

LEPIDOPTERA (MOTHS AND BUTTERFLIES) AT INVERNESS RIDGE
IN CENTRAL COASTAL CALIFORNIA AND THEIR RECOVERY
FOLLOWING A WILDFIRE

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Abstract.— In numbers of species, Lepidoptera (butterflies and moths) make up the largest group of plant-feeding animals in North America. Caterpillars of nearly all species feed on plants, and most of them are specialists on one or a few kinds of plants. Therefore they are liable to be severely affected by wildfires, and secondarily, their parasites and predators, including birds, bats, lizards, and rodents, suffer losses of a major food resource. In October 1995, a wildfire swept over part of The Point Reyes National Seashore, burning more than 12,300 acres (5,000 hectares) of public and private land, following a fire-free period of several decades. I tracked survival and recolonization by moths and butterflies during the subsequent five seasons. I made daytime searches for adults and caterpillars approximately monthly from March through October and collected blacklight trap samples, mostly in May and September-October. More than 650 species of Lepidoptera have been recorded in the Inverness Ridge area, and about 375 of them were recorded during the post-fire survey, including larvae of 31% of them. Plants in a Bishop pine forest higher on the ridge, where the fire was most intense, accumulated their caterpillar faunas slowly, while Lepidoptera feeding on plants typical of riparian woods in the lower canyons reestablished sooner and more completely. Recolonization varied markedly among different plant species, and the species richness gradually increased, in marked contrast to generalizations about effects of fire on arthropods derived from fire management of grasslands.

Introduction

Inverness Ridge forms the backbone of the Pt. Reyes Peninsula, located northwest of San Francisco Bay. The peninsula is defined by the San Andreas fault, running from Bolinas Lagoon through Olema Valley and Tomales Bay to the north. The long, straight ridge is situated along the eastern side of the peninsula, from about 15 miles NW of San Francisco, extending for about 20 miles (32 km). It is of relatively low relief, mostly 1000-1300 feet (300-400 m) elevation at the crest, broken only at Bear Valley by a low saddle of about 330 feet (100 m), then descends from Mt. Vision (1280 ft., 290 m) to low hills below 450 ft. NW of Inverness. The eastern front is quite steep, whereas the western slope is gradual, spreading out to the bluffs above Drakes Bay, the marshes of Drakes Estero, and the coastal downs and dunes of the Pacific Ocean shore of Pt. Reyes.

East of the San Andreas fault the geological origin of mainland Marin County is very old, consisting of Franciscan sedimentary and igneous rocks of Jurassic origin. Formations of the Pt. Reyes Peninsula also are old but are granitic and originated far to the south, its terrain having moved northward along the fault during the Tertiary. As a result there are distinctive soils, plants, and insects that depend upon them, characteristic of both Inverness Ridge and areas east of the fault. Notably, redwood (*Sequoia sempervirens*) and associated communities are restricted to the Mt. Tamalpais region of Franciscan formations, whereas Bishop pine (*Pinus muricata*) is primarily a coastal species, dominant on Inverness Ridge, but occurs only sparsely on ridges of interior Marin County. Forests of Inverness Ridge also feature Douglas-fir (*Pseudotsuga menziesii*), madrone (*Arbutus menziesii*), coast live oak (*Quercus agrifolia*), tanbark (*Lithocarpus densiflorus*), and California bay (*Umbellularia californica*) on the east escarpment. On the west side there are groves of Bishop pine and live oak, downslope giving way to chaparral dominated by coyote brush (*Baccharis pilularis*), California coffeeberry (*Rhamnus californica*), and bush monkey flower (*Mimulus aurantiacus*), and gallery forests of alder (*Alnus rubra*) and willow (*Salix lasiolepis*) along the west flowing creeks.

Nearly all collections of moths have been made in the northern half of Inverness Ridge in the vicinity of Inverness and Inverness Park, villages situated along the east side of the ridge, the southern half having been primarily private property until designation of Pt. Reyes National Seashore in 1965, when the land came under the jurisdiction of the National Park Service. Since that time there was no effort to inventory the Lepidoptera of the park until an extensive wildfire in 1995 led to a five-year survey on one transect, also on the northern half of the ridge.

History of Lepidoptera Collections at Inverness Ridge

There was no systematic and comprehensive baseline inventory of the moths and butterflies at any site on Pt. Reyes peninsula prior to the 1990s. There has been no long-term resident collector, although several persons made repeated one-night or short term visits between 1940 and 1965, collectively comprising a year-around sample at lights. Following is a chronicle of moth collectors who worked in the Inverness area, based on specimens examined, together with the primary locations of their specimens. [CAS= California Academy of Sciences, San

Francisco; EME= Essig Museum of Entomology, UC Berkeley; UCD = Bohart Entomological Museum, UC Davis; WDP = W. D. Patterson private collection, Sacramento]

There is one specimen of *Synanthedon sequoiae* (Sesiidae) that was reared from Bishop pine at Inverness in 1916 by E. C. Van Duzee, who was a hemipterist and curator at the CAS, but I have not seen other Lepidoptera collected during that era. H. H. Keifer collected moths on at least two dates in 1926, while he was a curatorial assistant at the CAS, and there may be more of his specimens from Inverness for which data have not been retrieved. E. C. Johnston of Petaluma, CA, collected moths on at least four dates in 1938 and 1940, and presumably there were others, especially microlepidoptera in which he specialized. His private collection, however, went to the Canadian National Collection, Ottawa, after his death in the early 1950s, and he sent some specimens to the U.S. National Museum, Washington, but those collections have not been searched systematically to retrieve Inverness records.

W. R. Bauer of Petaluma, CA, began making single night visits for macro moths in 1940. He continued following World War II, with 23 dates in 1947 and 21 in 1951. He was joined by J. S. Buckett beginning in 1954, and together they made collections during the following decade. Altogether Bauer worked at Inverness on more than 190 dates, mostly along Sir Francis Drake Highway and Pierce Point Road adjacent to Tomales State Park and at store front lights in Inverness, according to Bauer (1950s pers. comm.) and R. H. Leuschner, who collected with Bauer and Buckett in 1955. Cumulatively, they sampled on 15 or more dates in each month from February to July, but on fewer than 10 each month August to January (UCD). In addition they made many visits to McClures Beach on Tomales Point, but records from that locality and other beach dune sites on Pt. Reyes by many collectors are not summarized here. Buckett also collected microlepidoptera on his last visit, in 1965, providing the earliest known records for several species.

Catherine Toschi (now Tauber) made sporadic collections of larger moths beginning in 1953 at the family summer home near Vision Rd. and collected through the summers in 1961-62, while working as a student assistant in the museum at UC Berkeley, and on several dates in 1963-64, including a few in February. Her efforts, comprising a total of more than 60 dates, provided the first large-scale survey of small moths (EME). W. D. Patterson also collected larger moths and butterflies in Inverness in the mid 1950s and subsequently on sporadic visits, emphasizing microlepidoptera as well since 1995, at a family summer home near the top of Perth St. (WDP). C. W. O'Brien collected small moths on about 25 dates during 1959-63 at a site 1 mile SE of Inverness, near Dream Farm Rd. (EME). These were mostly in October to February and produced the earliest records of several microlepidoptera.

