

Taxonomic category	Habitat	Funct	Plant/				References
	Ad/Im	group	animal	host	Ab	Co	

LEPTOPSYLLIDAE (continued)

Peromyscopsylla selenis (Rothschild) anim/nest Pa/Sv A-Clca C 3

HYMENOPTERA

(50 families, 346 genera, 462 species)

ANDRENIDAE (2 genera, 3 species)

Andrena spp. O-vg/0-sl Fl/A p 29
Panurginus sp. O-vg/0-sl Fl/A p 29

(SEE ALSO APPENDIX C)

ANTHOPHORIDAE (6 genera, 9 species)

Anthophora spp. O-vg/0-sl Fl/A polylec A P 29
0-vg/O-vg Fl/A polylec U P 29
Ceratina pacifica Smith O-vg/0-vg Fl/A polylec A P 29
Ceratina sp. O-vg/0-sl Fl/A A P 29
Melissodes sp. O-vg/nest Fl/KP I-AndreA P 29
Nomada spp. O-vg/0-sl Fl/A polylec A P 29
Synhalonia sp. 0-vg/nest Fl/KP I-AnthoC P 29
Xeromelecta californica (Cresson)

(SEE ALSO APPENDIX C)

APHEUNIDAE (2 genera, 3 species)

Aphelinus spp. (2) 0-vg/ins /Pa I-APHID R P 40
Encarsia sp. 0-vg/ins /Pa I-ALEYR R P 40

APHIDIIDAE (1 genus, 1 species)

Pauesia sp. /ins /Pa I-APHID P
undetermined specimens /ins /Pa I-APHID P

API DAE (3 genera, 8 species)

Apis mellifera Linnaeus (I) O-vg/F-cn Fl/A polylec A P 2,29
Bombus bifarius nearcticus Handlirsch O-vg/0-sl Fl/A polylec A P 2,29
Bombus melanopygus Nylander O-vg/0-sl Fl/A polylec C P 29
Bombus mixtus Cresson O-vg/0-sl Fl/A polylec C P 29
Bombus occidentalis Greene O-vg/0-sl Fl/A polylec A P 2,29
Bombus sitkensis Nylander O-vg/0-sl Fl/A polylec C P 29
Bombus vosnesenski Radoszkowski O-vg/0-sl Fl/A polylec A P 2,29
Psithyrus insularis (Smith) 0-vg/nest Fl/KP I-Bombu C P 29

(SEE ALSO APPENDIX C)

ARGIDAE (1 genus, 1 species)

Arge clavicornis (Fabricius) F-cn/F-cn /H P-SHRUB U P 2

AULACIDAE (1 genus, 2 species)

Pristaulacus editus (Cresson) wood/ins /Pa I-COLEO U P
Pristaulacus oregonus Townes wood/ins /Pa I-COLEO U P

Taxonomic category	Habitat Ad/Im	Funct group	Plant/ animal host	Ab	Co	References
BETHYLIDAE (1 genus, 1 species)						
undetermined specimens	/ins	/Pa				p
BRACONIDAE (27 genera, 27 species)						
<i>Apanteles</i> sp.	F-cn/ins	/Pa	I-LEPID	P		1
<i>Ascogaster</i> sp.	/ins	/Pa	I-LEPID	P		
<i>Aspilota</i> sp.	/ins	/Pa		P		
<i>Bracon</i> sp.	F-cn/ins	/Pa		P		
<i>Chelonus</i> sp.	/ins	/Pa	I-LEPID	P		
<i>Chorebus</i> sp.	/ins	/Pa	I-DIPT	P		
<i>Coeloides</i> sp.	wood/ins	/Pa	I-SCOLY	P		
<i>Crassomicrodus</i> sp.	/ins	/Pa		P		
<i>Cremnops</i> sp.	O-vg/ins	/Pa	I-LEPID	P		
<i>Dendrosoter</i> sp.	wood/ins	/Pa	I-SCOLY	P		
<i>Doryctes</i> sp.	wood/ins	/Pa	I-COLEO	P		
<i>Earinus</i> sp.	F-cn/ins	/Pa	I-LEPID	P		
<i>Elasmosoma</i> sp.	/ins	/Pa	I-FORMI	P		
<i>Entsira</i> sp.	/ins	/Pa		P		
<i>Helconidia necydalidis</i> Cushman	F-cn/ins	/Pa	I-CERAM	P		41
<i>Heterospilus</i> sp.	/ins	/Pa	I-COLEO	P		1
<i>Meteorus</i> sp.	/ins	/Pa	I-LEPID	P		
<i>Microgaster</i> sp.	/ins	/Pa	I-LEPID	P		
<i>Microplitis</i> sp.	/ins	/Pa	I-LEPID	P		
<i>Oncophanes</i> sp.	F-cn/ins	/Pa	I-LEPID	P		
<i>Ontsira</i> sp.	wood/ins	/Pa	I-COLEO	P		
<i>Opius</i> sp.	F-cn/ins	/Pa	I-DIPT	P		
<i>Orthopelma californicum</i> Ashmead	F-cn/ins	/Pa	I-CYNIP	P		
<i>Protomicroplitis</i> sp.	/ins	/Pa	I-LEPID	P		
<i>Rogas</i> sp.	/ins	/Pa	I-NOCT	P		1
<i>Spathius</i> sp.	wood/ins	/Pa	I-SCOLY	P		
<i>Wroughtonia</i> sp.	wood/ins	/Pa	I-COLEO	P		
CERAPHRONIDAE (2 genera, 9 species)						
<i>Aphanogmus</i> sp.	F-cn/ins	/Pa	I-DIPT			1,40
<i>Ceraphron</i> spp. (8)	F-cn/ins	/Pa		A		1,40
undetermined specimens						p
CHALCIDIDAE (2 genera, 2 species)						
<i>Brachymeria</i> sp.	/ins	/Pa		P		
<i>Spilochalcis</i> sp.	/ins	/Pa		P		
CHRYSIDIDAE (5 genera, 6 species)						
<i>Chrysis praestans</i> Buyss	/ins	/Pa	I-HYMEN	U	P	
<i>Chrysis</i> sp.	/ins	/Pa	I-HYMEN	U	P	
<i>Chrysura</i> sp.	/ins	/Pa	I-HYMEN	U	P	
<i>Hedychridium dimidiatum</i> (Say)	/ins	/Pa	I-HYMEN	U	P	
<i>Omalus aeneus</i> (Fabricius)	/ins	/Pa	I-SPHEC	U	P	
<i>Trichrysis</i> sp.	/ins	/Pa	I-SPHEC	U	P	

