

Lepidoptera and Trichoptera from Paroa, near Greymouth, New Zealand

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ABSTRACT

Light trapping of Lepidoptera and Trichoptera was carried out at Paroa on the West Coast of the South Island, New Zealand from 20 February to 30 September 1990. The 144 species in 17 Lepidoptera families and 21 species in 7 Trichoptera families captured are listed.

Keywords: Lepidoptera, Trichoptera, Paroa, New Zealand, light trapping, species list.

INTRODUCTION

Paroa (171°9'50"E, 42°31'5"S) is located approximately 7 km south of Greymouth on State Highway 6. The willingness of Mr & Mrs R. Cotton to service a light trap gave me the opportunity to learn more of this poorly documented region of New Zealand. The initial intention was to survey the area for nocturnal moths over a 12 month period by light trapping. This resulted in a substantial bycatch of Trichoptera and the opportunity is taken to report on them as well.

METHODS

A light trap was set up at Paroa on 9 December 1989, near farmland and regenerating native bush at an altitude of 10 m and approximately 0.9 km inland from the coast. The trap operated continuously using 240 V electricity to power a 6 W UV tube. The contents were removed as close as possible to the 10th, 20th and last day of each month. Hand collecting for Lepidoptera was carried out both day and night from 9-13 December 1989; no hand collecting for Trichoptera was done. All material collected by light trap from 9 December 1989 to 20 February 1990 was unfortunately destroyed in transit.

I made initial identifications of the moths, while Brian Patrick (Department of Conservation, Dunedin) and John Dugdale (Landcare Research, Auckland) checked these determinations and supplied names for more difficult specimens. All Lepidoptera (and a smaller number of about 10 species of Coleoptera also caught) are stored in the B.M. Lyford private collection. John Ward (Canterbury Museum, Christchurch) identified all Trichoptera and they are deposited in the Canterbury Museum.

RESULTS AND DISCUSSION

Lists of the species of Lepidoptera and Trichoptera collected are presented in Tables 1 & 2. Lepidoptera taxa are arranged according to Dugdale (1988).

Table 1 is the first published list of West Coast moths, and it contains some interesting finds along with typical species of the region such as *Hydriomena subrectaria*, *Asaphodes camelias* and *Graphania chlorodonta*. A low number of 14 noctuid species was found whereas 40-50 would have been expected. The large hepialid moth *Aoraia enysii* was a surprise to find at such low altitude. While only one specimen of *Asaphodes stephanitis* was taken, I found this species to be common 180 km south west of Paroa along the coast at Fox Glacier on 18-19 March 1988.

In 1988, the Australian species *Merophyas divulsana* (a pest of lucerne) was first detected in New Zealand in Central Otago by Brian Patrick (pers. comm.). In contrast to my record, he found this species very common in almost every month of the year. Other Australian species not previously recorded this far south on the West Coast are *Athetis tenuis*, *Opogona omoscopa* and *Bactras optanias*. *Opogona omoscopa* has been recorded from Carter's Beach, Westport. I found it to be common at Paroa. One *Bactras optanias* was taken, in February. Previously, this species was only recorded from Hamilton in New Zealand, where larvae bore the stem of a giant rush (*Schoenoplectris*) (J.S. Dugdale, pers. comm.).

A number of cicadas were trapped over the December-January period. This is the first time I have had significant numbers taken by light trap. These too were ruined in transit.

The survey yielded 144 species over seven months, including winter, indicating a rich moth fauna. Further concentrated work is required throughout the West Coast region to gain a fuller knowledge of Lepidoptera and other taxa. A significant proportion of species (30 out of 144) recorded are represented by single captures. Further study would clarify adult flight periods of these species while acting as an abundance indicator. Hand collecting of diurnal species in a range of habitats is also needed in conjunction with continued collecting at light. I am sure that the five months from October-February not recorded here will be equally as interesting.

Table 1: Lepidoptera from Paroa.