P. A. Opler made the first larval collections on Inverness Ridge during several visits in 1967-69, in association with his research on microlepidoptera of coast live oak; I participated twice, and we collected larvae from a few other plants and wood rot fungi (EME). D. S. Green also sampled leaf mines, primarily on oak, making monthly visits between August 1976 and May 1977 (EME).

I made single night visits to the Inverness area with D. D. Linsdale in January 1959 and February 1961, and for several years beginning in 1970 participated in annual visits in May by a field

entomology class from the UC Berkeley, led by E. I. Schlinger. We camped atop Inverness Ridge in the area of the western terminus of Drakes View Road and ran blacklight sheets 2 nights each year and had phenomenally good luck with warm, calm evenings, unusual for May, in 1970 and 1972. Hence, a large number of persons contributed to a brief seasonal sample. In addition to adults taken diurnally and at black lights, I made about 40 larval collections (EME).

Beginning in 1994 my wife, Liz Randal, and I began making longer-term visits, and I started systematically recording all Lepidoptera species. Ultimately, I sampled moths at lights on about 220 dates between July 1994 and December 2001. These data originated from several sites — July 1994 (7 dates) and May 1995 (7) in the Sea Haven district near Tomales State Park; Jan.-Feb. 1995 (28), Oct. 1997 (28), Sept.-Oct. 1998 (35) and 1999 (28), at two sites at ca. 150-175 m elevation in Inverness Park; May 2000 in Inverness (7); Oct. 2000 at the top of Highland Rd., Inverness (25); and Oct.-Nov. 2001, Kehoe Rd. at the western edge of Inverness (28). Also there were several shorter visits of 1-5 nights on the Tomales Bay marsh 1 mile E of Inverness, in May 1999 and 2001, Feb. 2000, Aug. 2001, and Dec. 2001.

Coincidentally, an extensive wildfire burned the crest and seaward slope of Inverness Ridge, from Mt. Vision to upper Inverness Park, in October 1995. In response to an invitation from Pt. Reyes National Seashore biologists, I proposed to monitor the recovery of Lepidoptera populations in the burn zone. Pre-fire insect survey of the seaward slopes and the ridge top was limited to that conducted during annual May visits by our field entomology class in the 1970s. Hence, a post-fire census of species could not be compared directly to the pre-fire community, and I tracked the recolonization of selected plants, especially woody shrubs and trees, which harbor the richest communities of Lepidoptera. The area sampled is defined on the east by Inverness Ridge trail from Drakes View Road to Limantour Road, on the south by Bay View trail from Inverness Ridge trail to Muddy Hollow Road, and on the west by the Drakes View trail, a perimeter distance of about 6 miles (9.6 km). This provided a transect from the more severely burned pine forest at 1,000 ft. (300 m) elevation on the ridge top, descending through chaparral and grassland, to riparian woods along Muddy Hollow Creek at 100 ft. (30 m). My associates and I recorded Lepidoptera on 82 dates from March 14, 1996 to November 1, 2000, during which we made 45 diurnal visits, 263 larval and leaf mine collections, and 54 blacklight samples on 45 dates. Daytime survey was conducted approximately monthly from mid March to late October, with sporadic additional visits, mostly in May and October. After initial trials, I used four light trap sites at different elevations, situated 0.8-1.2 miles (1.3 to 2.0 km) inside the perimeter of the burn zone, at spots sheltered from sight of unburned areas by intervening hills. Additionally, in 1999 M. Hart made 6 evening visits to collect at light sheets, mostly during January to April, when we had few records. Blacklight samples were initiated one year after the fire and were made in all months except December and June, 75% of them in May or Sept.- Oct.

In summary, there have been moth collections at lights in the Inverness area on more than 600 dates, with 20 or more samples in all months except December (8), most often in February (66 dates), May (75), and October (134). There had been relatively few larval collections prior to the post-fire survey (ca. 100 vs. 260+ post-fire), so many new records for microlepidoptera in the Inverness area and even for Marin County resulted from larval collections following the 1995 fire, simply the result of increased effort.

In total, 635 species are listed, including 231 microlepidoptera (36%), 56 pterophorids and pyraloids (9%), 311 macro moths (49%), and 37 butterflies (6%). Based on what is known in other California coastal localities, the microlep fauna and probably the pyraloids appear to be under surveyed at Inverness Ridge. There may be 100 or more additional species not yet discovered. Considerable additional inventory of larvae in habitats not affected by the 1995 fire is needed. Although only 137 species had been recorded in the limited effort made prior to the fire in the ridge top and seaward slope area that burned, 375 species were recorded in the one portion of the burn zone surveyed during 1996-2000 (59% of the region total).

Larval host plants are recorded for 137 species (22% of the total), 85% of which were documented in the post-fire survey. Among the remainder, hosts of 195 species known to be specialist feeders are recorded elsewhere (i.e., total of 53% larval foods can be projected). Most of the others are generalists.

LEPIDOPTERA OF INVERNESS RIDGE, MARIN CO., CA
 compiled by J. A. Powell
 December 2003

Taxa	1st record	Fire zone		larval host plant	
		Pre-fire	Post-fire	at Inverness	elsewhere
Eriocraniidae:					
Dyseriocrania auricyanea?	IV.68		IV.97	Quercus agrifolia	
Acanthopteroctetidae:					
Acanthopteroctetes unifascia	V.71	V.71	VI.96	Ceanothus thyrsiflorus	
Hepialidae:					
Hepialus ?behrensi	VII.00		VII.00		
Hepialus californicus	V.99		V.99		
Nepticulidae:					
Stigmella sp.	IX.97		IX.97	Berberis pinnata	
Stigmella ?ceanothi	XI.67		VI.96	C. thyrsiflorus	
Stigmella ?diffasciae	V.77		III.96	Rhamnus californica	
Stigmella variella	XI.67	V.70	IV.97	Q. agrifolia	
Stigmella sp. 1	V.70	V.70			
Stigmella sp. 2	V.70	V.70			
Stigmella sp. 3	XI.67			Lithocarpus	
Tischeriidae:					
Tischeria ceanothi	XI.67	V.72	IV.97	C. thyrsiflorus	
Tischeria ?consanguinea	VII.00				Q. agrifolia
Tischeria splendida	VIII.97		VIII.97	Rubus ursinus	
Prodoxidae:					
Greya sp. 1	I.95				
Greya sp. 2	X.00				
Adelidae:					
Adela septentrionella	V.61	V.71	V.00	Holodiscus discolor	
Adela trigrapha	V.72	V.72			Linanthus

Heliozelidae:

Coptodisca arbutiella	III.77		IV.00	Arctostaphylos & Arbutus
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Tineidae:

Homosetia sp.	V.71	V.71	X.97	lichens
Monopis crocicapitella	V.00			bird, mammal products
Monopis mycetophilella	VII.94		V.98	Polyporus
Morphogoides berkeleyella	X.98?		V.00	Polyporus
Morphogoides gracilis	V.95		VI.96	Polyporus versicolor
Nemapogon granellus	X.96		X.96	Polyporus
Opogona omoscopa	V.95			decaying, moist plant products
Oinophila v-flava	I.95			moldy plant material
Phryganeopsis brunnea	IV.57		IX.00	
Tinea niveocapitella	V.95		IX.98	bird, mammal products
Tinea occidentella	V.95		X.97	bird, mammal products
Tinea pallescentella	I.95			bird, mammal products
Tinea pellionella	X.00			bird, mammal products
unplaced tineine	VII.99		VII.99	
unplaced gray tineid	IX.99			

Acrolophidae:

Amydria arizonella	VII.97		VII.97	
Amydria sp. 2 (pale)	IX.99			

Gracillariidae:

Caloptilia agrifoliella	III.59	III.74	VI.96	Q. agrifolia
Caloptilia alnivorella	V.68	V.72	II.97	Alnus rubra
Caloptilia diversilobiella	VII.94?		VIII.00	Toxicodendron
Caloptilia nondeterminata	V.68	V.70	IV.97	Ribes menziesii & sanguineum
Caloptilia palustriella	I.95		IV.97	Salix lasiolepis

(=stigmatelia?)

Caloptilia reticulata	XI.67		V.97	Q. agrifolia
Caloptilia 'umbellulariae'	I.95		X.96	Umbellularia
Caloptilia sp. (gray)	V.70	V.70		
Cameraria agrifoliella	XI.67		X.99	Q. agrifolia
Cameraria gaultheriella	IV.78	IV.78		Gaultheria shallon
Cameraria nemoris	V.70	V.70	VIII.97	Vaccinium
Cameraria sp.	V.69			Lithocarpus
Cremastobombycia sp.	VII.99		VII.99	Artemisia douglasii
Cremastobombycia sp.	VII.99		VII.99	Baccharis pilularis
Marmara arbutiella	X.97		X.97	Arbutus menziesii
Marmara sp.	VIII.97		VIII.97	Ceanothus stems
Micrurapteryx?	IV.00		IV.00	Salix lasiolepis
Neurobathra bohartiella	IV.67		X.99	Q. agrifolia
Phyllonorycter ?alnicolella	IV.97		IV.97	Alnus rubra
Phyllonorycter ?apicinigrella	X.96		X.96	Salix lasiolepis
Phyllonorycter inusitatella	IV.77			Q. agrifolia
Phyllonorycter ribefoliae	V.72	V.72	VII.97	Ribes sanguineum & menziesii
Phyllonorycter sp. A	IV.76		IV.98	Arctostaphylos
Phyllonorycter sp. B	VIII.00		VIII.00	Toxicodendron
Phyllonorycter sp. C	XI.67			Lithocarpus
Phyllonorycter sp. D	V.69			Lonicera
unplaced lithocolletine sp. 1	V.70	V.70		
unplaced lithocolletine sp. 2	V.70	V.70		
unplaced lithocolletine sp. 3	V.00		V.00	
unplaced lithocolletine sp. 4	V.00		V.00	

Bucculatricidae:

Bucculatrix albertiella	XI.67			Q. agrifolia
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Bucculatrix ceanothiella	IX.98		X.98	Ceanothus thyr.
Bucculatrix ?quadrigemina	X.00			
Bucculatrix variabilis	V.70	V.70	III.97	Baccharis pilularis
Bucculatrix sp. (white)	X.97		X.97	

Oecophoridae, (s. lat.):

Agonopterix alstroemeriana	I.95		X.96	Conium maculatum
Agonopterix nervosa	VII.62		IX.99	Cytisus
Agonopterix oregonensis	I.95			Sanicula
Agonopterix rosaciliella	III.99		III.99	Heracleum lanatum
Agonopterix sp.	II.95			
Borkhausenia nefrax	VII. 61			
Depressaria daucella	V.97		V.97	Cicuta, Oenanthe
Endrosis sarcitrella	VIII. 94		V.99	
Ethmia arctostaphylella	IX.99			Eriodictyon
Hoffmanophila pseudospretella	VIII.65			
Polix coloradella	V.00		V.00	
Pyramidobela angelarum	II.92			Buddleia

Momphidae:

Mompha n. sp.	VIII.97		VIII.97	Helianthemum
Mompha sp. 2	X.99			

Cosmopterigidae:

Sorhagenia nimbosa	V.70	V.70	III.96	Rhamnus californica
Walshia miscecolorella	III.97		III.97	Lupinus

Elachistidae:

Elachista marachella	V.74	V.74		Ehrharta
Elachista telcharella	V.95		III.97	

Blastobasidae:

Glyphidocera septentrionella	VIII.65		IX.00	
Oegoconia novimundi	IX.99			
Holcocera sp. 1	V.72	V.72	IV.00	Ceanothus
Holcocera sp. 1A	VII.94			
Holcocera sp. 2	X.98			
Holcocera sp. 3	IV.97		IV.97	
Holcocera sp. 4	V.95?		VIII.98	aphids on Gnaphalium
Hypatopa sp.	X.97		IX.98	
unplaced blastobasid A	VII.94			
unplaced blastobasid B	V.95			
unplaced blastobasid C	V.95			

Coleophoridae:

Batrachedra salicipomonella	VIII.00		VIII.00	Pontania galls
Coleophora ?baccharella	VIII.65		IV.97	Baccharis pilularis
Coleophora ?tildeni	IV.98		IV.98	B. pilularis
Coleophora,?pruniella	IV.97		IV.97	Alnus rubra
Coleophora sp. 1	V.70	V.70		
Coleophora sp. 2	VII.94			
Coleophora sp. 2A	VIII.65			
Coleophora sp. 3	IX.98			
Coleophora sp. 4	IX.98			

Gelechiidae:

Aristotelia argentifera	VIII.61		X.99	Baccharis pilularis
Aristotelia sp. 1	X.96		X.96	
Aristotelia sp. 2	VII.97		VII.97	
Bryotropha? sp.	X.00		X.00	
Chionodes ?braunella	VIII.65			Lupinus
Chionodes chrysophyla	IV.68		IV.00	Q. agrifolia

Chionodes ?johnstoni	IX.98			
Chionodes lophosella	VII.00		VII.00	Lupinus
Chionodes nanodella	VIII.65		IX.00	
Chionodes occidentella	XII.59		X.98	Quercus
Chionodes ochreistrigella	VIII.65			Rumex
Chionodes petalumensis	VII.94		VIII.99	Quercus
Chionodes sabinianae	VII.62		III.96	Pinus muricata
Chionodes sp. 2	I.95			
Chionodes sp. 4	VIII.65			
Coleotechnites sp. 1	IV.98		IV.98	Arctostaphylos
Coleotechnites sp. 2 (quercivorella group?)	VII.94		IX.98	
Coleotechnites sp. 3	IX.00			Pinus muricata
Coleotechnites sp. 4	IX.98			
Coleotechnites sp. 5 (coniferella group)	IX.00			
Euscrobipalpa arenaceariella	V.01		V.01	Artemisia douglasii
Evippe? sp. 1	VII.99		VII.99	
Evippe? sp. 2	IV.00		IV.00	Holodiscus discolor
Exceptia sisterina	VIII.65			
Filatima sp.	V.72	V.72	IX.00	
Gelechia ?desiliens	X.97			Platanus
Gelechla panella	IX.99			Arctostaphylos
Gnorimoschema baccharisella	VIII.65	V.70	IV.97	Baccharis pilularis
Leucogoniella ?californica	VIII.99		VIII.99	
Pseudochelaria scabrella	IX.63	V.73	IX.99	Arctostaphylos virgata
Recurvaria baccharella	IV.99		IV.99	B. pilularis
Recurvaria francisca/ ceanothiella	V.69	V.70	IV.96	Ceanothus thyr.
Scrobipalpula psilella group	VII.94		X.97	Gnaphalium