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
CIMBICIDAE (2 genera, 2 species)						
<i>Trichiosoma triangulum</i> Kirby	F-cn/F-cn	/H	P-DECID	U	P	
<i>Zaraea americana</i> Cresson	F-cn/F-cn	/H	P-Symph	U	P	2
COLLETIDAE (1 genus, 1 species)						
<i>Hylaeus</i> sp. (SEE ALSO APPENDIX C)	O-vg/0-vg	F1/A	polylec	A	P	29
DIAPRIIDAE (6 genera, 8 species)						
<i>Basalys</i> spp. (2)	/ins	/Pa		U		40
<i>Belyta</i> sp.	/ins	/Pa	I-DIPT	u		40
<i>Cinetus</i> spp. (2)	F-cn/ins	/Pa		u		40
<i>Psilus</i> sp.	/ins	/Pa	I-DIPT		p	41
<i>Trichopria</i> sp.	/ins	/Pa	I-DIPT	u		40
<i>Zygota</i> sp.	/ins	/Pa		u		40
undetermined specimens	/ins	/Pa	I-DIPT		p	2
DIPRIONIDAE (1 genus, 2 species)						
<i>Neodiprion scutellatus</i> Rohwer	F-cn/F-cn	/H	P-Psme	u	p	
<i>Neodiprion</i> sp.	F-cn/F-cn	/H	P-CONIF			1
DRYINIDAE (1 genus, 1 species)						
<i>Aphelopus</i> sp.	F-lt/ins	/Pa	I-HOMOP	u	A	40
EMBOLEMIDAE (1 genus, 1 species)						
<i>Embolemus nearcticus</i> (Brues)	/ins	/Pa			p	
ENCYRTIDAE (11 genera, 11 species)						
<i>Cheiloneurus</i> sp.	/ins	/Pa	I-COCCD			z
<i>Copidosoma bakeri</i> (Howard)	F-cn/ins	/Pa	I-LEPID	C		1
<i>Ginsiana</i> sp.	/ins	/Pa			P	
<i>Lamennasia</i> sp.	/ins	/Pa			P	
<i>Metaphycus</i> sp.	F-cn/ins	/Pa	I-COCCD			z
<i>Ooencyrtus</i> sp.	/ins	/Pa			P	
<i>Prionomitus</i> sp.	/ins	/Pa			P	
<i>Pseudaphycus</i> sp.	F-cn/ins	/Pa	I-PCOCC			1
<i>Psyllaephagus</i> sp.	/ins	/Pa			P	
<i>Rhopus</i> sp.	/ins	/Pa			P	
<i>Syrphophagus</i> sp.	/ins	/Pa			P	40
EUCHARITIDAE (1 genus, 1 species)						
<i>Pseudochalcura gibbosa</i> (Provancher)	/ins	/Pa	I-FORMI		P	2, 40
EUCOILIDAE (3 genera, 3 species)						
<i>Eucoila</i> sp.	/ins	/Pa	I-DIPT		P	
<i>Eucoilidea</i> sp.	/ins	/Pa	I-DIPT		P	

Taxonomic category	Habitat Ad/Im	Funct Plant/ group animal		Ab	Co	References
		Ad/Im	host			
EUCOILIDAE (continued)						
<i>Pseudocoila</i> sp.	/ins	/Pa	I-DIPT		p	
EULOPHIDAE (18 genera, 19 species)						
<i>Achrysocharis</i> sp.	/ins	/Pa		U		1
<i>Ceranibus</i> sp.	/ins	/Pa	I-THRIP	U		40
<i>Chrysocharis</i> sp.	/ins	/Pa		u	p	40
<i>Chrysonotomyia</i> sp.	/ins	/Pa		u	p	40
<i>Cirrospilus</i> sp.	/ins	/Pa		u	p	1
<i>Diglyphus</i> sp.	/ins	/Pa	I-AGROM	u	p	1
<i>Euderomphale</i> sp.	/ins	/Pa	I-ALEYR	u		40
<i>Euderus</i> sp.	/ins	/Pa	I-LEPID	u	p	
<i>Eupelmella</i> sp.				u	p	
<i>Euplectrus</i> sp.	/ins	/Pa	I-LEPID	u	p	
<i>Melittobia</i> sp.	/ins	/Pa	I-HYMEN	u		1,40
<i>Notanisomorpha</i> sp.	/ins	/Pa	I-AGROM	u	p	
<i>Omphale</i> sp.				u	p	40
<i>Pediobius</i> sp.	/ins	/Pa		u	p	
<i>Pnigalio</i> sp.	/ins	/Pa	I-LEAFM	u	p	
<i>Sympiesis</i> sp.	/ins	/Pa		u	p	
<i>Tetrastichus</i> spp.	/ins	/Pa		u	PS	1,40
<i>Zagrammosoma nigroli/neatum</i> Crawford	/ins	/Pa	I-LEPID	U	p	
EUMENIDAE (5 genera, 5 species)						
<i>Ancistrocerus</i> sp.	F-cn/wood	Pr/A	I-LEPID	u	p	
<i>Eumenes</i> sp.	F-cn/F-cn	Pr/A	I-LEPID	u	p	
<i>Euodynerus</i> sp.	F-cn/wood	Pr/A	I-LEPID	u	p	
<i>Stenodynerus</i> sp.	F-cn/	Pr/A	I-LEPID	u	p	40
<i>Symmorphus</i> sp.	F-cn/	Pr/A	I-CHRY	u	p	
EUPELMIDAE (1 genus, 1 species)						
<i>Calosota</i> sp. undetermined specimens	M-vg/ins	/Pa		C		1
					p	
EURYTOMIDAE (1 genus, 2 species)						
<i>EuryComa</i> spp.	/ins	/Pa			p	
FIGITIDAE (2 genera, 2 species)						
<i>Anacharis</i> sp.	/ins	/Pa	I-NEURO	U	P	
<i>Xyalaspis</i> sp.	/ins	/Pa	I-NEURO	U	P	
FORMICIDAE (13 genera, 28 species)						
<i>Amblyopone oregonense</i> (Wheeler)	wood/wood	Pr/A		U	P	35
<i>Aphaenogaster</i> sp.	F-gd/F-gd	/A				1,35
<i>Brachymyrmex dipilis</i> Emery	F-gd/F-gd	/A				35
<i>Camponotus essigi</i> M.R.Smith	wood/wood	0/A				35
<i>Camponotus laevigatuc</i> (F.Smith)	wood/wood	0/A		C	P	35
<i>Camponotus modoc</i> Wheeler	wood/wood	0/A		A	P	35,49,54