Family and Species	Months Trapped	Notes
Hepialidae:		
<i>Aoraia enysii</i> (Butler)	Mar	one only; not generally recorded at low altitudes
<i>Cladoxycanus minos</i> (Hudson)	May-Jul	there are a few West Coast records
<i>Wiseana copularis</i> (Meyrick)	Feb	
<i>Wiseana jocosa</i> (Meyrick)	Feb	
<i>Wiseana umbraculata</i> (Guenée)	Dec	
Tineidae:		
<i>Monopis ethelella</i> (Newman)	Aug-Sep	
<i>Opogona omoscopia</i> (Meyrick)	Feb-Apr	common
<i>Sagephora phortagella</i> Meyrick	Sep	one only
<i>Tinaea aetherea</i> Clarke	Dec	
Gracillariidae:		
<i>Caloptilia chrysitis</i> (Felder & Rogenhofer)	Apr-Jul	
<i>Caloptilia elaeas</i> (Meyrick)	Aug-Sep	
<i>Caloptilia linearis</i> (Butler)	May-Jul	
Yponomeutidae:		
<i>Kessleria copidota</i> (Meyrick)	Dec	
<i>Plutella xylostella</i> (Linnaeus)	Apr, May, Sep	
<i>Protosynaema sterophucha</i> Meyrick	Dec	
Gelechiidae:		
<i>Phthorimaea operculella</i> (Zeller)	Feb-May	
Oecophoridae:		
<i>Barea confusella</i> sense of Philpott	Dec	
<i>Eutorna symmorphia</i> Meyrick	Mar	one only
<i>Gymnobathra calliploca</i> Meyrick	Jun	one only
<i>Izatha peroneanella</i> (Walker)	Dec	one only
<i>Izatha picarella</i> (Walker)	Feb-Apr	
<i>Phaeosaces coarctella</i> (Walker)	Feb	one only
Elachistidae:		
<i>Cosmiotes</i> n.sp.	Dec	common throughout New Zealand and Chatham Is. Larvae mine sedges including <i>Cyperus</i> (maritime sedge). Pupa in chamber at end of mine
Tortricidae:		
<i>Apoctena conditana</i> (Walker)	Sep	one only
<i>Apoctena tigris</i> (Philpott)	Mar	one only
<i>Bactra noteraula</i> Walsingham	Mar-Apr	
<i>Bactra optanias</i> Meyrick	Feb	one only; present in eastern Australia
<i>Capua semiferana</i> (Walker)	Dec, Feb	
<i>Catamacta gavisana</i> (Walker)	Feb, May	
" <i>Cnephasia</i> " <i>jactatana</i> (Walker)	Dec, Feb-May, Sep	
" <i>Cnephasia</i> " <i>microbathra</i> Meyrick	Mar-Apr	
<i>Cryptaspasma querula</i> (Meyrick)	Feb, May	
<i>Ctenopseustis obliquana</i> (Walker)	Feb	
<i>Epalxiphora axenana</i> Meyrick	Feb-Sep	
<i>Epiphyas postvittana</i> (Walker)	Feb-Jun	
<i>Leucotenes coprosmae</i> Dugdale	Mar-Apr	
<i>Merophyas divulsana</i> (Walker)	Feb	one only; Australian species
<i>Merophyas leucaniana</i> (Walker)	Dec, Feb-May	