Symmetrischema striatellum	III.97		III.97	Solanum xantii	
Symmetrischema tangolias	I.95				
Syncopacma sp.	X.96		X.96		legumes
Teliopsis baldiana	VIII. 65		VII.00	Toxicodendron	
Telphusa sedulitella	VIII.61		X.96	Q. agrifolia	
Copromorphidae:					
Lotisma trigonana	V.70	V.70	VI.97	Vaccinium	
Alucifidae:					
Alucita sp.	I.95				
Carposinidae:					
Bondia comonana	X.97				
Epermeniidae:					
Epermenia californica	V.73	V.73	III.96	Heracleum	
Epermenia ?cicutatella	VII.94				
Glyphipterigidae:					
Glyphipteryx powelli	III.59		III.96		Urtica?
Plutellidae:					
Eucalantica polita	I.59	V.70	V.98	Vaccinium	
Euceratia securella	VII.94				
Plutella porrectella	VII.94				
Plutella vanella	VII.94				Osmorhiza
Plutella xylostella	V.71	V.71	X.97		Brassica
Plutella interrupta	X.00				
Ypsolopha cervella	VII. 94				Q. agrifolia
Ypsolopha ?arizonella	IX.98				
Ypsolopha flavistrigella	X.98		X.98		
Argyresthiidae:					
Argyresthia pilatella	V.70	V.70	V.00		Pinus

Argyresthia sp. 1	V.95			
Argyresthia sp. 2	X.97			
Argyresthia sp. 3	III.99		III.99	Salix lasiolepis
Schreckensteiniidae:				
Schreckensteinia festaliella	V.72	V.72	VI.96	Rubus (3 spp.)
Lyonetiidae:				
Bedellia somnulentella	VII.65		X.96	Calystegia
Lyonetia speculella	V.99		V.00	Ceanothus
Sesiidae:				
Sesia tibialis	VII.01			Salix
Synanthedon bibionipennis	VII.97		VII.97	Rubus
Synanthedon novaroensis	VII.00		VII.00	conifers
Choreutidae:				
Anthophila alpinella	III.59		X.96	Urtica
Caloreas multimarginata	VIII.97		VIII.97	Artemisia dougl.
Choreutis ?diana	V.68			Anus rubra
Tebenna gnaphaliella	X.96		X.96	Gnaphalium
Tortricidae, Olethreutinae:				
Bactra verutana	X.96		X.96	Cyperaceae
Endothenia hebesana	V.00		V.00	Castilleja
Rhyacionia ?pasadenana	VII.94			Pinus
Petrova sp.	VII.62			Pinus
Phaneta scalana	IV.00		IV.00	Artemisia dougl.
Eucosma juncticiliana	VII.97		VII.97	Solidago
Eucosma nr. palpata	VIII.99		VIII.99	
Eucosma sonomana	III.59	V.71		Pinus
Eucosma williamsi	VIII.00		VIII.00	Baccharis pilularis
Chimoptesis chrysopyla	I.95			Q. agrifolia

Catastega n. sp.	IX.98				
Epinotia albangulana	VIII.65	V.70	III.96	Alnus rubra	
Epinotia arctostaphylana	X.98		X.98	Arctostaphylos	
Epinotia bigemina	V.72	V.72	IV.98	Arctostaphylos	
Epinotia columbia	VI.96		VI.96	Salix lasiolepis	
Epinotia emarginana	IV.68	V.70	VI.96	Q. agrifolia	
Epinotia nr. ethnica	I.95				
Epinotia nr. fumoviridana	X.97		IX.00		
Epinotia hopkinsana	VII. 62	V.70	V.98		Pinus
Epinotia infuscana	VIII. 97		VII.97		Lupinus
Epinotia johnsonana	IV.68?		V.99	Holodiscus discolor	
Epinotia kasloana	X.99		X.99	Ceanothus thyr.	
Epinotia lindana	X.97				Cornus
Epinotia lomonana	X.97		X.97		Prunus
Epinotia nigralbana	V.00		V.00		Arctostaphylos
Epinotia radicana	VII.61				Pseudotsuga
Epinotia rectiplicana	X.98		X.98		Salix
Epinotia saggitana	XI.59				Ribes
Epinotia seorsa	X.01				Salix
Epinotia signiferana	X.97		X.97	Ceanothus thyr.	
Epinotia solandriana	V.69	V.72	IV.99	Alnus rubra.	
Epinotia subplicana	V.70	V.70	X.99	Arctostaphylos	
Epinotia vagana	V.73	V.73			Ribes menziesii
Ancylis metamelana	IV.59	IV.78	VII.99		
Ancylis ?simuloides	V.70	V.70	IX.97	Ceanothus thyr	
Pseudexentera habrosana	I.59	II.95	IV.00	Q. agrifolia	
Cydia latiferreana	X.97	X.98			Quercus
Cydia pomonella	X.01				Malus, Crataegus

Tortricidae, Tortricinae:

Acleris ?forbesana	XII.97			
Acleris hastiana	I.95		III.96	Salix lasiolepis
Acleris keiferi	IX.98		X.98	Rubus ursinus
Acleris santacruis	I.40			Corylus
Acleris senescens	I.95		III.96	Salix lasiolepis
Cnephasia longana	V.97		V.97	Heracleum (generalist)
Decodes aneuretus	V.71	V.71	V.98	Arctostaphylos
Decodes basiplaganus	IX.98			Q. agrifolia
Decodes fragarianus	IV.68			Q. agrifolia
Archips argyropilus	V.70	V.70		generalist
Argyrotaenia franciscana/ citrana complex	V.70	V.70	V.97	Ribes, Rubus (generalist)
Argyrotaenia provana	X.97		X.97	Pseudotsuga
Choristoneura conflictana	VII.62			Populus tremuloides
Clepsis fucana	V.70	V.70	V.98	generalist
Clepsis peritana	VII.94		X.96	generalist
Clepsis virescana	V.00		V.00	generalist
Pandemis pyrusana	VII.62	V.72	IX.00	Alnus generalist
Amorbia cuneana	VII.62		X.97	Arbutus generalist
Platynota stultana	X.97			generalist
Henricus umbrabasanus	VII.94			Quercus
Saphenista nomonana	V.70	V.70		Ceanothus thyr.
Saphenista saxicolana	V.70		V.00	Baccharis pilul.
Saphenista sp. 1	X.00			
“Saphenista” sp. 2	X.01			Garrya