Taxonomic category	Habitat Ad/Im	Funct group	Plant/ animal host	Ab	Co	References
FORMICIDAE (continued)						
<i>Camponotus novaeboracensis</i> (Fitch)	wood/wood	0/A		A	p	1,35
<i>Camponotus vicinus</i> Mayr	F-gd/F-gd	0/A		C	p	35
<i>Formica accreta</i> Francouer	F-gd/F-gd	Pr/A		U	p	
<i>Formica argentea</i> Wheeler	F-gd/F-gd	Pr/A		U	p	
<i>Formica fusca</i> Linnaeus	F-gd/F-gd	Pr/A		C	p	
<i>Formica lasioides</i> Emery	M-gd/M-gd	/A		U	p	
<i>Formica neorufibarbis</i> Emery	wood/wood	Pr/A		U	p	
<i>Formica pacifica</i> Francouer	F-gd/F-gd	Pr/A		C	p	
<i>Formica subnuda</i> Emery	F-gd/F-gd	/A		C	p	
<i>Lasius pallitarsis</i> (Provancher)	F-gd/F-gd	0/A			p	1,35
<i>Lasius vestitus</i> Wheeler	F-gd/F-gd	0/KP			p	
<i>Lasius</i> (<i>Chthonolasius</i>) sp.	F-gd/F-gd	0/KP			p	
<i>Leptothorax muscorum</i> (Nylander)	wood/wood	/A		C	p	35
<i>Leptothorax nevadensis</i> Wheeler	O-gd/O-gd	/A				35
<i>Leptothorax rugulatus</i> Emery	F-gd/F-gd	/A		C		1
<i>Manica hunteri</i> (Wheeler)	F-gd/F-gd	/A		u		35
<i>Myrmica</i> sp.		Pr/A				1,35
<i>Polyergus breviceps</i> Emery	F-gd/F-gd	/A				35
<i>Solenopsis molesta</i> (Say)	O-gd/O-gd	0/A		u	p	35
<i>Stenamma</i> spp. (2)	F-gd/F-gd	Pr/A				35
<i>Tapinoma sessile</i> (Say)	F-gd/F-gd	/A		u	P	1,35
GASTERUPTIIDAE (1 genus, 1 species)						
<i>Gasteruption septentrionale</i> Schletterer)	/ins	Fl/Pa	I-HYMEN	U	P	2
HALICTIDAE (5 genera, 5 species)						
<i>Dialictus</i> sp.	O-vg/0-sl	Fl/A	polylec	A	p	29
<i>Evyllaes</i> sp.	O-vg/0-sl	Fl/A	polylec	A	p	29,41
<i>Halictus</i> sp.	O-vg/0-sl	Fl/A	polylec	A	p	29
<i>Lasioglossum</i> sp.	O-vg/0-sl	Fl/A	polylec	A	p	29
<i>Sphecodes</i> sp.	0-vg/nest	Fl/KP	I-HALIC	A	p	29
(SEE ALSO APPENDIX C)						
ICHNEUMONIDAE (118 genera, 127 species)						
<i>Acrodactyla</i> sp.	/anim	/Pa	A-SPID	U	p	
<i>Acrolyta</i> sp.	/ins	/HP	I-BRACO	U	p	
<i>Acropimpla</i> sp.	/ins	/Pa	I-LEPID	U	p	
<i>Adelognathus</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Agrothereutes</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Alexeter</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Alloplasta</i> sp.	/ins	/Pa	I-LEPID	U	p	
<i>Anoncus</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Aoplus</i> sp.	/ins	/Pa	I-LEPID	U	p	
<i>Aplomerus robustus</i> Townes	wood/ins	/Pa	I-BUPR	C	p	
<i>Arotrephes</i> sp.	M-vg/ins	/Pa		U	p	
<i>Asthenolabus</i> sp.	/ins	/Pa	I-LEPID	U	p	
<i>Atractodes</i> sp.	/ins	/Pa	I-DIPT	U	p	
<i>Banchus</i> sp.	/ins	/Pa	I-LEPID	U	p	1
<i>Barycnemis</i> sp.	/ins	/Pa	I-COLEO	C	p	

