

FOREST INSECTS COLLECTED  
IN  
BANFF NATIONAL PARK  
1948 - 1971

BY

G.N. STILL, V.B. PATTERSON AND J.C.E. MELVIN

NORTHERN FOREST RESEARCH CENTRE  
INFORMATION REPORT NOR-X-104  
JULY, 1974

CANADIAN FORESTRY SERVICE  
DEPARTMENT OF THE ENVIRONMENT  
5320 - 122 STREET  
EDMONTON, ALBERTA, CANADA  
T6H 3S5

Forest Insects Collected

in

Banff National Park

1948 - 1971

by

G.N. Still, V.B. Patterson and J.C.E. Melvin

Northern Forest Research Centre, Canadian Forestry Service

Department of the Environment, Edmonton, Alberta

*ABSTRACT*

*Forest insects collected in Banff National Park from 1948 to 1971 are listed alphabetically by order, family, genus, and species. Hosts, numbers of collections, and stages of the insects when collected are shown.*

*RESUME*

*Les insectes forestiers récoltés de 1948 à 1971 dans le parc national du Banff sont énumérés alphabétiquement selon les ordres, les familles, les genres et les espèces. A ceci s'ajoutent les hôtes, le nombre des récoltés et les stades de développement des insectes, s'il y a eu récolté.*

*TABLE OF CONTENTS*

	<u>Page</u>
INTRODUCTION.....	1
LIST OF COMMON NAMES OF PLANTS USED WITH SCIENTIFIC EQUIVALENTS.....	2
ACARINA.....	3
COLEOPTERA.....	4
DIPTERA.....	16
HEMIPTERA.....	17
HOMOPTERA.....	18
HYMENOPTERA.....	20
LEPIDOPTERA.....	23
NEUROPTERA.....	37

*INTRODUCTION*

The Forest Insect and Disease Survey, operating within a number of Federal Government departments, has been collecting forest insects in the Prairie Provinces and western National Parks since 1937. The vast majority of collections were made following post-war staff increases. Since 1948, all collections have been recorded on computer tapes, along with pertinent ecological data. Computer print-outs were used to compile the following annotated list of insects collected in Banff National Park from 1948 to 1971.

As most collections were made by beating foliage over a canvas sheet, some of the hosts shown for adult collections may be inaccurate. Because of the emphasis placed on the collection of some insects for special studies, the numbers of collections do not necessarily reflect the relative abundance of species.

## LIST OF COMMON NAMES OF PLANTS USED

## WITH SCIENTIFIC EQUIVALENTS

Alder	<i>Alnus</i> spp.
Aspen, Trembling	<i>Populus tremuloides</i> Michx.
Birch	<i>Betula</i> spp.
Birch, Dwarf	<i>Betula glandulosa</i> Michx.
Caragana, Siberian	<i>Caragana arborescens</i> Lam.
Fir	<i>Abies</i> , <i>Pseudotsuga</i> spp.
Fir, Alpine	<i>Abies lasiocarpa</i> (Hook.) Nutt.
Fir, Balsam	<i>Abies balsamea</i> (L.) Mill.
Fir, Blue Douglas	<i>pseudotsuga menziesii</i> (Mirb.) Franco var. <i>glauca</i> (Beissn) Franco
Fir, Douglas	<i>Pseudotsuga menziesii</i> (Mirb.) Franco
Juniper	<i>Juniperus</i> spp.
Juniper, Common	<i>Juniperus communis</i> L.
Juniper, Rocky Mountain	<i>Juniperus scopulorum</i> Sarg.
Larch	<i>Larix</i> spp.
Larch, Alpine	<i>Larix lyallii</i> Parl.
Larch, European	<i>Larix decidua</i> Mill.
Maple	<i>Acer</i> spp.
Maple, Manitoba	<i>Acer negundo</i> L.
Pine	<i>Pinus</i> spp.
Line, Limber	<i>Pinus flexilis</i> James
Pine, Lodgepole	<i>Pinus contorta</i> Dougl. var. <i>latifolia</i> Engelm.
Poplar spp.	<i>Populus</i> spp.
Poplar, Balsam	<i>Populus balsamifera</i> L.
Spruce	<i>Picea</i> spp.
Spruce, Engelmann	<i>Picea engelmannii</i> Parry
Spruce, Western White	<i>Picea glauca</i> (Moench) Voss var. <i>albertiana</i> (S. Brown) Sarg.
Spruce, White	<i>Picea glauca</i> (Moench) Voss
Willow	<i>Salix</i> spp.

## ACARINA

Family Genus	Species	Host	Number of Collections	Stage Collected
<b>ACARIDAE</b>				
Histiogaster	arborsignum Woodring	Lodgepole pine	1	A
<b>LAELAPIDAE</b>				
Androlaelaps	casalis (Berlese)	Lodgepole pine	1	A
<b>ORIBATULIDAE</b>				
Scheloribates sp.		Lodgepole pine	1	A
<b>TETRANYCHIDAE</b>				
Oligonychus	ununguis Jac	Spruce	1	
		Engelmann spruce	1	
		White spruce	15	L

## COLEOPTERA

Family Genus	Species	Host	Number of Collections	Stage Collected
<b>ANOBIIDAE</b>				
Ernobius sp.		Lodgepole pine	2	A
Utobium sp.		Douglas fir	1	A
	elegans Horn	Blue Douglas fir	1	L A
<b>BUPRESTIDAE</b>				
Anthaxia sp.		Spruce	1	A
Chrysobothris sp.		Lodgepole pine	1	A
	trinervia Kby.	Alpine larch	1	A
	verdigrispennis Frost	White spruce	1	A
Dicerca sp.		Trembling aspen	1	A
	tenebrica Kby.	Trembling aspen	1	A
	tenebrosa Kby.	Trembling aspen	1	A
Melanolphila sp.		Spruce	1	A
<b>CANTHARIDAE</b>				
Podabrus sp.		Alpine fir	4	A
		White spruce	12	A
		Lodgepole pine	6	A
		Trembling aspen	1	A
		Willow	2	A
		Misc.	3	A
	brevicollis Fall.	Alpine larch	1	A
	piniphilus Esch.	White spruce	1	A
		Willow	1	A
		Misc.	1	A
Silis sp.		White spruce	2	A
	difficilis Lec.	White spruce	1	A
		Douglas fir	1	A