Pterophoridae:

Amblyptila pica	X.96		X.96	scrophs
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Anstenoptilia marmarodactyla	IX.98			Lamiaceae
Capperia ningoris	VI.61	V.72		Lamiaceae
Emmelina monodactyla	I.95		X.98	Convolvulaceae
Oidaematophorus nr. confusus	V.95			
Oidaematophorus grandis	VII.94		VIII.98 Baccharis	
Oidaematophorus sp. A	VII.62			
Oidaematophorus sp. B	X.00			
Oidaematophorus sp. C	X.00			
Platyptilia ?carduidactyla	X.96		X.96 Cirsium	
Platyptilia williamsi	V.72	V.72	X.96	Asteraceae
Platyptilia sp. 1	X.97			
Crambidae:				
Cosipara sp.	IX.98			
Eudonia franciscalis	VIII.62		VI.97	
Eudonia ?echo	IX.99			
Eudonia rectilinea	VIII.65		X.96	mosses
Eudonia spenceri	VII. 94			
Dicymolomia metalliferalis	VIII.96			
Hellula rogatalis	IX.99			Lepidium
Petrophila confusalis	IX.98		IX.00	algae, aquatic
Microtheoris ophionalis	X.97			
Pyraustinae:				
Herpetogramma ?pertextalis	IX.98			generalist
Mecyna mustelinalis	VII.94		V.97	
Mimorista subcostalis	IX.98			
Nomophila nearctica	X.97		X.98	Poaceae
Pyrausta californicalis	III.59		IX. 98	Lamiaceae
Pyrausta perrubralis	VIII.61	V.70	X.97	

<i>Pyrausta subsequalis</i>	V.70	V.70	III.96	<i>Plantago</i>
<i>Udea profundalis</i>	IV.96		IV.96	<i>Urtica</i> generalist
<i>Uresiphita reversalis</i>	X.97		X.97	<i>Lupinus</i> <i>Cytisus</i>
Crambinae:				
<i>Agriphila anceps</i>	X.96		X.96	Poaceae
<i>Agriphila attenuata</i>	X.97			Poaceae
<i>Agriphila ?undata</i>	X.96		X.96	Poaceae
<i>Crambus occidentalis</i>	X.96		X.96	Poaceae
<i>Euchromius ocellus</i>	VII.94		IX.99	Poaceae
<i>Pediasia nr. dorsipunctellus</i>	IX.98			Poaceae
Pyralidae:				
<i>Pyralis farinalis</i>	X.98			
<i>Aglossa? sp.</i>	X.97			<i>Neotoma</i> nest
Phycitinae:				
<i>Acrobasis tricolorella</i>	X.98		X.98	Heteromeles
<i>Anagasta kuehniella</i>	V.72	V.7	X.97	
<i>Apomyelois bistriatella</i>	X.61			Hypoxyton
<i>Bandera ?virginella</i>	VII.00		VII.00	Poaceae?
<i>Dasypyga alternosquamella</i>	VII.61			Arceuthobium
<i>Dioryctria abietivorella</i> group	VIII.62	V.70		conifers
<i>Ephesiodes gilvescentella</i>	V.72	V.72	X.97	Detritivore
<i>Homoeosoma electellum</i>	IX.98		X.98	Asteraceae
<i>Hulstia undulatella</i>	V.95			
<i>Laetilia zamacrella</i>	IX.99			Homoptera on <i>Pinus</i>
<i>Lipographis fenestrella</i>	V.70	V.70		
<i>Patagonia peregrina</i>	X.98		X.98	<i>Gnaphalium</i>
<i>Phobus</i> sp.	VII.94			
<i>Plodia interpunctella</i>	X.97			

Sosipatra?	IX.99			
Trachycera caliginoidella	VII.62		IX.00	Quercus
Vitula edmansae	V.72	V.72	IX.99	bee nests
Vitula n. sp.	IX.98			
unplaced phycitine	IX.98			
Thyatiridae:				
Habrosyne scripta	V.70	V.70	V.00	
Euthyatira forata	III.94			Cornus?
Drepanidae:				
Drepana arcuata	V.72	V.72	IX.99	Alnus
Geometridae:				
Archirhoe multipunctata	IX.47			
Biston b. cognataria	VII.58		V. 98	
Campaea perlata	VI.40		IV.96	
Ceratodalia gueneata	VII.51		VII.00	
Chetoscelis faseolaria	VII.40		VII.00	Artemisia calif.
Chlorosea banksiaria	VI.40			generalist
Cyclophora nanaria	X.98			generalist
Dichorda illustraria	X.97		IX.00	
Drepanulatrix baueraria	II.40		X.97	Ceanothus thyr.
Drepanulatrix falcateraria	V. 71	V. 71		Ceanothus
Drepanulatrix monicaria	IV.47	V.70	VI.96	Ceanothus thyr.
Drepanulatrix quadraria usta	III.40	V.72	X.97	Ceanothus
Drepanulatrix unicalcaria	X.97		X.97	Ceanothus
Dysstroma citrata	V.47		IV.96	generalist
Dysstroma hulstata ?	V.57			
Dysstroma mancipata (= brunneata?)	V.56			

<i>Dysstroma sobria</i>	V.70	V.70	V.99	generalist
<i>Elpiste marcescaria</i>	IV.47	V.70	VII.97	<i>Baccharis pilularis</i>
<i>Enchoria lacteata</i>	III.61	II.95		
<i>Enypia venata</i>	VII.47			
<i>Epirrhoe plebeculata?</i>	III.00		III.00	Galium
<i>Epirrita autumnata omisa</i>	II.93			Pseudotsuga
<i>Eulithis xyli</i>	VII.40			
<i>Eupithecia absinthiata</i>	IX.98			
<i>Eupithecia acutipennis</i>	II.47			
<i>Eupithecia annulata</i>	XII.94		II.00	Pseudotsuga
<i>Eupithecia bivittata</i>	VI.40			
<i>Eupithecia cestata</i>	III.47	V.70	III.90	generalist
<i>Eupithecia ?cognizata</i>	II.52			
<i>Eupithecia columbrata</i>	V.72	V.72		
<i>Eupithecia gilvipennata</i>	I.95			
<i>Eupithecia graefii</i>	X.50	V.72		Arbutus
<i>Eupithecia implorata</i>	V.70	V.70		
<i>Eupithecia karenae</i>	XI.57	V.70		
<i>Eupithecia longipalpata</i>	V.74	V.74	VII.98	conifers
<i>Eupithecia maestosa</i>	XI.59	V.70		
<i>Eupithecia miserulata zela</i>	IX.98			
<i>Eupithecia misturata</i>	VII.62	V.70	X.97	<i>Ceanothus, Vaccinium</i> (generalist)
<i>Eupithecia mystiat</i>	V.71	V.71		
<i>Eupithecia olivacea</i>	II.47			Conifers
<i>Eupithecia ravocostaliata</i>	II.48			
<i>Eupithecia purpurissata</i>	IV.47	V.70	III.97	<i>Arctostaphylos</i>
<i>Eupithecia rotundopunctata</i>	III.50	V.70	IV.96	general
<i>Eupithecia sabulosata</i>	VI.47			Scrophularia