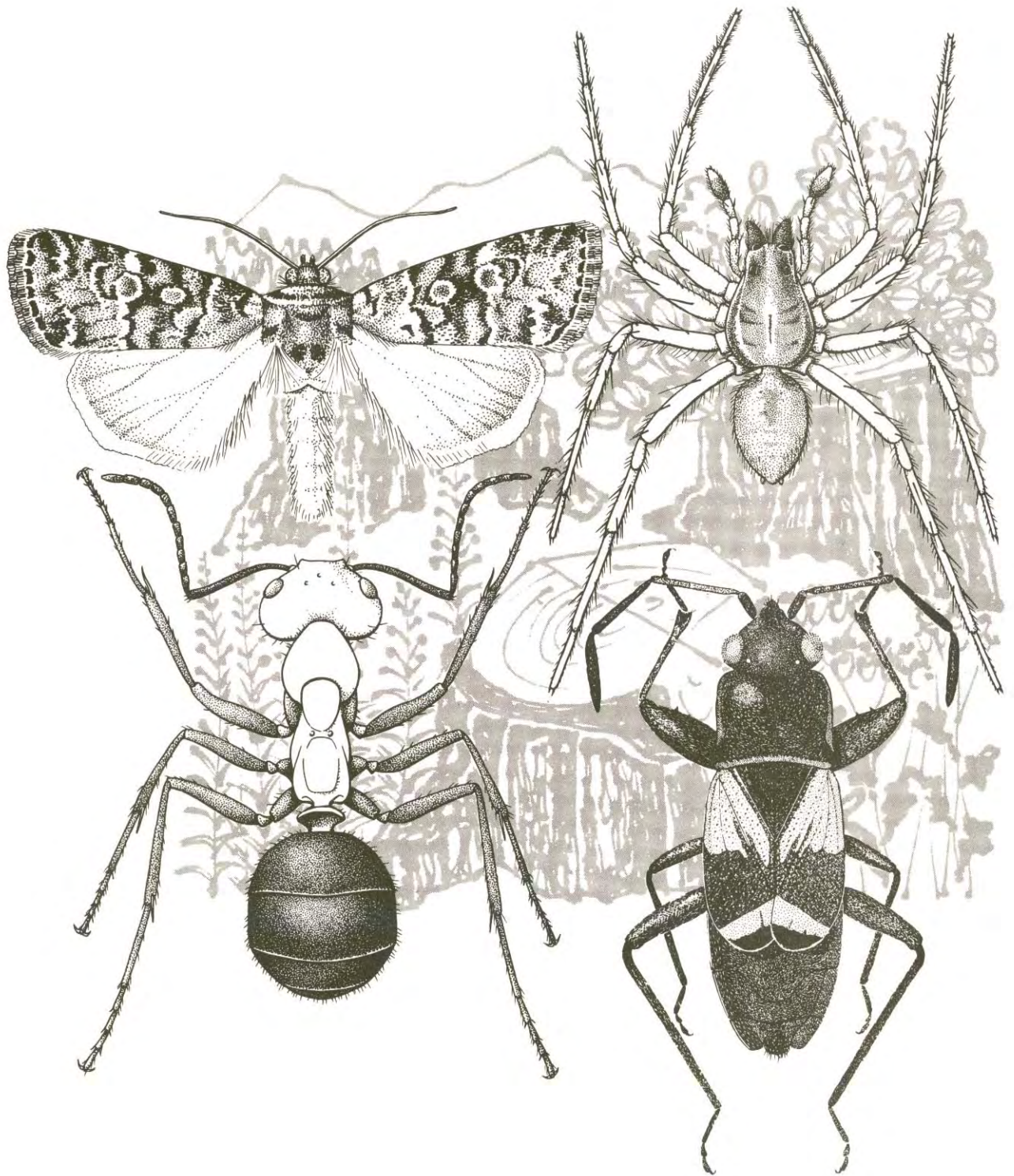
Taxonomic category	Habitat Ad/Im	Funct Plant/ group animal		Ab	Co	References
		Ad/Im	host			
ICHNEUMONIDAE (continued)						
<i>Bathythrix</i> sp.	/ins	/Pa	I-HYMEN	U		F
<i>Blaptichus</i> sp.	/ins	/Pa		U		p
<i>Caenocryptus</i> sp.	/ins	/Pa	I-TENTH	C		p
<i>Campodorus</i> sp.	/ins	/Pa		U		p
<i>Campoletis</i> sp.	M-vg/ins	/Pa	I-NOCT	C		p
<i>Campoplex</i> sp.	F-cn/ins	/Pa	I-LEPID	C		p
<i>Casinaria</i> sp.	/ins	/Pa	I-LEPID	C		p
<i>Castastenos</i> sp.	/ins	/Pa		U		p
<i>Charitopes</i> sp.	/ins	/Pa		u		p
<i>Chorinaeus</i> sp.	F-cn/ins	/Pa	I-LEPID	u		p
<i>Coccygomimus varians</i> Townes	F-cn/ins	/Pa	I-LEPID	u		p
<i>Coccygomimus</i> sp.	F-cn/ins	/Pa	I-LEPID	u		p
<i>Coleocentrus manni</i> Cushman	wood/ins	/Pa	I-COLEO	u		p
<i>Coleocentrus occidentalis</i> Cresson	wood/ins	/Pa	I-COLEO	u		p
<i>Colpomera quadrisculpta</i> (Gravenhorst)	/anim	/Pa	A-SPID	u		31
<i>Cratichneumon</i> sp.	/ins	/Pa	I-LEPID	u		p
<i>Cryptus</i> sp.	/ins	/Pa	I-LEPID	u		p
<i>Ctenichneumon</i> sp.	/ins	/Pa	I-LEPID	u		p
<i>Ctenochira</i> sp.	/ins	/Pa	I-TENTH	u		p
<i>Cubocephalus</i> sp.	/ins	/Pa	I-TENTH	u		p
<i>Cyclolabus</i> sp.	F-cn/ins	/Pa	I-GEOM	u		p
<i>Delomerista</i> sp.	F-cn/ins	/Pa	I-TENTH	u		p
<i>Demopheles</i> sp.	wood/ins	/Pa	I-COLEO	u		F
<i>Diadegma</i> sp.	/ins	/Pa	I-LEPID	C		p
<i>Diaglyptidea</i> sp.	/ins	/HP	I-HYMEN	u		p
<i>Diaparsis</i> sp.	/ins	F1/Pa	I-COLEO	u		p
<i>Diphyus</i> sp.	/ins	/Pa	I-LEPID	u		p
<i>Diplazon</i> sp.	/ins	/Pa	I-SYRPH	u		p
<i>Dolichomitus imperator</i> (Kriechbaumer)	wood/ins	/Pa	I-CERAM	u		p
<i>Dolichomitus</i> sp.	wood/ins	/Pa	I-COLEO	u		p
<i>Dusona</i> sp.	F-cn/ins	/Pa	I-LEPID	u		p
<i>Earobia</i> sp.	/ins	/Pa	I-COLEO	u		p
<i>Echthrus abdominalis vancouverensis</i> (Bradley)	wood/ins	/Pa	I-COLEO	u	P	41
<i>Endasys</i> sp.	/ins	/Pa	I-TENTH	A		p
<i>Enizemum</i> sp.	/ins	/Pa	I-SYRPH	u		p
<i>Enytus montanus</i> (Ashmead)	/ins	/Pa	I-LEPID	u		1
<i>Enytus</i> sp.	/ins	/Pa	I-LEPID	u		p
<i>Eridolius</i> sp.	/ins	/Pa		u		p
<i>Erromenus</i> sp.	/ins	/Pa	I-TENTH	u		p
<i>Ethelurgus</i> sp.	/ins	/Pa	I-DIPT	u		1
<i>Euceros</i> sp.	/ins	/HP	I-ICHNE	u		p
<i>Euryproctus</i> sp.	/ins	/Pa	I-TENTH	u		p
<i>Eusterinx</i> sp.	/ins	/Pa		u		1
<i>Excaverus</i> sp.	F-cn/ins	/Pa	I-TENTH	u		p
<i>Exenterus</i> sp.	F-cn/ins	/Pa	I-DIPRI	C		p
<i>Exochus</i> sp.	/ins	/Pa	I-LEPID	u		F
<i>Exyston</i> sp.	/ins	/Pa	I-TENTH	u		p
<i>Gelis tenellus</i> (Say)	/ins	/HP	I-HYMEN	u		1
<i>Gelis</i> sp.	/ins	/Pa		u		1
<i>Helcostizus</i> sp.	wood/ins	/Pa	I-COLEO	u		p
<i>Helictes</i> sp.	/ins	/Pa		u		p

Taxonomic category	Habitat Ad/Im	Funct	Plant/	Ab	Co	References
		group	animal host			
ICHNEUMONIDAE (continued)						
<i>Himerta</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Hoplismenus</i> sp.	/ins	/Pa	I-NYMPH	U	p	
<i>Hyplamblys</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Hyposoter fuscitarsus</i> (Viereck)	F-cn/ins	/Pa	I-LEPID	U	p	1
<i>Hyposoter</i> sp.	/ins	/Pa	I-LEPID	U	p	1
<i>Ichneumon</i> sp.	/ins	/Pa	I-LEPID	U	p	
<i>Ischnus</i> sp.	F-cn/ins	/Pa	I-LEPID	U	p	
<i>Itoplectis evetriae</i> (Viereck)	F-cn/ins	/Pa	I-LEPID	U	p	1
<i>Lamachus</i> sp.	F-cn/ins	/Pa	I-DIPRI	U	p	
<i>Lathrolestes</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Lissonota</i> sp.	/ins	/Pa	I-LEPID	U	p	1
<i>Lysibia</i> sp.	/ins	/HP	I-BRACO	U	p	
<i>Mastrus</i> sp.	/ins	/Pa	I-HYMEN	C	p	1
<i>Megastylus</i> sp.	/ins	/Pa		U	p	
<i>Mesochorus</i> sp.	/ins	/HP	I-DIPT	U	p	1,50
<i>Mesoleius</i> sp.	F-cn/ins	/Pa	I-TENTH	U	p	
<i>Mesostenus</i> sp.	/ins	/Pa	I-LEPID	U	p	
<i>Messatoporus</i> sp.	/ins	/Pa	I-HYMEN	U	p	
<i>Metoa</i> sp.	/ins	/Pa	I-LEPID	U	p	
<i>Metopius</i> sp.	/ins	/Pa	I-LEPID	U	p	
<i>Monoblastus</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Nemeritis</i> sp.	/ins	/Pa		U	p	
<i>Nepiera</i> sp.	/ins	/Pa	I-LEPID	U	p	
<i>Odontocolon parvum</i> Townes	wood/ins	/Pa	I-COLEO	U	p	
<i>Olesicampe</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Ophion</i> sp.	/ins	/Pa	I-LEPID	U	p	1
<i>Orthocentrus</i> sp.	/ins	/Pa	I-MYCET	U	p	1
<i>Phaeogenes</i> sp.	/ins	/Pa	I-LEPID	U	p	
<i>Phobetres</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Phobocampe</i> sp.	/ins	/Pa	I-LEPID	U	p	
<i>Phrudus</i> sp.	/ins	/Pa	I-COLEO	U	p	
<i>Phygadeuon</i> sp.	/ins	/Pa	I-DIPT	U	p	
<i>Pimpla spatulata</i> Townes	wood/ins	/Pa	I-EUMEN	U	p	
<i>Platylabus</i> sp.	F-cn/ins	/Pa	I-GEOM	U	p	
<i>Plectiscidea</i> sp.	/ins	/Pa		U	p	
<i>Polyaulon</i> sp.	/ins	/Pa		U	p	
<i>Polyblastus</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Polysphincta koebelei</i> Howard	/anim	/Pa	A-SPID	U	p	31
<i>Probles</i> sp.	/ins	/Pa	I-COLEO	U	p	
<i>Pterocormus</i> sp.	/ins	/Pa	I-LEPID	U	p	
<i>Pygocryptus</i> sp.	/ins	/Pa		C	p	
<i>Rhimproctopna</i> sp.	F-cn/ins	/Pa	I-LEPID	U	p	
<i>Rhorus</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Rhyssa alaskensis</i> Ashmead	wood/ins	/Pa	I-SIRIC	U	p	41
<i>Scambus deceptor</i> Walley	/ins	/Pa	I-LEPID	U	p	
<i>Scambus</i> sp.	/ins	/Pa		U	p	
<i>Sinarachna anomela</i> (Holmgren)	/anim	/Pa	A-SPID	U	p	31
<i>Sinarachna strigis</i> (Howard)	/anim	/Pa	A-SPID	U	p	
<i>Sinophorus</i> sp.	M-vg/ins	/Pa	I-LEPID	U	p	
<i>Stibeutes</i> sp.	/ins	/Pa		U	p	
<i>Sussaba</i> sp.	/ins	/Pa	I-SYRPH	U	p	
<i>Synodites</i> sp.	/ins	/Pa	I-TENTH	U	p	
<i>Syrphoctonus</i> sp.	/ins	/Pa	I-SYRPH	U	p	