## COLEOPTERA

## CERAMBYCIDAE

Acmaeops	pratensis Laich.	Misc.	1		A
Anoplodera	nigrella Say	Engelmann spruce	1		A
	sanguinea Lec.	Lodgepole pine	1		A
	sexmaculata Linn.	Alpine fir	1		A
		White spruce	1		A
		Misc.	1		A
	tibiales Lec.	Lodgepole pine	1		A
Asemum	nitidum Lec.	Lodgepole pine	1		A
Cortodera	longicornis Kby.	Lodgepole pine	1		A
Grammoptera	subargentata Kby.	Misc.	1		A
Leptura sp.		Lodgepole pine	1		A
Monochamus	scutellatus Say.	No host	1		A
		White spruce	1		A
Neoclytus	muricatulus Kby.	White spruce	1		A
Pachyta	lamed Linn.	Engelmann spruce	1		A
Saperda	calcarata Say.	Trembling aspen	4	L	

## CHRYSOMELIDAE

Adoxus	obscurus Linn.	Lodgepole pine	1		A
Altica sp.		Misc.	1	L	
Chrysomela sp.		Misc.	1	L	
		White spruce	1		A
	aeneicollis Schffr.	White spruce	2		A
		Willow	54	L P	A
	schaefferi Brown	Willow	2		A
	scripta F.	balsam poplar	4	L P	A
		Willow	1	L P	



## COLEOPTERA

	<i>semota</i> Brown	Trembling aspen	1		A
		Balsam poplar	9	L P	A
		Willow	2	L	A
<i>Gonioctena</i> sp.		Willow	1	L	
	<i>americana</i> Schaef.	Trembling aspen	5	L	A
		Willow	3	L	A
	<i>notmani</i> Schaef.	Willow	1		A
<i>Orsodacne</i> sp.		White spruce	1		A
	<i>atra</i> Ahr.	Alpine fir	2		A
		White spruce	6		A
		Lodgepole pine	1		A
		Trembling aspen	1		A
<i>Pachybrachys</i> sp.		Willow	1		A
		Misc.	1		A
<i>Pyrrhalta</i>	<i>carbo</i> (Lec.)	White spruce	1		A
		Lodgepole pine	1		A
		Willow	1		A
	<i>decora</i> (Say)	White spruce	1		A
		Willow	7	L	A
<i>Syneta</i> sp.		Alpine fir	2		A
		Engelmann spruce	1		A
		White spruce	9		A
		Lodgepole pine	2		A
	<i>carinata</i> Mann.	Spruce	1		A
		White spruce	1		A
	<i>pilosa</i> Brown	Balsam fir	1		A
		Alpine fir	6		A
		Spruce	4		A
		Engelmann spruce	4		A
		White spruce	46		A
		Black spruce	1		A
		Lodgepole pine	9		A
		Douglas fir	10		A
<i>Zeugophora</i>	<i>abnormis</i> Lec.	Balsam poplar	1		A

## COLEOPTERA

## CLERIDAE

Thanasimus	undatulus Say.	Lodgepole pine	1	A
		Blue Douglas fir	1	-
Trichodes	ornatus Say.	Misc.	1	A

## COCCINELLIDAE

Adalia	frigida Schn.	White spruce	1	A		
		Trembling aspen	1	A		
Coccinella sp.	transversoguttata richardsoni Brown	White spruce	1	A		
		Siberian caragana	1	A		
		Alpine fir	1	A		
		Rocky Mountain juniper	1	A		
		Engelmann spruce	1	A		
		White spruce	5	A		
		Lodgepole pine	7	A		
		Douglas fir	3	A		
		Siberian caragana	1	A		
		Trembling aspen	3	A		
		Willow	1	A		
		Misc.	3	A		
		Exochomus sp.	trifasciata perplexa Muls.	Lodgepole pine	1	A
				Douglas fir	1	A
		Hippodamia sp.	quinquesignata quinquesignata Kby.	Alpine larch	1	A
Mulsantina sp.	Siberian caragana	1		A		
	tredecimpunctata tibialis Say.	Common juniper		1	A	
Mulsantina sp.	picta Rand.	White spruce	1	A		
		Lodgepole pine	2	A		
		Douglas fir	1	A		
Mulsantina sp.	picta Rand.	Fir	1	A		
		White spruce	10	A		

## COLEOPTERA

		Lodgepole pine	7		A
		Douglas fir	12		A
		Trembling aspen	1		A
		Misc.	1		A
CUCUJIDAE					
Cucujus	puniceus Mann.	Misc.	1		A
CURCULIONIDAE					
Brachyrhinus sp.		Juniper	1		A
	ovatus Linn.	Common juniper	2		A
		White spruce	2		A
		Lodgepole pine	3		A
		Misc.	1		A
Cylindrocopturus	deleoni Buch.	Lodgepole pine	1		A
Dorytomus sp.		Common juniper	1		A
		Lodgepole pine	1		A
Hylobius sp.		White spruce	1		A
		Lodgepole pine	5		-
		Trembling aspen	1		A
Lepyrus sp.		Willow	1		A
	palustris Scop.	Willow	1		A
Magdalis sp.		White spruce	1		
		Lodgepole pine	2		A
		Douglas fir	1		A
		Balsam poplar	1		A
		No host	1		A
Pissodes sp.		Spruce	2		A
		White spruce	1		A
		Lodgepole pine	14	L P	A
	burkei Hopk.	Alpine fir	1		A
	engelmanni Hopk.	Engelmann spruce	2		A
		White spruce	1		A
	schwarzi Hopk.	Lodgepole pine	6	L P	A
	terminalis Hopk.	Lodgepole pine	5	L	