Table 1: — Continued

Family and Species	Months Trapped	Notes
<i>Planotortrix excessana</i> (Walker)	Dec, Feb-Sep	
<i>Planotortrix notophaea</i> (Turner)	Dec, May	
<i>Pyrgotis plagiatana</i> (Walker)	Feb, Aug-Sep	
<i>Pyrgotis plinthoglypta</i> Meyrick	Feb	one only
<i>Strepsicrates zopherana</i> (Meyrick)	Dec	diurnal
Carposinidae:		
<i>Heterocrossa eriphylla</i> Meyrick	May-Jun	
Pterophoridae:		
<i>Platyptilia repletalis</i> Walker	Feb	
<i>Pterophorus furcatalis</i> (Walker)	Mar	one only
<i>Pterophorus monospilalis</i> (Walker)	Mar	one only
Lycaenidae:		
<i>Lycaena salustius</i> (Fabricius)	Dec	diurnal
<i>Zizina labradus labradus</i> (Godart)	Dec	diurnal
Pieridae:		
<i>Pieris rapae rapae</i> (Linnaeus)	Dec	diurnal
Pyralidae:		
<i>Ephesttia cautella</i> (Walker)	Dec	
<i>Patagoniodes farinara</i> (Turner)	Feb-Mar, May	
Crambidae:		
<i>Antiscopa elaphra</i> (Meyrick)	Mar-Sep	
<i>Antiscopa epicomia</i> (Meyrick)	Aug	one only
<i>Deana hybreasalis</i> (Walker)	Apr, Jun-Jul	
<i>Eudonia atmogramma</i> (Meyrick)	Dec, Mar	
<i>Eudonia cataxesta</i> (Meyrick)	Dec, Feb-Mar	
<i>Eudonia feredayi</i> (Knaggs)	Dec, Mar-Apr	
<i>Eudonia leptalea</i> (Meyrick)	Dec, Feb-May, Jul-Sep	
<i>Eudonia luminatrix</i> (Meyrick)	Mar	one only
<i>Eudonia minualis</i> (Walker)	Mar	
<i>Eudonia octophora</i> (Meyrick)	Mar	one only
<i>Eudonia philerga</i> (Meyrick)	Feb-Mar, Sep	
<i>Eudonia sabulosella</i> (Walker)	Dec, Feb-Apr	
<i>Eudonia submarginalis</i> (Walker)	Feb	one only
<i>Eudonia thyridias</i> (Meyrick)	Dec	
<i>Glaucocharis chrysochyta</i> (Meyrick)	Dec	one only
<i>Glaucocharis elaina</i> (Meyrick)	Mar-Apr	
<i>Hygraula nitens</i> (Butler)	Feb-Apr	
<i>Mnesictena flavidalis</i> (Doubleday)	Dec, Feb-May	
<i>Musotima nitidalis</i> (Walker)	Dec, Feb-Apr, Sep	
<i>Orocrambus angustipennis</i> (Zeller)	Dec	
<i>Orocrambus apicellus</i> (Zeller)	Dec, Feb-Apr	
<i>Orocrambus flexuosellus</i> (Doubleday)	Dec, Feb-May	
<i>Orocrambus heliotes</i> (Meyrick)	Dec	very common; diurnal
<i>Orocrambus ramosellus</i> (Doubleday)	Dec, Mar	
<i>Orocrambus vittellus</i> (Doubleday)	Feb	one only
<i>Scoparia chalicodes</i> Meyrick	Jul-Sep	
<i>Scoparia cyameuta</i> (Meyrick)	Apr-May	one only
<i>Scoparia halopsis</i> Meyrick	Mar-Sep	
<i>Scoparia humilialis</i> Hudson	Dec	
<i>Scoparia phalerias</i> Meyrick	Sep	
<i>Scoparia rotuella</i> (Felder & Rogenhofer)	Apr-May	
<i>Scoparia ustimacula</i> Felder & Rogenhofer	Jul	one only
Geometridae:		
<i>Asaphodes aegrota</i> (Butler)	Dec, Feb-Mar, May-Sep	
<i>Asaphodes beata</i> (Butler)	Apr-May	