<i>Eupithecia ?scabrogata</i>	XII.95		II.00	
<i>Eupithecia ?segregata</i>	VI.94		V.98	Quercus
<i>Eupithecia subapicata</i>	V.70	V.70	V.99	Marah
<i>Eupithecia subvirens</i>	I.95		X.97	generalist
<i>Eupithecia tripunctaria</i>	IV.52	V.70		
<i>Eusarca falcata</i>	VI.51			generalist
<i>Eustroma semiatrata</i>	V.70	V.70		Epilobium
<i>Gabriola dyari</i>	VI.40	V.70	IX.00	conifers
<i>Hydriomena albifasciata</i>	III.47		II.97	Q. agrifolia
<i>Hydriomena californiata</i>	VII.47			Pseudotsuga
<i>Hydriomena edenata</i>	I.40			
<i>Hydriomena feminata (TL)</i>	III.40			
<i>Hydriomena glaucata</i>	IV.47			
<i>Hydriomena johnstoni (TL)</i>	IV.40			
<i>Hydriomena manzanita</i>	III.47	V.72		Arctostaphylos
<i>Hydriomena ?marinata</i>	V.70	V.70	V.99	Pseudotsuga
<i>Hydriomena nubilofasciata</i>	II.40		IV.98	Q. agrifolia
<i>Hydriomena quinquefasciata</i>	II.40		II.00	Salix lasiolepis
<i>Hydriomena renunciata viridescens (TL)</i>	V.47			
<i>Hydriomena speciosata</i>	IV.47	V.70		conifers
<i>Lobocleta granitaria</i>	IV.76		VIII.00	
<i>Lobophora simsata</i>	IV.47			generalist
<i>Melanolophia imitata</i>	V. 71	V. 71	IX.98	conifers
<i>Mesoleuca gratulata</i>	III.59		III.96	Quercus
<i>Nasusina vaporata</i>	V.70	V.70	V.00	
<i>Nemoria darwiniata</i>	V.70	V.70	X.97	general
<i>Nemoria leptalea</i>	IX.61		IX.98	Ceanothus
<i>Nemoria pistaciaria</i>	VI.40	V.73		Ceanothus

Nemoria pulcherrima	II.59			Quercus
Neocalcis californiaria	VII.56		X.96 Alnus	generalist
Neoterpes edwardsata	X.97		X.97	Eschscholzia
Neoterpes triangulata	IV.46		V.00	
Nepytia umbrosaria	VI.40			Pseudotsuga, rarely Pines
Operophtera occidentalis	XII. 54			generalist
Orthonama centrostrigaria	II.40		II.97	Polygonaceae
Perizoma costiguttata	VI.40			Holodiscus
Perizoma curvilinea	II.40	V.72	II.97	
Perizoma custodiata	VI.40		V.99	chenopods
Perizoma grandis	VI.40		V.00	
Pero "macdunnoughi"	X.93		VII.97	general
Pero mizon	V.41			
Pero occidentalis	V.47	V.70		conifers?
Pherne parallelia	VI.40		X.97	
Phigalia plumogeraria	I.95			general
Philedia punctomaculata	X.50		X.00	
Plataea personaria	V.55			Artemisia calif.
Prochoerodes forficaria	II.40		VII.97	general
Prochoerodes ?truxaliata	V.41			
Pterotaea ?albescens	X.98			
Sabulodes aegrotata	III.40	V.70	VI.97 Sambucus, Alnus	generalist
Scopula j. quadrilinearia	VIII. 62			
Scopula californiaria	V.98		V.98	
Semiothisa californiaria	V.97		V.97	Lotus
Semiothisa muscariata.	IX.99		IX.00	Quercus
Sicya crocearia	X.50		IX.97 Ceanothus	generalist
Spargania magnoliata.	X.95		V.99	Epilobium

Stamnodes affiliata	II.55			
Stamnodes (?marinata)	I.95			
Synaxis cervinaria	V.72	V.72		generalist
Synaxis jubararia	X.50			
Synaxis pallulata (&/or mosesiana)	IX.98		IX.99	Pseudotsuga, conifers
Thallophaga hyperborea	XII.61	V.70		
Thallophaga nigroseriata	II.47			
Thallophaga ?taylorata	I.95		X.99	Salix
Triphosa californiata.	II.40		III.97	Rhamnus
Triphosa haesitata	VII. 54	V.73	III.97	Rhamnus
Venusia duodecemlineata.	II.47	V.70	IV.98	Q. agrifolia
Venusia obsoleta	II.47			
Venusia pearsalli	III.40		II.97	Salix generalist
Xanthorhoe defensaria	VIII.65	V.70	VI.96	generalist
Xanthorhoe marinensis [IV.40 "incursata" CAS --- need to confirm]	V.41			
Xanthorhoe offensaria	IV.40			
Zenophleps lignicolorata	V.41		II.00	
Epiplemidae:				
Callizia amorata	VIII.62		VI.96	Lonicera
Saturniidae:				
Hemileuca eglanterina	IX.57			general
Hyalophora euryalus	VIII.62	V.71	V.98	Rhamnaceae
Lasiocampidae:				
Malacosoma californicum	V.70	V.70	V.00	general
Tolype lowriei	IX.94		IX.00	Pseudotsuga
Sphingidae:				
Hyles lineata	IX.98			Onagraceae

<i>Smerinthus cerisyi</i>	VII.62			Salix
Lymantriidae:				
<i>Orgyia vetusta</i>	X.99	X.99		general
Notodontidae:				
<i>Clostera apicalis</i>	II.91		X.98	<i>Salix lasiolepis</i>
<i>Furcula scolopendrina</i>	VI.40		V.99	Salicaceae
<i>Oligocentria pallida</i>	IX.95			Arbutus
<i>Pheosia rimosa</i>	VII.52		VII.00	Salicaceae
Dioptidae:				
<i>Phryganidea californica</i>	X.95		IV.00	<i>Q. agrifolia</i>
Arctiidae:				
<i>Cisthene deserti</i>	VII.61			Lichens
<i>Cisthene faustinula</i>	VII.47			Lichens
<i>Clemensia albata</i>	VII.61			Pseudotsuga
<i>Cisseps packardi</i>	VIII. 54			monocots
<i>Apantesis ornata</i>	V.47	V.70	V.98	generalist
<i>Arachnis picta</i>	X.48			generalist
<i>Hemihyalea edwardsii</i>	IX.47		X.99	<i>Q. agrifolia</i>
<i>Isia isabella</i>	V.41		X.97	generalist
<i>Lophocampa argentata</i>	VII.54		IV.96	<i>Pinus muricata,</i> <i>Alnus, Corylus</i>
<i>Lophocampa maculata</i>	VII. 51		V.99	<i>Salix, Alnus</i>
<i>Spilosoma vagans</i>	II.40	V.70	V.98	generalist?
<i>Spilosoma vestalis</i>	V.95		V.98	generalist
Noctuidae:				
<i>Abagrotis denticulata</i>	V.95		IX.98	general
<i>Abagrotis baueri</i>	X.13.95			
<i>Abagrotis pulchrata</i>	IX.99			