## COLEOPTERA

Rhyncolus sp.		Lodgepole pine	1	A
Rhynchites	bicolor F.	Misc.	2	A
Scythropus sp.		Common juniper	1	A
		Lodgepole pine	3	A
		Douglas fir	1	A
	elegans Couper	White spruce	1	A
		Lodgepole pine	10	A
		Douglas fir	4	A
DERMESTIDAE				
Dermestes sp.		No host	1	A
ELATERIDAE				
Agriotes	limosus Lec.	Douglas fir	1	A
Ampedus sp.		White spruce	1	A
Cardiophorus sp.		Lodgepole pine	1	A
Conoderus	debilis Lec.	Alpine larch	1	A
Ctenicera sp.		Alpine fir	1	A
		White spruce	6	A
		Lodgepole pine	1	A
		Douglas fir	1	A
		Poplar	1	A
		Misc.	1	A
	aereipennis Kby.	White spruce	1	A
		Douglas fir	2	A
		Lodgepole pine	1	A
	appropinquans Rand.	Spruce	1	A
	bombycina Germ.	White spruce	1	A
		Lodgepole pine	1	A
		Trembling aspen	1	A
	callida Brown	Lodgepole pine	1	A
	cruciata festiva Lec.	White spruce	7	A
		Lodgepole pine	1	A
	elegans Cand.	White spruce	2	A
		Lodgepole pine	1	A

## COLEOPTERA

	Trembling aspen	1	A
<i>fallax</i> Say.	White spruce	1	A
	Douglas fir	1	A
	Trembling aspen	1	A
<i>glauca</i> Germ.	White spruce	1	A
<i>kendalli</i> Kby.	Misc.	1	A
<i>lobata caricina</i> Esch.	Lodgepole pine	1	A
<i>lutescens</i> Fall	Douglas fir	1	A
	Alpine fir	1	A
<i>nebraskensis</i> Bland.	Douglas fir	1	A
<i>nigricollis</i> Bland.	White spruce	4	A
	Lodgepole pine	1	A
	Misc.	1	A
<i>nitidula</i> Lec.	White spruce	1	A
<i>ochreipennis</i> Lec.	Spruce	1	A
	White spruce	4	A
	Lodgepole pine	2	A
	Douglas fir	1	A
	Willow	1	A
	Misc.	1	A
<i>propola propola</i> Lec.	White spruce	2	A
	Lodgepole pine	3	A
	Douglas fir	2	A
<i>pudica</i> Brown	White spruce	4	A
	Lodgepole pine	2	A
<i>resplendens</i>	White spruce	1	A
<i>resplendens</i> Esch.	Lodgepole pine	2	A
	Misc.	1	A
<i>semimetallica</i> Walk.	White spruce	3	A
	Lodgepole pine	2	A
<i>stricklandi</i> Brown	Lodgepole pine	1	A
<i>suckleyi</i> Lec.	Lodgepole pine	1	A
<i>triundulata</i> Rand.	Misc.	1	A

## COLEOPTERA

Dalopius sp.		Misc.	2	A
Eanus	decoratus Mann.	White spruce	1	A
Lacon sp.		Engelmann spruce	1	A
		White spruce	1	A
		Lodgepole pine	1	A
	brevicornis Lec.	White spruce	4	A
		Lodgepole pine	3	A
		Douglas fir	2	A
	profusus Cand.	White spruce	2	A
		Lodgepole pine	1	A
Limonius	aeger Lec.	Fir	1	A
		Common juniper	1	A
		Rocky Mountain juniper	1	A
		White spruce	38	A
		Lodgepole pine	13	A
		Douglas fir	9	A
		Trembling aspen	1	A
		Willow	2	A
		Misc.	3	A
Sericus	brunneus Linn.	Lodgepole pine	1	A
HELODIDAE				
Cyphon	variabilis Thunb.	Common juniper	1	A
MELANDRYIDAE				
Scotochroa	basalis Lec.	White spruce	1	A
		Alpine larch	1	A
		Lodgepole pine	1	A
LATHRIDIIDAE				
Corticaria sp.		Lodgepole pine	1	A
Microgramme	filum (Aube)	Lodgepole pine	2	A
MELYRIDAE				
Hoppingiana	hudsonica Lec.	Lodgepole pine	3	A
		Douglas fir	1	A

## COLEOPTERA

## NITIDULIDAE

Epuraea sp.	White spruce	2		A
	Lodgepole pine	1		A

## OEDEMERIDAE

Calopus	angustus Lec.	Lodgepole pine	1		A
---------	---------------	----------------	---	--	---

## RHIZOPHAGIDAE

Rhizophagus sp.	White spruce	1			A
-----------------	--------------	---	--	--	---

## SCARABAEIDAE

Aphodius sp.	Blue Douglas fir	1			A
	Alpine larch	1			A

	hamatus Say.	No host	1		A
--	--------------	---------	---	--	---

Dichelonyx sp.	White spruce	2			A
	Misc.	2	E		A

	backi Kby.	Alpine fir	1		A
		Rocky Mountain juniper	1		A
		White spruce	21		A
		Lodgepole pine	4		A
		Limber pine	1		A
		Douglas fir	3		A
		Trembling aspen	1		A
		Misc.	4		A

	fulgida Lec.	Alpine fir	1		A
		White spruce	1		A
		Lodgepole pine	1		A
		Douglas fir	1		A

	vicina columbiana Hopp.	Willow	1		A
		Misc.	2		A

## SCOLYTIDAE

Cryphalus sp.	Alpine fir	1			A
---------------	------------	---	--	--	---

## COLEOPTERA

<i>Crypturgus</i>	<i>borealis</i> Sw.	White spruce	1		A	
<i>Dendroctonus</i> sp.		Alpine fir	2		A	
		Spruce	1		A	
		Engelmann spruce	3		A	
		White spruce	1		A	
		Lodgepole pine	2		A	
		<i>murrayanae</i> Hopk.	Lodgepole pine	7		A
	<i>rufipennis</i> Kby.	Alpine fir	1		A	
		Engelmann spruce	7		A	
		White spruce	13		A	
	<i>ponderosae</i> Hopk.	Lodgepole pine	1		A	
<i>Dryocoetes</i>	<i>affaber</i> Mann.	Engelmann spruce	4		A	
		White spruce	8		A	
		Western white spruce	1		A	
		Lodgepole pine	1		A	
	<i>autographus</i> Ratz.	White spruce	1		A	
<i>Hylurgops</i> sp.		Lodgepole pine	1	L		
	<i>rugipennis</i> Mann.	Lodgepole pine	5	L	A	
<i>Ips</i> . sp.		Spruce	1		A	
		Engelmann spruce	5		A	
		White spruce	3		A	
		Lodgepole pine	2		A	
		<i>amiskwiensis</i> G. Hopk.	Engelmann spruce	1		A
		<i>borealis</i> Sw.	Engelmann spruce	3		A
		<i>engelmanni</i> Sw.	Engelmann spruce	2		A
			White spruce	1		A
		<i>gildi</i> Blackm.	Lodgepole pine	5	L P	A
			Limber pine	1	L	A
		<i>perturbatus</i> Eich.	White spruce	5		A
		<i>pini</i> Say	White spruce	2		A
			Lodgepole pine	9		A
		<i>semirostris</i> G. Hopk.	Engelmann spruce	2		A
		<i>tridens</i> Mann.	White spruce	1		A