Taxonomic category	Habitat	Funct group	Plant/ animal	Ab	Co	References
	Ad/Im	Ad/Im	host			
ICHNEUMONIDAE (continued)						
<i>Temelucha</i> sp.	/ins	/Pa	I-LEPID	U		P
<i>Tersilochus</i> sp.	/ins	/Pa	I-COLEO	U		P
<i>Therion</i> sp.	/ins	/Pa	I-LEPID	U		P
<i>Triclistuspoda gricus</i> (Gravenhorst)	/ins	/Pa	I-LEPID	U		1
<i>Trychosis</i> sp.	/anim	/Pa	A-SPID	U		P
<i>Xorides cincticornis</i> (Cresson)	wood/ins	/Pa	I-COLEO	C		P
<i>Zatypota patellata</i> Townes	/anim	/Pa	A-SPID	U		31
<i>Zatypota percontatoria</i> (Miiller)	/anim	/Pa	A-SPID	U		31
MEGACHILIDAE (7 genera, 9 species)						
<i>Anthidium</i> sp.	O-vg/0-sl	Fl/A			U	P 29
<i>Cherostoma</i> sp.	O-vg/0-vg	Fl/A	P-Phace	R		P 29
<i>Chelostomopsis rubifloris</i> (Cockerell)	O-vg/0-vg	Fl/A	polylec	R		P 29
<i>Coelioxys</i> spp.	O-vg/nest	Fl/KP	I-Megac	A		P 29
<i>Hoplitis</i> sp.	O-vg/0-vg	Fl/A	polylec	R		P 29
<i>Osmia</i> spp.	O-vg/	Fl/A		C		P 29
<i>Stelis</i> sp.	O-vg/nest	Fl/KP	I-Osmia	U		P 29
(SEE ALSO APPENDIX C)						
MEGASPILIDAE (2 genera, 7 species)						
<i>Conostigmus</i> spp. (6)	/ins	/PA	I-DIPT	U		1,40
<i>Lagynodes</i> sp.	F-cn/ins	/Pa		A		40
MYMARIIDAE (6 genera, 7 species)						
<i>Alaptus</i> sp.	F-cn/ins	/Pa	I-PSOC*	U		S
<i>Anagrus</i> sp.	/ins	/Pa	I-CICDL*	U		40
<i>Anaphes</i> sp.	/ins	/Pa	I-EGGS	U		P
<i>Gonatocerus</i> sp. (ater group)	/ins	/Pa	I-CICDL*	U		P 40
<i>Gonatocerus</i> sp. (littoralis group)	/ins	/Pa	I-CICDL*	U		P 40
<i>Ooctonus</i> sp.	/ins	/Pa	I-CICDL*	U		40
<i>Polynema</i> sp.	/ins	/Pa	I-EGGS	U		P 40
undetermined specimens	/Ins	/Pa	I-EGGS			S 2
(* all species are egg parasites on the hosts listed)						
ORMYRIDAE (1 genus, 1 species)						
<i>Ormyrus</i> sp.	/ins	/HP	I-GALL	U		P
ORUSSIDAE (1 genus, 1 species)						
<i>Orussus thoracicus</i> (Ashmead)	wood/ins	/Pa	I-BUPR	U		P
PAMPILIDAE (1 genus, 1 species)						
undetermined specimens	F-cn/F-cn	/H	P-Abam			A
PERILAMPIDAE (1 genus, 1 species)						
<i>Perilampus</i> sp.	/ins	/Pa				p

Clearcut

The Andrews Forest contains many small stands where, for research purposes, the trees have been cut and removed at various times over the past 40 years. These cut areas include complete clearcuts with and without the slash burned, various conifer replanting schemes, cuts with shelterwood retained for natural seeding, and selective tree removal with minimal understory disturbance. In the early stages of regrowth, annual plants and deciduous shrubs are dominant. The arthropod fauna found in clearcuts is a complex mixture of immigrants from adjacent forested land, remnants from the mature pre-logged forest, immigrants from natural meadow and forest gap communities, and some exotic species. A few species associated with forest trees can be found on seedlings as well. The diverse fauna associated with deciduous and annual plants elevates species richness to levels greater than those found in later stages of forest succession. In the early stages of regrowth, herbivores comprise a significant portion of the fauna. Most conspicuous are winged grasshoppers (not the wingless taxa common in natural meadows), sucking bugs, and caterpillars such as the larva of the adult noctuid moth, *Oncocnemis dunbari* (top left). In the open, sunny, hot places typical of clearcuts, seed-feeding carabid beetles and lygaeid bugs, such as *Malezonotus obrieni* (lower right) display great species richness and abundance. The major predators in clearcuts include large carabid beetles, wandering spiders such as the wolf spider, *Schizocosa mccooki* (upper right), and ants such as *Formica neorufibarbis* (lower left).