<i>Abagrotis ?reedi</i>	IX.00		IX.00	
<i>Acronicta hesperidea</i>	V.94			
<i>Acronicta funeralis</i>	VII.62			
<i>Acronicta lepusculina felina</i>	IX.98			
<i>Acronicta marmorata</i>	IX.94		IX.00	
<i>Acronicta perdita</i>	V.70	V.70	V.98	general
<i>Adelphagrotis indeterminata</i>	IX.62			
<i>Adelphagrotis stellaris</i>	VIII.61		VII.00	general
<i>Agrochola pulchella</i>	X.95			
<i>Agrochola purpurea</i>	VII.94		X.97	general
<i>Agrotis aeneipennis</i>	VI.40	V.70	V.98	general
<i>Agrotis gravis</i>	VI.40			
<i>Agrotis ipsilon</i>	VII.94		X.97	general
<i>Agrotis venerabilis</i>	X.50		X.99	general
<i>Aletia oxygala</i>	VII.47		VII.00	Poaceae?
<i>Amphipoea americana pacifica</i>	VII.54		X.98	Iris seed capsules
<i>Amphipoea lunata</i>	VI.40			
<i>Anhimella perbrunnea</i>	VII.62		IX.99	general/detritivor
<i>Annaphila diva</i>	IV.54			
<i>Apamea ?albina</i>	V.99		V.99	
<i>Apamea amputatrix</i>	VII.53		VII.00	Poaceae
<i>Apamea castanea</i>	V.00		V.00	Poaceae
<i>Apamea cuculliformis</i>	V.95			Poaceae
<i>Apamea devastator</i>	VIII.02			Poaceae
<i>Apamea ?genialis</i>	VI.40	V.71	V.99	Poaceae
<i>Apamea maxima</i>	VI.40			Poaceae
<i>Apamea multicolor</i>	IV.47			Poaceae
<i>Apamea plutonia (=remissa?)</i>	VI.40			

<i>Apamea remissa</i> (=indocilis)	V.00		V.00	Poaceae
<i>Aseptis binotata/paviae</i>	V.41		IV.99	Ceanothus, Ribes generalist
<i>Aseptis ethnica</i>	V.73	V.73		Arctostaphylos
<i>Aseptis?</i> sp.	V.95			
<i>Autographa ampla</i>	V.69			Alnus rubra
<i>Autographa californica</i>	V.70	V.70	VI.96	generalist
<i>Autographa pasiphaea</i>	VIII.61		X.98	Stachys
<i>Autographa labrosa</i>	IX.55			
<i>Autoplusia egenoides</i>	X.97			
<i>Behrensia conchiformis</i>	II.59		II.00	
<i>Caenurgia togataria</i>	X.96		X.96	Poaceae
<i>Caenurgina ?erechtea</i>	VI.96		II.97	Poaceae
<i>Caenurgina caerulea</i>	III.59		V.73	Poaceae/legumes
<i>Catocala aholibah</i>	IX.98			
<i>Catocala ?irene</i>	IX.95			
<i>Cerastis cornuta</i>	I.40			
<i>Cerastis gloriosa</i>	II.40		II.00	Delphinium
<i>Cerastis robertsoni</i>	I.62		I.99	
<i>Cobalos franciscana</i>	VII.59			
<i>Cryphia viridata</i>	VIII.51			Lichens
<i>Cucullia dentilinea</i>	VII.54		V.99	Scrophularia
<i>Cucullia serraticornis</i>	III.47			Solidago
<i>Dargida procincta</i>	VIII.54	V.71	V.98	general
<i>Diarsia esuralis</i>	VI.40	V.70	V.99	general
<i>Diarsia rosaria</i>	II.40	IX.00		
<i>Dicestra chartaria</i>	IV.60			
<i>Dryotype opina</i>	XI.59		X.97	general?
<i>Egira baueri</i>	II.50			

Egira cognata	II.40				
Egira crucialis	II.59	V.71	V.98		general
Egira curialis	II.48		I.99		general
Egira hiemalis	V.71	V.71	IV.98	Vaccinium	general
Egira perlubens	V.70	V.70	III.99		general
Egira rubrica	II.40	V.70	V.99		general
Egira simplex	II.60				
Egira vanduzeei	V.55	V.71	V.99		
Eumicremma minima	X.97		X.97	Gnaphalium	
Euplexia benesimilis	VI.55	V.70			general
Euxoa albipennis	X.50		X.97		general
Euxoa auxiliaris	IX.98				
Euxoa difformis	IX.50				
Euxoa excellens	IX.50				
Euxoa fenesica	X.54				
Euxoa fuscigera	X.50				
Euxoa infausta	VI.40				
Euxoa messoria	IX.98				
Euxoa obeliscoides	X.98		X.98		
Euxoa olivia	IX.98				
Euxoa septentrionalis	X.50		IX.98		
Euxoa sp. 1	VII.94				
Euxoa sp. 2	VII.94				
Faronta terrapictalis	IV.47				
Feltia deceptiva	II.95				Pseudotsuga
Feralia februalis	II.61		II.00		general
Galgula partita	VII.94		II.97		Oxalis
Heliothis phloxiphaga	IV.96		IV.96		general

<i>Heliothis zea</i>	X.97		X.98	general
<i>Hemeroplanis finitima</i>	V.00		V.00	Lotus
<i>Hemieuxoa rudens</i>	X.95		IX.97	general
<i>Hemigraphiphora plebeia</i>	X.95			
<i>Homoglaea dives</i>	II.59		IV.97	<i>Salix lasiolepis</i>
<i>Homoncocnemis fortis</i>	III.50			
<i>Homorthodes communis</i>	V.70	V.70	V.98	fallen leaves
<i>Homorthodes fractura</i>	V.47		V.00	fallen leaves
<i>Homorthodes hanhami</i>	VII.95			
<i>Hydraecia obliqua</i>	VIII.62		X.97	general, stem borer
<i>Hypena californica</i>	III.40		II.97	<i>Urtica</i>
<i>Hypena decorata</i>	I.95			<i>Urtica</i>
<i>Lacinipolia cuneata</i>	V.38	V.70		general
<i>Lacinipolia comis</i>	IX.98			
<i>Lacinipolia davena</i>	VIII.62			
<i>Lacinipolia patalis</i>	V.70	V.70	V.98	Rosaceae, general?
<i>Lacinipolia quadrilineata</i>	IV.60	V.70	X.97	dead leaves?
<i>Lacinipolia rectilinea</i>	IX.98		IX.98	
<i>Lacinipolia stricta cinnabarina</i>	VII.59		X.00	general, herbs
<i>Leucania farcta</i>	VI.40		IX.99	Poaceae
<i>Leucania insueta</i>	V.47	V.70		
<i>Leucania oaxacana</i>	IX.98			
<i>Leucania "oregona"</i>	IV.73	IV.73	IX.97	Poaceae
<i>Litholomia napaea unifasciata</i>	V.99			
<i>Lithophane contenta</i>	I.95			general, deciduous trees
<i>Lithophane pertorrida</i>	X.98		I.99	general, trees
<i>Megalographa biloba</i>	X.97		IX.00	general
<i>Meganola sp.</i>	VII.94			<i>Quercus</i>