## COLEOPTERA

	yohoensis Sw.	Alpine fir	1		A
		Spruce	1		P A
		Engelmann spruce	6	L	A
		White spruce	14	L P	A
		Lodgepole pine	2		A
Orthotomicus sp.		White spruce	1		
	caelatus Eich.	Engelmann spruce	1		A
	lasiocarpus Sw.	Larch	1		
	vicinus Lec.	White spruce	1		A
		Lodgepole pine	2		A
Pityogenes	knechteli Sw.	White spruce	1		
		Lodgepole pine	8		A
Pityophthorus sp.		Larch	6		A
		Spruce	2		
		Engelmann spruce	1		
		Lodgepole pine	1		
	tuberculatus Eich.	Lodgepole pine	1		A
Polygraphus	rufipennis Kby.	Spruce	1		A
		Engelmann spruce	4		A
		White spruce	7		A
		Lodgepole pine	2		A
Pseudohylesinus sp.		Blue Douglas fir	1		A
	nebulosus Lec.	Douglas fir	1		A
		Blue Douglas fir	1		A
Scierus	annectens Lec.	Douglas fir	1		A
		Blue Douglas fir	1		A
Scolytus	piceae Sw.	White spruce	3		A
	tsugae Sw.	Blue Douglas fir	1		A
	unispinosus Lec.	Blue Douglas fir	1		
Taenioglyptes	ruficollis ruficollis	Alpine fir	1		
	Hopk.	Alpine larch	1		

## COLEOPTERA

Trypodendron sp.		White spruce	3	A
		Western white spruce	1	A
		Lodgepole pine	2	A
	lineatum Olivier	Engelmann spruce	4	A
		White spruce	2	A
		Lodgepole pine	4	A
STAPHYLINIDAE				
Atheta sp.		Lodgepole pine	2	A
TENEBRIONIDAE				
Corticeus sp.		White spruce	3	A
Tribolium	confusum Duval	Lodgepole pine	1	A

## DIPTERA

Family Genus	Species	Host	Number of Collections	Stage Collected
<b>BIBIONIDAE</b>				
Bibio	holtii Mcat.	White spruce	1	A
		Willow	1	A
<b>CECIDOMYIDAE</b>				
Dasineura	balsamicola Lintn.	Alpine fir	2	L P
Mayetiola sp.		Willow	1	
Mycodiplosis sp.		Lodgepole pine	7	L
Rhabdophaga sp.	swainei Felt	Willow	1	
		Spruce White spruce	1 5	P
<b>SCIARIDAE</b>				
Bradysia sp.	nr. varians Johannsen	Lodgepole pine	4	A
		Lodgepole pine	2	A
<b>SYRPHIDAE</b>				
Metasyrphus	lapponicus Zett.	White spruce	1	L
		White spruce	4	L P
		Lodgepole pine	2	L
		Douglas fir	4	L P
		Maple	1	L
Scaeva	pyrastris Linn.	Alpine larch	1	L P
		White spruce	3	L
		Douglas fir	1	P

## HEMIPTERA

Family Genus	Species	Host	Number of Collections	Stage Collected
<b>MIRIDAE</b>				
Deraeocoris sp.		Alpine fir	1	A
		Lodgepole pine	2	
barberi Kngt.		Fir	1	A
		Spruce	1	A
		White spruce	5	A
		Douglas fir	1	A
Dichroscytus	suspectus Reut.	White spruce	1	A
Lygus sp.		Misc.	1	A
		rubidus Kngt.	Lodgepole pine	1
<b>PENTATOMIDAE</b>				
Chlorochroa	uhleri Say.	Common juniper	1	A
		White spruce	1	A
Elasmostethus	cruciatus Say.	White spruce	1	A

## HOMOPTERA

Family Genus	Species	Host	Number of Collections	Stage Collected		
<b>ACHILIDAE</b>						
Eiptera sp.		Alpine fir	1	A		
		White spruce	1	A		
		Lodgepole pine	1	A		
<b>ADELGIDAE</b>						
Adelges sp.		Alpine larch	2	E	A	
		Engelmann spruce	1			
		White spruce	3		A	
		Lodgepole pine	1		A	
		Limber pine	2	L		
		Douglas fir	1			
		Blue Douglas fir	1			
		abietis Linn.	White spruce	3		A
		cooleyi Gill.	Spruce	6		A
			Engelmann spruce	10	L	A
			White spruce	35	L	A
			Blue Douglas fir	5	L	A
		lariciatus	White spruce	2		
	Pineus sp.		Lodgepole pine	2		
		Limber pine	3			
	pinifoliae Fitch.	Spruce	2			
		Engelmann spruce	3			
		White spruce	10	L		
		Limber pine	2	E L	A	
	similis Gill.	Engelmann spruce	1			
<b>APHIDIDAE</b>						
Asiphum sp.		Trembling aspen	3	L	A	
		rosettei Maxson	1	L		

