusta</i> (Walker) alpine	-	600-1200 m	common in montane to native grasslands

**COLEOPTERA (Beetles) (11 species)****CARABIDAE**

<i>Oregus aereus</i> White	-	450 m	improved pasture
<i>Megadromus curtulus</i> (Broun)	-	450 m	improved tussock

**TENEBRIONIDAE**

<i>Artystona obscura</i> Sharp	-	930 m	Danseys Pass
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**ELATERIDAE**

<i>Elatichrosis castanea</i> (Broun)	-	450 m	-
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**OEDEMERIDAE**

<i>Selenopalpus rectipes</i> Broun	-	1500 m	Mt Pisgah
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**Scarabaeidae**

<i>Odontria striata</i> White	-	to 1000 m	widespread in grasslands
<i>Prodontria</i> n.sp. Since mountains,	-	1000-1060 m	common at Danseys Pass. found on the adjacent Mt Kyeburn and Mt Buster

**CURCULIONIDAE**

<i>Lyperobius</i> n.sp.1	-	-	[see note]
<i>Lyperobius</i> n.sp.2	-	-	[see note]
<i>Anagotus lewisi</i> (Broun)	-	760-930 m	Danseys Pass, larvae in <i>Chionochloa</i> tillers
<i>Sargon sulcifer</i> (Broun)	-	1600 m	Mt Pisgah

Note: These two undescribed species were found together on Cayenne Spur at 1240 m, Siberia Hill, on *Aciphylla gracilis* (Fig. 9). Both large species occur elsewhere, one on Mt Kyeburn the other on Ida Range and Grampian Mts (R Craw pers. comm.).

**HYMENOPTERA (Wasps) (2 species)****POMPIDAE**

<i>Priocnemis crawi</i> Harris	-	1550 m	high-alpine snowbanks
<i>Priocnemis ordishi</i> Harris	-	1550 m	high-alpine snowbanks

**TRICHOPTERA (Caddisflies) (15 species)**

<i>Aoteapsyche colonica</i>	Nov-Feb	250-520 m	-
<i>Costachorema xanthoptera</i>	Feb	250 m	-
<i>Hudsonema aliena</i>	Dec	1260 m	Siberia Hill, Pisgah Spur
<i>Hydrobostis clavigera</i>	Feb	250 m	-
<i>Hydrobostis kiddi</i>	Feb	900 m	-
<i>Hydrobostis parumbripennis</i>	Feb	250-900 m	-
<i>Hydrobostis umbripennis</i>	Feb	250 m	-
<i>Pycnocentroides aeris</i>	Dec-Feb	200-500 m	-
<i>Pycnocentroides aureola</i>	Feb	250 m	-



<i>Polyplectropus puerilis</i>	Dec	500 m	-
<i>Plectrocnemia maclachlani</i>	Dec	500 m	-
<i>Psiloborema bidens</i>	Feb	250 m	-
<i>Psiloborema mataura</i>	Feb	900 m	-
<i>Oecetis unicolor</i>	Feb	250 m	-
? <i>Neuroborema</i> n.sp.	Feb	250 m	-

**ARACHNIDA** (1 species)

**DIPLURIDAE**

<i>Hexathele ramsayi</i> Forster	-	-	[see note]
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Note: Type locality, Mt Dasher Station 1150 m Kakanui Mts (Forster & Wilton 1968)