Taxonomic category	Habitat Ad/Im	Funct group	Plant/ animal host	Ab	Co	References
PLATYGASTERIDAE (5 genera, 11 species)						
<i>Amblyaspis</i> sp.	/ins	/Pa	I-CECID		p	40
<i>Inostemma</i> sp.	/ins	/Pa	I-CECID			2,40
<i>Leptacis</i> sp.	/ins	/Pa	I-CECID			40
<i>Platygaster</i> sp. prob. <i>pseudotsugae</i> MacGaugn	/ins	/Pa	I-CECID			40
<i>Platygaster</i> spp. (6)	/ins	/Pa	I-CECID		p	1,40
<i>Synopeas</i> sp.	/ins	/Pa	I-CECID		p	
POMPILIDAE (10 genera, 17 species)						
<i>Ageniella euphorbiae</i> (Viereck)	O-gd/	Pr/A	A-SPID	U	p	40
<i>Anoplius relativus</i> (Fox)	O-gd/O-sl	Pr/A	A-SPID	u	p	40
<i>Anoplius tenebrosus</i> (Cresson)	O-gd/O-sl	Pr/A	A-SPID	u	p	
<i>Aporinellus completus</i> (Banks)	O-gd/O-sl	Pr/A	A-SPID	u	p	40
<i>Aporus luxus assimilis</i> (Banks)	O-gd/O-sl	Pr/A	A-SPID	u	p	40
<i>Auplopus architectus metallicus</i> (Banks)	O-gd/O-sl	Pr/A	A-SPID	u	p	40
<i>Ceropales</i> sp.	O-gd/O-sl	Pr/A	A-SPID		p	
<i>Dipogon papago papago</i> (Banks)	F-cn/wood	Pr/A	A-SPID	u	p	
<i>Evagetes hyacinthinus</i> (Cresson)	O-gd/O-sl	Pr/A	A-SPID	u	p	40
<i>Pompilus arctus</i> Cresson	O-gd/O-sl	Pr/A	A-SPID	u	p	40
<i>Pompilus luctuosus luctuosus</i> Cresson	O-gd/O-sl	Pr/A	A-SPID	u	p	40
<i>Pompilus parvulus</i> (Banks)	O-gd/O-sl	Pr/A	A-SPID	u	p	40
<i>Pompilus scelestus</i> Cresson	O-gd/O-sl	Pr/A	A-SPID	u	p	40
<i>Pompilus silvivagus</i> Evans	O-gd/O-sl	Pr/A	A-SPID	u	p	40
<i>Priocnemis notha occidentis</i> Banks	O-vg/O-sl	Pr/A	A-SPID	u	p	40
<i>Priocnemis oregona</i> Banks	O-vg/O-sl	Pr/A	A-SPID	u	p	40
<i>Priocnemis</i> sp.	O-vg/O-sl	Pr/A	A-SPID		p	
PROCTOTRUPIDAE (1 genus, 1 species)						
undetermined specimens	/ins	/Pa	I-COLEO		P	2
PTEROMALIDAE (2 genera, 3 species)						
<i>Gastrancistrus</i> sp.	/ins	/Pa	I-CECID			2,40
<i>Spalangiopelta apotherisma</i> Darling & Hanson	F-lt/ins	/Pa				40
<i>Spalangiopelta felonia</i> Darling & Hanson	F-lt/ins	/Pa				40
undetermined specimens					P	
SAPYGIDAE (1 genus, 1 species)						
<i>Sapyga</i> sp.	/ins	/Pa	I-MEGAC	U	P	
SCELIONIDAE (8 genera, 16 species)						
<i>Ceratobaeus</i> sp.	/anim	/Pa	A-SPID*	U		40
<i>Exon californicum</i> Masner	/ins	/Pa	I-EGGS	U		40
<i>Gyron</i> spp.	/ins	/Pa	I-HETER*	U		40
<i>Scelio</i> sp.	/ins	/Pa	I-ACRID*	U		40
<i>Teleas</i> sp.	/ins	/Pa	I-EGGS	U		40

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
SCELIONIDAE (continued)						
<i>Telenomas</i> spp. (7)	/ins	/Pa	I-EGGS	U		1,40
<i>Trimorus</i> spp.	/ins	/Pa	I-EGGS	U		40
<i>Trissolcus</i> sp.	/ins	/Pa	I-HETER*	U	P	
(* all species are egg parasites on the hosts listed)						
SIGNIPHORIDAE (1 genus, 1 species)						
<i>Thysanus</i> sp.	/ins	/Pa	I-DIASP			1
SIRICIDAE (2 genera, 2 species)						
<i>Urocerus albicornis</i> (Fabricius)	F-cn/wood		/X	U	P	41
<i>Xeris morrisoni</i> (Cresson)	F-cn/wood	/X	P-CONIF	U	P	41
SPHECIDAE (26 genera, 34 species)						
<i>Ammophila acnta</i> (Fernald)	O-vg/0-gd	Pr/A	I-LEPID	U	P	
<i>Ammophila azteca azteca</i> Cameron	O-vg/0-gd	Pr/A	I-LEPID	U	P	40
<i>Ammophila dysmica</i> Menke	O-vg/0-gd	Pr/A	I-LEPID	U	P	40
<i>Ancistromma corrugata</i> (Bohart & Bohart)	O-gd/	Pr/A	I-ORTH	U	p	40
<i>Astata</i> sp.	O-vg/0-gd	Pr/A	I-PENT	U	p	
<i>Cerceris aequalis</i> Provancher	O-vg/0-gd	Pr/A	I-COLEO		p	
<i>Cerceris nigrescens</i> F. Smith	O-vg/0-gd	Pr/A	I-CURC	U	p	
<i>Crabro</i> spp.	O-vg/0-gd	Pr/A	I-DIPT	U	p	
<i>Crossocerus</i> sp.	O-vg/0-gd	Pr/A	I-DIPT	C	p	
<i>Didineis nodosa</i> Fox	O-vg/	Pr/A	I-CICDL	U	p	40
<i>Dryudella rhimpa</i> Parker	O-gd/	Pr/A	I-LYGAE	R	p	40
<i>Ectemnius lapidarius</i> (Panzer)	/wood	Pr/A	I-SYRPH	U	p	
<i>Ectemnius ruficornis</i> (Zetterstedt)		Pr/A		U	p	40
<i>Ectemnius</i> sp.	/wood	Pr/A		U	p	
<i>Gorytes</i> sp.	O-vg/0-gd	Pr/A	I-HOMOP	U	p	
<i>Mimesa basirufus</i> Packard	O-vg/0-gd	Pr/A	I-CICDL	U	p	
<i>Nysson</i> sp.		Pr/A		U	p	40
<i>Oxybelus emarginatus</i> Say	O-vg/0-gd	Pr/A	I-DIPT	U	p	
<i>Passaloecus melanocrus</i> Rohwer	F-cn/wood	Pr/A	I-APHID			1
<i>Passaloecus melanognathus</i> Rohwer	F-cn/wood	Pr/A	I-APHID			1
<i>Pemphredon inornatus</i> Say	F-cn/wood	Pr/A	I-APHID	U	P	
<i>Pisonopsis triangularis</i> Ashmead	O-vg/0-gd	Pr/A	A-SPID	U	P	40
<i>Podalonia communis</i> (Cresson)	O-vg/0-gd	Pr/A	I-LEPID	U	P	
<i>Psenulus frontalis</i> (Fox)	F-cn/wood	Pr/A	I-APHID	U	P	
<i>Rhopalum (Corynopus)</i> sp.	F-cn/wood	Pr/A	I-DIPT		p	
<i>Rhopalum (Rhopalum)</i> sp.	F-cn/wood	Pr/A	I-PSOC		p	
<i>Sceliphron caementarium</i> (Drury)	O-vg/O-gd	Pr/A	A-SPID	U	P	
<i>Solierella blaisdelli</i> (Bridwell)	O-vg/O-gd	Pr/A	I-LYGAE	U	P	40
<i>Spilomena</i> sp.	F-cn/wood	Pr/A	I-THYSP	U	P	
<i>Stigmus americanus</i> Packard	F-cn/wood	Pr/A	I-APHID	U	P	
<i>Tachysphex</i> sp.	O-vg/0-gd	Pr/A	I-ORTH	U	P	40
<i>Trypargilium tridentatum</i> (Packard)	F-cn/	Pr/A	A-SPID	R	P	40
<i>Trypoxylon sculleni</i> Sandhouse	F-cn/wood	Pr/A	A-SPID	C	P	