## HOMOPTERA

Cinara sp.		Alpine fir	2	L	
		Alpine larch	9	L	A
		Spruce	1	L	
		Engelmann spruce	1	L	
		White spruce	2	L	
		Pine	1		A
		Lodgepole pine	1		A
		Douglas fir	2	L	A
		Blue Douglas fir	2	L	A
		Trembling aspen	1	L	
		<i>brevispinosa</i> G. & P.	Lodgepole pine	2	L
Mindarus	<i>abietinus</i> Koch.	Alpine fir	1	L	
		White spruce	3	L	
Pemphigus sp.		Balsam poplar	1		
	<i>populi-caulis</i> Fitch.	Balsam poplar	1		
Periphyllus	<i>negundinis</i> Thos.	Manitoba maple	2	L	A
Prociphilus	<i>xylostei</i> Degeer	Misc.	1	L	A
Pterocomma	<i>bicolor</i> Oest.	Willow			A
Wahlgreniella	<i>crataegi</i> Monnel	Siberian caragana	4	L	A
		Misc.	1	L	
CERCOPIDAE					
Aphrophora sp.		White spruce	1		A
		Lodgepole pine	1		A
		Douglas fir	1		A
	<i>permutata</i> Uhl.	Lodgepole pine	1		A
COCCIDAE					
Physokermes	<i>piceae</i> (Schr.)	Spruce	1		A
		White spruce	3	L	A
PSYLLIDAE					
Trioza sp.		Engelmann spruce	1		A

## HYMENOPTERA

Family Genus	Species	Host	Number of Collections	Stage Collected	
<b>BRACONIDAE</b>					
	<i>Apanteles</i> sp.	Lodgepole pine	3	A	
	<i>Aphidius</i> sp.	Lodgepole pine	1	A	
	<i>Ascogaster</i> sp.	Lodgepole pine	2	A	
	<i>Brachistes</i> sp.	Lodgepole pine	1	A	
	<i>Bracon</i> sp.	Lodgepole pine	2	A	
	<i>Calyptus</i> sp.	Lodgepole pine	1	A	
	<i>Chelonus</i> sp.	Lodgepole pine	1	A	
	<i>Triaspis</i> sp.	Lodgepole pine	2	A	
<b>CIMBICIDAE</b>					
<i>Cimbex</i>	<i>americana</i> Leach	Trembling aspen	2	L	
		Willow	1	L	
<i>Trichiosoma</i> sp.		White spruce	1	L	
		Lodgepole pine	1	P	
		Alder	1	P	
		Trembling aspen	2	L	A
		Willow	2	L	
<i>Zaraea</i> sp.		Lodgepole pine	2	L	
<b>DIPRIONIDAE</b>					
<i>Neodiprion</i> sp.		Alpine fir	3	L	
		Spruce	2	L	
		Engelmann spruce	6	L	
		White spruce	62	L	P
		Lodgepole pine	61	L	P
		Douglas fir	22	L	P
		<i>abietis</i> Harr.	Spruce	1	L
		Engelmann spruce	7	L	
		White spruce	39	L	P
		Douglas fir	6	L	P

## HYMENOPTERA

## ICHNEUMONIDAE

Glypta sp.	Lodgepole pine	2		A
Lissonota sp.	Lodgepole pine	1		A
Mastrus sp.	Lodgepole pine	1		A
Pimplopterus sp.	Lodgepole pine	1		A

## PAMPHILIIDAE

Acantholyda sp.	Alpine fir	2	L	
	Rocky Mountain juniper	1	L	
	Engelmann spruce	2	L	
	White spruce	27	L	
	Lodgepole pine	12	L	
	Willow	1	L	
	Misc.	1	L	

## SIRICIDAE

Urocerus	flavicornis F.	Engelmann spruce	1		A
----------	----------------	------------------	---	--	---

## TENTHREDINIDAE

Anoplonyx sp.	Alpine larch	1	L	
	Alpine fir	1	L	P
Nematus sp.	Dwarf birch	1	L	
	Willow	7	L	
	Misc.	1	L	
Pikonema sp.	White spruce	5	L	P
	Lodgepole pine	1	L	
alaskensis Roh.	Alpine fir	1	L	
	Engelmann spruce	4	L	
	White spruce	82	L	
	Lodgepole pine	3	L	
	Douglas fir	1	L	



## HYMENOPTERA

	<i>dimmockii</i> Cress.	Fir	1	L	P
		Spruce	5	L	
		Engelmann spruce	11	L	
		White spruce	203	L	P
		Lodgepole pine	6	L	
		Douglas fir	2	L	
<i>Pristiphora</i> sp.		White spruce	1	L	
	<i>erichsonii</i> Htg.	European larch	1	L	
		Alpine larch	8	L	A
<i>Tenthredo</i> sp.		White spruce	1		P
		Willow	1	L	
TORYMIDAE					
<i>Megastigmus</i>	<i>spermatrophus</i>	White spruce	1		
	<i>spermatrophus</i>				
	Wachtl.				
XYELIDAE					
<i>Pleroneura</i> sp.		Alpine fir	3	L	
		Blue Douglas fir	1	L	
	<i>borealis</i> Felt	Alpine fir	20	L	

## LEPIDOPTERA

Family Genus	Species	Host	Number of Collections	Stage Collected		
<b>AEGERIIDAE</b>						
Albuna	pyramidalis Wlk.	Lodgepole pine	1			A
Vespamia sp.		Alpine fir	1	L		
		Engelmann spruce	1			
		Blue Douglas fir	1			
<b>ARCTIIDAE</b>						
Lexis	bicolor Grt.	Engelmann spruce	1	L		
		White spruce	4	L	P	
		Lodgepole pine	5	L	P	A
		Douglas fir	2	L		
<b>COLEOPHORIDAE</b>						
Coleophora sp.		White spruce	1	L		
<b>GELECHIIDAE</b>						
Chionodes sp.		White spruce	1			P
	continuella Zell.	White spruce	3	L		P
Compsolechia	niveopulvella Cham.	Engelmann spruce	1			P
		Balsam poplar	1	L		
		Trembling aspen	32	L		P
		Willow	1			P
Eucordylea sp.		White spruce	1	L		
		Lodgepole pine	32	L	P	A
	canusella Free.	Lodgepole pine	33	L	P	A
	florae Free.	Lodgepole pine	1	L		
	starki Free.	Lodgepole pine	119	L		P