Merolonche spinea	IV.47				Lupinus
Mesogona olivata	X.97				Quercus
Mesogona sp. 2 (Crabo)	IX.99		IX.99		
Miodera stigmata	XI.57				
Noctua pronuba	X.01				general
Nola minna	VII.62	V.70	V.00		Q. agrifolia, Ceanothus,
Nycteola sp.	I.95				Salix
Oligia indirecta	VI.40				
Oligia tonsa	VII.59		X.99		
Orthosia arthrolita	X.95		X.97		
Orthosia behrensiana	I.95		II.00		
Orthosia hibisci	II.50		V.99		general
Orthosia macona	I.64		II.00		
Orthosia mys	XII.95		II.00		
Orthosia pacifica	II.51		II.00		general
Orthosia praeces	II.51	V.71	IV.97	Aesculus	general
Orthosia terminata	I.95				
Orthosia transparens	II.40	V.71	IV.98	Arctostaphylos	Arbutus
Panthea ?portlandia	VII.62	V.72			conifers
Papaipema sauzalitae	IX.54	V.73	X.97	Scrophularia,	general stem borer Heracleum
Parabagrotis cupidissima	X.97		X.97		Poaceae?
Parabagrotis formalis	X.98		V.99		
Parabagrotis insularis	V.70	V.70	X.97		Poaceae?
Peridroma saucia	VIII.53	V.77	III.97		general
Perigonica pectinata	III.95		V.99?		
Platyperigea extimia	X.99				
Pleromella opter	V.71	V.71	V.99		
Pleromelloida conserta	VII.62				

Pleromelloida cinerea	XII.94			
Properigea posticata	IX.98			
Protorthodes curtica?	IX.00	IX.00		
Protorthodes rufula	II.60	V.70	X.97	general
Pseudaletia unipuncta	VII.62		X.97	Poaceae, general
Pseudorthodes irrorata	V.47		V.98	general
Pseudorthodes puerilis	III.40	V.70	X.97	general
Pseudorthosia variabilis	IX.47			general
Raphia pallula	VIII.55			
Schinia sueta californica	V.41			
Scoliopteryx libatrix	II.95			
Scotogramma deffessa	VII.59			
Spaelotis quadricava	IX.98			general
Spodoptera exigua	X.95		X.97	general
Spodoptera praefica	II.95			general
Stretchia ?pacifica	II.48			Ribes
Tetanolita palligera	VII.61			dead leaves
Trichoclea edwardsii	III.50			
Tricholita fistula	IX.99		IX.99	shrub Asteraceae
Trichoplusia ni	X.97			general
Ulolonche ?disticha	X.30		X.30	
Xestia mustelina	IX.00		IX.00	Pseudotsuga
Xestia c-nigrum	V.95		X.99	general
Zale lunata	VI.40		X.99	general
Zosteropoda hirtipes	VII.61		X.97	general
Zotheca tranquilla	VII.59			Sambucus

Inverness Ridge butterflies

Taxa	Fire zone			larval host plant	
	1st record	Pre-fire	Post-fire	at Inverness	elsewhere
Hesperiidae:					
<i>Erynnis tristis</i>	X.96		X.96		Quercus
<i>Pyrgus communis</i>	IV.98		IV.98		Malvaceae
<i>Pyrgus ruralis</i>	IV.76	IV.76	IV.97		Horkelia/Potentilla
<i>Hylephila phyleus</i>	IX.00		IX.00		Poaceae
<i>Ochlodes sylvanoides</i>	VII.94		X.96		Poaceae
<i>Paratrytone melane</i>	X.96		X.96		Poaceae
<i>Polites sabuleti</i>	X.98		X.98		Poaceae
Papilionidae:					
<i>Papilio eurymedon</i>	VII.94		III.96	Rhamnus californica	
<i>Papilio rutulus</i>	V.00				Salix
<i>Papilio zelicaon</i>	VII.94		III.97		Apiaceae
<i>Parnassius clodius</i>	VI.1920*				Dicentra (extinct)
Pieridae:					
<i>Colias eurydice</i>	VII.54**				Amorpha (non resident)
<i>Colias eurytheme</i>	VI.96		VI.96		Legumes
<i>Euchloe ausonides</i>	III.97		III.97		Brassica
<i>Pieris napi</i>	II.95	II.95	III.96		Cardamine
<i>Pieris rapae</i>	VII.94		VI.96	Brassica	
Lycaenidae:					
<i>Callophrys eryphon</i>	V.70	V.70	IV.96		Pinus
<i>Callophrys iroides</i>	IV.98		IV.98		generalist
<i>Strymon melinus</i>	X.96		X.96		generalist
<i>Habrodais grunus</i>	IX.52***				Q.chrysolepis, Lithocarpus
<i>Celastrina ladon</i>	V.70	V.70	VI.96	Ceanothus	generalist
<i>Icaricia acmon</i>	V.70	V.70	VI.96		Eriogonum, Lotus

Plebeius saepiolus V.1919**** clovers (extinct?)

Nymphalidae:

Adelpha bredowi	VII.94		X.97	Quercus
Limnitis lorquini	IX.98		V.99	Salix
Junonia coenia	III.96		III.96	Plantago
Nymphalis antiopa	III.97		III.97	Salix
Nymphalis californica	II.95	II.95		Ceanothus thyrsiflorus
Phyciodes campestris	X.99		VIII.00	
Phyciodes mylitta	V.70	V.70	VI.96	Cirsium
Polygonia oreas	II.95	II.95	X.98	Ribes
Polygonia satyrus	VII.94	II.95	III.96	Urtica holosericea
Speyeria zerene myrtleae	VII.94			
Vanessa annabella	VII.94		IV.96	Malva parviflora
Vanessa atalanta	II.95	II.95	III.96	Urtica holosericea
Vanessa cardui	III.96		III.96	Artemisia douglasiana
Vanessa virginiensis	VI.96		VI.96	Gnaphalium (3 spp.), Anaphalis
Danaus plexippus	III.96		III.96	Asclepias (non resident)

Satyridae:

Cercyonis pegala	VI.96		VI.96	Poaceae
Coenonympha californica	V.71	V.71	IV.96	alien grass Poaceae

* Collected at "Bear Valley" (Divide Meadow area) 1920-1954; presumed extinct

** Inverness, Perth St., one specimen collected in July 1954. I have seen *eurydice* flying in October at Indian Valley, ca. 12 airline km E of Inverness

*** Inverness, Perth St. in 1952 and just above Perth St. in 2001, on Lithocarpus.

**** Collected at "Bear Valley" (Divide Meadow area) 1919 to 1959; presumed extinct