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
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TENTHREDINIDAE (21 genera, 46 species)

<i>Aglaostigma rubens</i> (Cresson)		/H		U	p	
<i>Allantus cinctus</i> (Linnaeus)	O-vg/0-vg	/H	P-ROSAC			1
<i>Ametastegia pallipes</i> Spinola		/H	P-HERBS	U		23
<i>Ametastegia tener</i> (Fallen)		/H	P-HERBS	U		23
<i>Aneugmenus padi</i> (Linnaeus) (I)	M-vg/M-vg	/H	P-Ptaq	U	p	30
<i>Dolerus aeneiceps</i> Goulet		/H		U	p	
<i>Empria ignota</i> (Norton)	R-vg/R-vg	/H	P-Salix	U	p	23,30
<i>Empria maculata</i> (Norton)	O-vg/0-vg	/H	P-ROSAC	C	p	23,30
<i>Empria multicolor</i> (Norton)	F-cn/F-cn	/H	P-Alnus	U		23
<i>Empria obscurata</i> (Cresson)	O-vg/0-vg	/H	P-Fraga			23
<i>Exxxxra</i> sp.	R-vg/R-vg	/H	P-Salix	U	p	
<i>Loderus genucinctus niger</i> Rohwer	R-vg/R-vg	/H	P-Equis	U	p	30
<i>Macrophya fumator</i> Norton		/H		U	p	30
<i>Monophadnoides atratus</i> (MacGillivray)	O-vg/0-vg	/H	P-ROSAC	U	p	
<i>Monophadnoides geniculatus</i> (Hartig)	O-vg/0-vg	/H	P-Rubus	C	p	23,30
<i>Monophadnoides typicus</i> (Rohwer)	O-vg/0-vg	/H	P-ROSAC	u	p	
<i>Monophadnus assaracus</i> MacGillivray	O-vg/0-vg	/H	P-ROSAC	u	p	
<i>Nematus iridescens</i> Cresson	R-vg/R-vg	/H	P-Salix	C	p	
<i>Nematus oligospilus</i> Forester	R-vg/R-vg	/H	P-Salix	C	p	
<i>Nematus unicolor</i> (Marlatt)		/H		u	p	
<i>Nematus Vancouverensis</i> (Marlatt)	R-vg/R-vg	/H	P-Popul	u	p	
<i>Nematus</i> spp. (3)		/H			p	
<i>Pachynematus</i> sp.		/H		u	p	
<i>Pachyprostasis rapae</i> (Linnaeus)		/H			p	23
<i>Paracharactus montivagus</i> (Cresson)		/H	P-GRASS			23
<i>Phyllocolpa</i> sp.	R-vg/R-vg	/H	P-Salix	u	p	
<i>Phymatocera offensa</i> (MacGillivray)	F-cn/F-cn	/H	P-Smila	u	p	
<i>Phymatocera similata</i> (MacGillivray)	F-cn/F-cn	/H	P-Smila	u	p	23,30
<i>Pristiphora pallidiventris</i> (Fallén)	O-vg/0-vg	/H	P-ROSAC	u	p	
<i>Pristiphora serrula</i> Wong & Ross		/H		u	p	
<i>Pristiphora sycophanta</i> Walsh	R-vg/R-vg	/H	P-Salix	u	p	
<i>Pristola macnabi</i> Ross	F-cn/F-cn	/H	P-Vame	u	p	
<i>Rhogogaster addenda</i> (Cresson)		/H		u	p	30
<i>Strongylogaster distans</i> Norton	M-vg/M-vg	/H	P-Ptaq	C	p	30
<i>Strongylogaster tibialis</i> Cresson	M-vg/M-vg	/H	P-Ptaq	C	p	23,30
<i>Tenthredo ferrugineipes</i> Cresson		Fl/H		u	p	
<i>Tenthredo maxima</i> (Norton)		Fl/H		u	p	
<i>Tenthredo pectoralis</i> Norton		Fl/H		u	p	
<i>Tenthredo repleta</i> MacGillivray		Fl/H		u	p	
<i>Tenthredo rhammisia</i> MacGillivray		Fl/H		u	p	30
<i>Tenthredo subcoerulea</i> Eschscholtz		Fl/H		C	p	
<i>Tenthredo varipicta</i> Norton		Fl/H		u	p	30
<i>Tenthredo</i> spp. (2)		Fl/H			p	30

TORYMIDAE (2 genera, 2 species)

<i>Megastigmus</i> sp.	F-cn/F-cn	/Sd				1,40
<i>Torymus</i> sp.	/ins	/Pa			p	

TRICHOGRAMMATIDAE (3 genera, 3 species)

<i>Aphelinoidea</i> sp.	/ins	/Pa	I-EGGS	u		40
<i>Lathromeris</i> sp.	/ins	/Pa	I-EGGS	u		40

Taxonomic category	Habitat		Funct group		Plant/animal	Ab	Co	References
	Ad/Im	Ad/Im	Ad/Im	host				

TRICHOGRAMMATIDAE (continued)

Xiphogramna sp. /ins /Pa I-EGGS U 40

VESPIDAE (3 genera, 9 species)

Dolichovespula arctica Rohwer F-cn/F-cn Pr/A U P
Dolichovespula arenaria (Fabricius) F-cn/F-cn Pr/A C P 40
Dolichovespula macxxlata (Linnaeus) F-cn/F-cn Pr/A C P 1
Dolichovespula norvegicoides (Sladen) F-cn/F-cn Pr/A U P
Polistes fuscatus aurifer Saussure F-cn/ Pr/A I-LEPID U P
Vespula acadica (Sladen) F-cn/F-gd Pr/A U P 40
Vespula consobrina (Saussure) F-cn/F-gd Pr/A U P
Vespula pennsylvanica (Saussure) F-cn/F-gd Pr/A U P
Vespula vulgaris (Linnaeus) F-cn/F-gd Pr/A C P 1