## LEPIDOPTERA

## GEOMETRIDAE

Biston	cognataria Gn.	White spruce	1	L		
Campaea	perlata Gn.	White spruce	1	L		
Caripeta	angustiorata Wlk.	Lodgepole pine	14	L		
	divisata Wlk.	White spruce	5	L		
Deilinia	borealis Hlst.	Willow	1	L		
Dysstroma sp.		Common juniper	1	L		
		Spruce	1	L		
		Misc.	4	L		
		citrata Linn.	White spruce	1	L	
		formosa boreata Tayl.	Misc.	1	L	
		truncata Hufn.	Misc.	5	L	P
		truncata walkerata Pears.	Misc.	3	L	
Ectropis	crepuscularia Schiff.	Willow	2	L		
Entephria	multivagata Hlst.	White spruce	1		A	
Enypia	moillieti Blkmre.	White spruce	1	L		
		Lodgepole pine	1		P	
		Douglas fir	5	L		
Epirrhanthis sp.		Willow	1	L		
	substriataria danbyi Hlst.	White spruce	5	L		
		Lodgepole pine	1	L		
Epirrita sp.		White spruce	1	L		
	autumnata omissa Harr.	Alpine fir	11	L		
		Engelmann spruce				
		White spruce	23	L		
		Douglas fir	3	L		
		Alder	1	L		
Willow		1	L			

## LEPIDOPTERA

	autumnata Gn.	Engelmann spruce	1	L
Eupithecia sp.		Alpine fir	1	L
		Juniper	2	L
		Common juniper	1	L
		Spruce	1	L
		Engelmann spruce	1	L
		White spruce	6	L
		Lodgepole pine	2	L
		Douglas fir	1	L
		Willow	1	L
		Misc.	1	L
	albicapitata Pack.	White spruce	1	L
	columbrata McD.	Alpine fir	1	L
filmata Pears.		Alpine fir	4	L
		Spruce	2	L
		Engelmann spruce	3	L
		White spruce	28	L
		Douglas fir	4	L
luteata Pack.		Fir	1	L
		Alpine fir	3	L
		Engelmann spruce	1	L
		White spruce	36	L
		Lodgepole pine	3	L
		Douglas fir	10	L
nimbicolor Hlst.		Willow	1	L
		Misc.	2	L
niphadophilata Dyar		Juniper	3	L
		Common juniper	16	L
		Rocky Mountain juniper	3	L
ornata Hlst.	Lodgepole pine	3	L	
palpata Pack.		Lodgepole pine	2	L
		Douglas fir	1	L
perfusca Hlst.		White spruce	1	L
		Lodgepole pine	1	L

## LEPIDOPTERA

	<i>pseudotsugata</i> Mack.	White spruce	1	L
	<i>satyrata</i> Hbn.	Misc.	2	L
	<i>transcanadata</i> Mack.	White spruce	2	L
		Douglas fir	3	L
<i>Hesperumia</i>	<i>sulphuraria</i> Pack.	Misc.	3	L
<i>Hydriomena</i> sp.		White spruce	1	L
		Lodgepole pine	1	L
		Douglas fir	1	L
		Willow	1	L
	<i>albimontanata</i> McD.	Douglas fir	1	L
	<i>furcata</i> Thun.	Willow	5	L
<i>Hypagyrtis</i>	<i>piniata</i> Pack.	White spruce	1	L
<i>Iridopsis</i>	<i>larvaria</i> Gn.	Misc.	1	L
<i>Itame</i> sp.		Dwarf Birch	1	L
		Misc.	2	L
	<i>anataria</i> Swett	Dwarf birch	1	L
		Misc.	7	L
	<i>bitactata</i> Wlk.	Alder	1	L
		Misc.	1	L
	<i>denticulodes</i> Hlst.	Willow	1	L
		Misc.	5	L
	<i>loricaria julia</i>	White spruce	2	L
	Hlst.	Trembling aspen	3	L
		Willow	2	L
		Misc.	1	L
<i>Leucobrephos</i>	<i>brephoides</i> Wlk.	Balsam poplar	1	L
<i>Lobophora</i> sp.		Misc.	1	L
	<i>nivigerata</i> Wlk.	White spruce	1	L
		Trembling aspen	1	L
		Willow	2	L

## LEPIDOPTERA

Lygris sp.		Spruce	1	L		
		White spruce	1	L		
		Lodgepole pine	2	L		
		destinata Moesch.	Willow	2	L	
		flavibrunneata McD.	White spruce	1		P A
		propulsata Wlk.	Misc.	6	L	
		testata Linn.	Alder	1	L	
			Willow	1	L	
		xylina Hlst.	Misc.	1	L	
		xylina speciosa Hlst.	Misc.	2	L	
Melanophila	imitata Wlk.	Blue Douglas fir	1	L		
Metanema	determinata Wlk.	Willow	1	L		
Nepytia	canosaria Wlk.	White spruce	1		P	
Nyctobia	limitaria Wlk.	Engelmann spruce	1	L		
		White spruce	18	L		
		Douglas fir	4	L		
		Blue Douglas fir	1	L		
Operophtera	bruceata Hlst.	Balsam poplar	1	L		
		Trembling aspen	3	L		
		Willow	2	L		
Pero sp.		White spruce	1	L		
		Lodgepole pine	3	L		
		Willow	1	L		
	behrensarius Pack.	Lodgepole pine	1	L		
Plagodis	phlogosaria approximaria Dyar	White spruce	1	L		
Rheumaptera	hastata Linn.	Lodgepole pine	1		A	
		Dwarf birch	1	L		
Selenia	alciphearia Wlk.	Dwarf birch	1	L		
		Willow	1	L		

## LEPIDOPTERA

Semiothisa sp.		Lodgepole pine	1	L	
	granitata Gn.	Fir	1	L	
		Alpine fir	7	L	
		Engelmann spruce	1	L	
		White spruce	58	L	
		Lodgepole pine	10	L	
		Douglas fir	17	L	
	hebetata Hlst.	Willow	2	L	
	hebetata ponderosa B. & McD.	No host	1	L	
	perplexa McD.	White spruce	1	L	
		Lodgepole pine	39	L	
Sicya	macularia Harr.	White spruce	2	L	
		Willow	3	L	
		Misc.	1	L	
Tetracis	cachexiata Gn.	Lodgepole pine	1		P
Thera	otisi Dyar	Juniper	6	L	
		Common juniper	20	L	
		Rocky Mountain juniper	5	L	
		White spruce	2		P
		Douglas fir	1		P
GRACILLARIIDAE					
Gracillaria sp.		Balsam poplar	1	L	
		Misc.	1	L	
Lithocolletis	tremuloidiella Braun.	Trembling aspen	1		P
Phyllocnistis sp.		Balsam poplar	1		
	populiella Cham.	Balsam poplar	1		P
		Trembling aspen	42	L	P
LASIOCAMPIDAE					
Epicnaptera	americana Harr.	White spruce	1	L	
		Alder	1	L	
		Balsam poplar	1	L	
		Willow	3	L	