Table 1: — Continued

Family and Species	Months Trapped	Notes
<i>Asaphodes cameli</i> (Meyrick)	Feb-May, Jul-Sep	
<i>Asaphodes stephanitis</i> Meyrick	Mar	one only; possibly northern-most record
<i>Austrocidaria callichlora</i> (Butler)	Mar-May, Aug	
<i>Austrocidaria gobiata</i> (Felder & Rogenhofer)	Feb-May	
<i>Austrocidaria parora</i> (Meyrick)	Aug-Sep	
<i>Austrocidaria similata</i> (Walker)	Dec, Feb, May, Sep	
<i>Chalastra pellurgata</i> Walker	Mar	one only
<i>Chloroclystis filata</i> (Guenée)	Mar-Apr, Aug	
<i>Chloroclystis inductata</i> (Walker)	Mar-May, Jul	
<i>Cleora scriptaria</i> (Walker)	Mar-Jul	
<i>Declana floccosa</i> Walker	Dec, Feb-Sep	
<i>Declana junctilinea</i> (Walker)	Apr	
<i>Epicyme rubropunctaria</i> (Doubleday)	Jun-Jul	
<i>Epiphryne verriculata</i> (Felder & Rogenhofer)	Feb-Sep	
<i>Epyaxa lucidata</i> (Walker)	Dec, Feb-Mar	
<i>Epyaxa rosearia</i> (Doubleday)	Dec, Feb-Sep	
<i>Epyaxa venipunctata</i> (Walker)	Mar, May-Jun	
<i>Gellonia dejectaria</i> (Walker)	Mar	
<i>Helastia cineraria</i> (Doubleday)	Feb-May, Sep	
<i>Helastia corcularia</i> (Guenée)	Feb-Apr, Sep	
<i>Homodotis megaspilata</i> (Walker)	Mar, Sep	
<i>Hydriomena rixata</i> (Felder & Rogenhofer)	Mar	
<i>Hydriomena subrectaria</i> (Guenée)	Dec	
<i>Ischalis fortinata</i> (Guenée)	Apr-May	one only
<i>Ischalis variabilis</i> (Warren)	Feb-Jun, Aug-Sep	
<i>Microdes quadristrigata</i> Walker	Mar	
<i>Orthoclydon praefactata</i> (Walker)	Apr-May, Jul-Aug	
<i>Praedelis porphyrias</i> (Meyrick)	Mar-Apr	one only
<i>Pasiphila muscosata</i> (Walker)	Apr-May, Jul	
<i>Pasiphila plinthina</i> Meyrick	Sep	one only
<i>Poecilasthena pulchraria</i> (Doubleday)	Mar, Aug	
<i>Pseudocoremia indistincta</i> Butler	Apr-May	
<i>Pseudocoremia leucalaea</i> (Meyrick)	Dec, Feb-May	
<i>Pseudocoremia productata</i> (Walker)	Dec, Feb-Sep	
<i>Pseudocoremia suavis</i> Butler	Jun-Jul	
<i>Sarisa muriferata</i> (Walker)	Apr-May, Aug-Sep	
<i>Sestra flexata</i> (Walker)	Feb-May, Aug-Sep	
<i>Tatosoma tipulata</i> (Walker)	Aug	one only
" <i>Xanthorhoe</i> " <i>occulata</i> Philpott	Aug-Sep	
" <i>Xanthorhoe</i> " <i>semifissata</i> (Walker)	Dec	
<i>Xyridacma ustaria</i> (Walker)	Feb	one only
<i>Xyridacma veronicae</i> Prout	Mar-Jun, Aug-Sep	
Arctiidae:		
<i>Nyctemera annulata</i> (Boisduval)	Dec	
Noctuidae:		
<i>Agrotis ipsilon aneituma</i> Walker	Mar-May	
<i>Athetis tenuis</i> (Butler)	Mar-Apr	one only
<i>Chrysodeixis eriosoma</i> (Doubleday)	Mar, May	
<i>Graphania chlorodonta</i> (Hampson)	Dec	
<i>Graphania lignana</i> (Walker)	Feb	one only
<i>Graphania</i> sp. nr <i>insignis</i> (Walker)	Feb-Mar, May-Jul, Sep	
<i>Graphania mutans</i> (Walker)	Dec, Mar, Jul-Aug	
<i>Graphania plena</i> (Walker)	Feb-Mar, Sep	
<i>Physetica caerulea</i> (Guenée)	Dec	
<i>Rhaphsa scotosialis</i> Walker	Feb-Sep	
<i>Rictonis comma</i> (Walker)	Dec	
<i>Schranksia costaestrigalis</i> (Stephens)	Feb-Jul, Sep	very common
<i>Tmetolophota atristriga</i> (Walker)	Feb-Apr	
<i>Tmetolophota semivittata</i> (Walker)	Dec, Feb-Mar	

Table 2: Trichoptera from Paroa

Family and Species	Months trapped	Notes
Hydrobiosidae:		
<i>Edpercivalia fusca</i> (McFarlane)	Apr, Sep	not common
<i>Hydrobiosis copis</i> McFarlane	Mar-Apr	
<i>Hydrobiosis parumbripennis</i> McFarlane	Feb, Jun-Aug	
<i>Hydrobiosis soror</i> Mosely	Mar-May, Jul	
<i>Neurochorema confusum</i> (McLachlan)	Feb-Mar	
<i>Psilochorema bidens</i> McFarlane	Feb, Apr, Sep	
<i>Psilochorema leptoharpax</i> McFarlane	Apr	
<i>Psilochorema tauroru</i> McFarlane	Jun-Jul, Sep	
<i>Tiphobiosis cowiei</i> Ward	Mar-Apr, Aug	rare species; few records
Hydropsychidae:		
<i>Aoteapsyche colonica</i> (McLachlan)	Feb	
Polycentropodidae:		
<i>Polyplectropus aurifusca</i> McFarlane	Sep	
<i>Polyplectropus puerilis</i> (McLachlan)	Mar-Apr	
Oeconesidae:		
<i>Oeconesus maori</i> McLachlan	Sep	
<i>Pseudoeconesus stramineus</i> McLachlan	Feb-Mar	
Conoesucidae:		
<i>Olinga feredayi</i> (McLachlan)	Feb	
<i>Pycnocentrodes aureola</i> (McLachlan)	Feb-Apr	
Helicopsychidae:		
<i>Helicopsyche albescens</i> Tillyard	Feb	
Leptoceridae:		
<i>Triplectides cephalotes</i> (Walker)	Feb	
<i>Triplectides obsoleta</i>	Feb-Apr	
<i>Triplectidina oreolimnetes</i> (Tillyard)	Mar	

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REFERENCE

- Dugdale, J.S., 1988: Lepidoptera—annotated catalogue and keys to family-group taxa. *Fauna of New Zealand* 14: 1-262.