## LEPIDOPTERA

Malacosoma	californicum pluviale (Dyar)	Dwarf birch	1	L	
LYCAENIDAE					
Incisalia sp.		Lodgepole pine	1		A
	eryphon Bdv.	Lodgepole pine	1	L	
LYMANTRIIDAE					
Parorgyia	plagiata Wlk.	White spruce	1	L	
NOCTUIDAE					
Achytonix sp.		White spruce	1	L	
		Douglas fir	1	L	
Acronicta sp.		Willow	2	L	
		Misc.	2	L	
	distans Grt.	Willow	1	L	
Andropolia	contacta Wlk.	White spruce	1	L	
Anomogyna	elimata Gn.	White spruce	1	L	
	perquiritata Morr.	Alpine fir	1	L	
		Engelmann spruce	1	L	
		White spruce	3	L	
Autographa sp.		Willow	1	L	
		Misc.	2	L	
	calificornica Speyer	White spruce	1	L	
Bombycia	algens Grt.	White spruce	1	L	
Brachylomia	populi Stkr.	White spruce	3	L	
		Balsam poplar	5	L	
Enargia sp.		White spruce	1	L	
		Trembling aspen	1	L	
	infumata Grt.	Trembling aspen	1	L	



## LEPIDOPTERA

Feralia sp.		White spruce	3	L
	jocosa Gn.	Spruce	1	L
		White spruce	10	L
		Lodgepole pine	1	L
		Douglas fir	2	L
Homoglaea sp.		White spruce	1	L
		Balsam poplar	1	L
	carbonaria Harv.	Trembling aspen	1	L
	hircina Morr.	Trembling aspen	1	L
Ipimorpha	pleonectusa Grt.	White spruce	1	L
		Trembling aspen	4	L
		Willow	1	L
Lithomoia	solidaginis Hbn.	Misc.	1	L
	solidaginis germana Morr.	Willow	1	L
Lithophane sp.		Juniper	1	L
Orthosia sp.		Common juniper	1	L
		White spruce	1	L
	hibisci Gn.	Willow	1	L
	revicta Morr.	Alpine fir	1	L
Panthea	acronyctoides Wlk.	Engelmann spruce	1	L
		White spruce	9	L
		Lodgepole pine	1	L
		Douglas fir	1	L
	furcilla Pack.	Lodgepole pine	12	L
Peridroma	sausia Hbn.	Birch	1	E
Polia sp.		Willow	1	L
	assimilis Morr.	Lodgepole pine	1	L
		Douglas fir	1	L
		Willow	1	L
		Misc.	1	L

## LEPIDOPTERA

	<i>cristifera</i> Wlk.	Willow	1	L	
		Misc.	1	L	
	<i>ingravis</i> Sm.	Alpine fir	1	L	
		White spruce	1	L	
		Lodgepole pine	1	L	
		Willow	1	L	
<i>Scoliopteryx</i>	<i>libatrix</i> Linn.	Trembling aspen	1	L	
		Willow	2	L	P
<i>Spaelotis</i>	<i>clandestina</i> Harr.	Alder	1	L	
<i>Stretchia</i>	<i>plusiaeformis</i> Hy. Edw.	Misc.	1	L	
<i>Synedoida</i> sp.		No host	1		A
	<i>hudsonica</i> G. & R.	Alpine larch	1	L	
		White spruce	1	L	
		Lodgepole pine	2	L	
		Douglas fir	1	L	
		Willow	1	L	
		Misc.	1	L	
<i>Syngrapha</i> sp.		Spruce	1		P
		White spruce	2	L	
		Alpine fir	1	L	
	<i>alias</i> Ottol.	Alpine fir	3	L	
		Engelmann spruce	4	L	
		White spruce	32	L	
	<i>epigaea</i> Grt.	White spruce	1	L	
	<i>selecta</i> Wlk.	Alpine fir	1	L	
		White spruce	4	L	
<i>Xylena</i>	<i>cineritia</i> Grt.	Misc.	1	L	
<i>Xylotype</i> sp.		Misc.	1	L	
	<i>acadia</i> B. & B.	Alder	1	L	
<i>Zale</i>	<i>duplicata largera</i> Sm.	White spruce	3	L	
		Lodgepole pine	5	L	
		Douglas fir	1	L	

## LEPIDOPTERA

## NOTODONTIDAE

<i>Cerura</i>	<i>borealis</i> Bdv.	Willow	1	L
<i>Icthyura</i> sp.		Lodgepole pine	1	L
		Trembling aspen	1	L
	<i>albosigma</i> Fitch	Poplar	1	L
		Willow	1	L
	<i>apicalis</i> Wlk.	Trembling aspen	1	L
	<i>brucei</i> Hy. Edw.	Willow	1	L
<i>Pheosia</i>	<i>rimosa</i> Pack.	Trembling aspen	1	L

## NYMPHALIDAE

<i>Nymphalis</i>	<i>antiopa</i> L.	Balsam poplar	2	L
		Trembling aspen	2	L
		Willow	19	L
<i>Polygonia</i> sp.		Misc.	1	L
	<i>faunus</i> Edw.	Lodgepole pine	1	L
		Misc.	1	L

## OECOPHORIDAE

<i>Martyrhilda</i>	<i>sciadopa</i> Meyr.	Balsam poplar	1	L
--------------------	-----------------------	---------------	---	---

## OLETHREUTIDAE

<i>Aphania</i>	<i>dextrana</i> McD.	Trembling aspen	1	L
<i>Epinotia</i> sp.		Engelmann spruce	1	L
		Willow	1	L
		Misc.	1	L
	<i>castaneana</i> Wlshm.	Willow	1	L
		Misc.	1	L
	<i>cruciana</i> Linn.	Willow	2	L
	<i>medioplagata</i> Wlshm.	Lodgepole pine	1	L
		Willow	1	L

## LEPIDOPTERA

	<i>nisella criddleana</i> Kft.	Trembling aspen	9	L	
	<i>solandriana</i> Linn.	Alder	1	L	
		Birch	1	L	
		Balsam poplar	4	L	
		Trembling aspen	1	L	
<i>Grapholitha</i> sp.		Lodgepole pine	1	L	
	<i>poss caeruleana</i> Wlshm.	Lodgepole pine	1		A
<i>Griselda</i> sp.		White spruce	1		P
	<i>radicana</i> Wlshm.	Alpine fir	5	L	P
		Spruce	5	L	
		Engelmann spruce	7	L	P
		White spruce	102	L	P
		Douglas fir	7	L	
<i>Gypsonoma</i>	<i>fasciolana</i> Clem.	Trembling aspen	1	L	
<i>Laspeyresia</i> sp.		Engelmann spruce	1		
		Lodgepole pine	5	L	A
	<i>youngana</i> Kft.	Engelmann spruce	1		
		White spruce	1		
<i>Paralobesia</i>	<i>piceana</i> Free.	White spruce	1	L	
<i>Petrova</i> sp.		Alpine fir	1	L	
		Spruce	3		
		Engelmann spruce	1		
		White spruce	1		
		Lodgepole pine	23	L	P
	<i>metallica</i> Busck.	Lodgepole pine	9	L	P
<i>Pseudexentera</i>	<i>oregonana</i> Wlshm.	Trembling aspen	1	L	
<i>Taniva</i>	<i>albolineana</i> Kft.	White spruce	1	L	

## LEPIDOPTERA

Zeiraphera sp.		Alpine fir	1	L	
		Spruce	1		P
		White spruce	11	L	
		Lodgepole pine	1	L	
		Douglas fir	1	L	
	improbana (Wlk.)	Alpine larch	10	L	P A
fortunana Kft.		Alpine fir	7	L	
		Spruce	3	L	
		Engelmann spruce	3	L	
		White spruce	48	L	
		Douglas fir	1	L	
canadensis Mut. and Free.		Spruce	3	L	
		White spruce	2	L	
		Douglas fir	1	L	
PLUTELLIDAE					
Cerostoma	dorsimaculella Kft.	White spruce	1		P
		Willow	1	L	P
Plutella	vanella Wlshm.	White spruce	2	L	P
PTEROPHORIDAE					
Platyptilia sp.		Misc.	1	L	
	punctidactyla Haw.	White spruce	1		P
		Misc.	2	L	P A
PYRALIDAE					
Dioryctria sp.		White spruce	1	L	
		Lodgepole pine		L	
abietivorella Grt.		White spruce	1	L	
		Lodgepole pine	1		
		Limber pine	2	L	
reniculella Grt.		White spruce	1	L	
SPHINGIDAE					
Celerio	gallii intermedia Kby.	Misc.	1	L	
Hemaris sp.		Douglas fir	1	L	

## LEPIDOPTERA

<i>Smerinthus</i>	<i>jamaicensis</i> F. <i>geminatus</i> Say.	Trembling aspen	1	L	
<i>Sphinx</i> sp.		Douglas fir	1	L	
TORTRICIDAE					
<i>Acleris</i> sp.		Engelmann spruce	1	L	
		White spruce	1	L	
		Willow	1	L	
	<i>fuscana</i> B. & B.	White spruce	1		P
	<i>hudsoniana</i> Wlk.	Willow	1	L	
	<i>variana</i> Fern.	Alpine fir	33	L	P
		Spruce	14	L	P
		Engelmann spruce	30	L	P A
		White spruce	263	L	P A
		Douglas fir	9	L	
		Trembling aspen	1	L	
		Misc.	1	L	
<i>Archips</i> sp.		Lodgepole pine	1	L	
<i>Archippus</i>	<i>packardianus</i> Fern.	White spruce	9	L	P
<i>Argyrotaenia</i> sp.		Alpine fir	1	L	
		Lodgepole pine	1	L	
	<i>occultana</i> Free.	White spruce	1	L	
	<i>tabulana</i> Free.	Lodgepole pine	1	L	
<i>Choristoneura</i> sp.		Alpine fir	1	L	
		Engelmann spruce	1	L	
		Lodgepole pine	15	L	P
	<i>conflictana</i> Wlk.	White spruce	1	L	
		Trembling aspen	12	L	P
	<i>fumiferana</i> Clem.	Balsam fir	10	L	P
		Alpine fir	57	L	P
		Common juniper	5	L	

## LEPIDOPTERA

		Spruce	7	L	P
		Engelmann spruce	20	L	P
		White spruce	207	L	P A
		Lodgepole pine	11	L	P A
		Limber pine	1	L	
		Douglas fir	26	L	P
		Blue Douglas fir	1	L	
		Willow	1	L	
		Misc.	1	L	
	pinus pinus Free.	Lodgepole pine	2	L	P
Clepsia	persicana Fitch	Common juniper	1		P
		Engelmann spruce	1		P
		White spruce	4	L	P
		Balsam poplar	1	L	
		Trembling aspen	L	L	
		Misc.	2	L	P
Pandemis	canadana Kft.	Dwarf birch	2	L	
YPONOMEUTIDAE					
Ocnerostoma sp.		Lodgepole pine	1		P

## NEUROPTERA

Family Genus	Species	Host	Number of Collections	Stage Collected
<b>HEMEROBIIDAE</b>				
Hemerobius	conhenctus conjunctus Fitch.	Lodgepole pine	3	A
	dorsatus Bks.	White spruce	1	A
		Lodgepole pine	1	A
		Douglas fir	3	A
	humulinus Linn.	Alpine fir	1	A
	kokaneeanus Currie	White spruce	1	A
stigmaterus Fitch	White spruce	1	A	
Wesmaelius	longifrons Wlk.	Spruce	1	A
		White spruce	2	A
		Douglas fir	1	A