COLLEMBOLA

(1 order, 6 families, 17 genera, 39 species)

COLLEMBOLA

(6 families, 17 genera, 39 species)

ENTOMOBRYIDAE (4 genera, 7 species)

Entomobrya triangularis Schott F-1t/F-1t U A 1,40
Entomobrya unostrigata Stach (I) F-1t/F-1t C 1
Entomobrya sp. F-1t/F-1t U A 40
Lepidocyrtus sp. F-1t/F-1t U A 40
Sinella sexoculata (Schott) F-1t/F-1t R 1
Sinella sp. F-1t/F-1t U A 40
Tomocerus flavescens Tullberg F-1t/F-1t A A 1,40

ISOTOMIDAE (5 genera, 11 species)

Isotoma arborea (Linnaeus) wood/wood Fu/Fu 1
Isotoma monochaeta Kos 1
Isotoma sensibilis Tullberg wood/wood Fu/Fu 1
Isotoma sp. nr *nigrifrons* (Folsom) C 1
Isotoma sp. (3) F-1t/F-1t A A 40
Metisotoma grandiceps (Reuter) F-1t/F-1t D/D C A 1,40
Proisotoma sp. F-1t/F-1t A A 40
Tetracanthella christianseni Cassagnau F-cn/F-cn Li/Li C A 1,40
**Uzelia* n.sp. F-cn/F-cn 1

HYPOGASTRURIDAE (3 genera, 10 species)

Hypogastrura pseudoarmata (Folsom) F-1t/F-1t C 1
Hypogastrura spp. (4) F-1t/F-1t A A 40
Neanura setosa Canby F-1t/F-1t C 1
Neanura spp. (3) F-1t/F-1t A A 40
Xenylla humicola (O.Fabricius) F-1t/F-1t C 1

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
NEELIDAE (1 genus, 1 species)						
<i>Neelus</i> sp.	F-lt/F-lt			C	A	40
ONYCHIURIDAE (1 genus, 4 species)						
* <i>Onychiurus voegtlini</i> Christiansen & Bellinger	F-cn/F-cn	Li/Li		u		1
<i>Onychiurus</i> spp. (3)	F-lt/F-lt			A	A	40
SMINTHURIDAE (3 genera, 6 species)						
<i>Arrhopalites diversus</i> Mills	F-lt/F-lt			U		1
<i>Arrhopalites</i> sp.	F-lt/F-lt			U	A	40
<i>Dicyrtoma beta</i> Christiansen & Bellinger	F-lt/F-lt			c		1
<i>Dicyrtoma maculosa</i> (Schott)	F-lt/F-lt			A	A	1,40
<i>Sminthurinus quadrimaculatus</i> (Ryder)	F-lt/F-lt			C		1
<i>Sminthurinus</i> sp.	F-lt/F-lt			U	A	40

PROTURA

(1 order, 1 family, 1 genus, 1 species)

PROTURA

(1 family, 1 genus, 1 species)

undetermined specimens F-s1/F-s1 DD AS

DIPLURA

(1 order, 1 family, 1 genus, 1 species)

DIPLURA

(1 family, 1 genus, 1 species)

CAMPODEIDAE (1 genus, 1 species)

undetermined specimens F-s1/F-s1 D/D C A

DIPLOPODA

(6 orders, 10 families, 14 genera, 16 species)

CHORDEUMATIDA

(3 families, 5 genera, 5 species)

CASEYIDAE (3 genera, 3 species)

Caseya denrogona Gardner & Shelley F-lt/F-lt D/D A A 40,52
Ochrogramma bentona (Chamberlin) F-lt/F-lt D/D A 40,52
Vashingtonia irritans (Chamberlin) F-lt/F-lt D/D A 40,52

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
CONOTYLIDAE (1 genus, 1 species)						
<i>Taiyutyla corvallis</i> Chamberlin	F-1t/F-1t	DD			A	
STRIARIIDAE (1 genus, 1 species)						
<i>Amplaria</i> sp.	F-1t/F-1t	DD		A	A	40
JULIDA						
(1 family, 1 genera, 1 species)						
PARAJULIDAE (1 genus, 1 species)						
<i>Bollmaniulus</i> sp.	F-1t/F-1t	DD		U	A	40
POLYDESMIDA						
(3 families, 5 genera, 5 species)						
NEARCTODESMIDAE (1 genus, 1 species)						
<i>Nearctodesmus</i> sp.	F-1t/F-1t	DD		A	A	40
POLYDESMIDAE (1 genus, 1 species)						
<i>Scytonotus</i> sp.	F-1t/F-1t	DD		A	A	40
XESTODESMIDAE (2 genera, 2 species)						
<i>Chonaphe</i> sp.	F-1t/F-1t	DD				2
<i>Harpaphe haydeniana haydeniana</i> (Wood)	F-1t/F-1t	DD		A	A	2,40
FAMILY UNKNOWN (1 genus, 1 species)						
*New Genus, n. s. p.	F-1t/F-1t	DD		R	A	40
POLYXENIDA						
(1 family, 1 genus, 1 species)						
POLYXENIDAE (1 genus, 1 species)						
<i>Polyxenus pugetensis</i> Kinkaid	F-1t/F-1t	D/D		A	A	2,40
POLYZONIDA						
(1 family, 1 genus, 1 species)						
POLYZONIIDAE (1 genus, 1 species)						
<i>Bdellozonium rothi</i> Cook & Loomis	F-1t/F-1t	D/D		R	A	40

Taxonomic category	Habitat	Funct	Plant/			References
		group	animal	Ab	Co	
	Ad/Im	Ad/Im	host			

SPIROBOLIDA

(1 family, 1 genus, 2 species)

SPIROBOLIDAE (1 genus, 2 species)

<i>Tylobius deses</i> Cook	M-sl/M-sl	D/D		A	A	40
undetermined specimens	F-1t/F-1t	D/D			A	2

CHILOPODA

(3 orders, 3 families, 3 genera, 3 species)

GEOPHILOMORPHA

(1 family, 1 genus, 1 species)

undetermined specimens	F-1t/F-1t	Pr/Pr			A	2
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LITHOBIOMORPHA

(1 family, 1 genus, 1 species)

undetermined specimens	F-1t/F-1t	Pr/Pr			A	2
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SCOLOPENDROMORPHA

(1 family, 1 genus, 1 species)

undetermined specimens	F-1t/F-1t	Pr/Pr			A	2
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CRUSTACEA (MALACOSTRACA)

(1 order, 1 family, 1 genus, 1 species)

ISOPODA

(1 family, 1 genus, 1 species)

LIGIIDAE (1 genus, 1 species)

<i>Ligidium gracile</i> Dana	F-1t/F-1t	D/D			A	2
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ARACHNIDA

(5 subclasses, 90 families (includes 30 ORIBATIDA superfamilies), 242 genera, 381 species)

PSEUDOSCORPIONES

(5 families, 9 genera, 12 species)

CHEIRIDIDAE (1 genus, 1 species)

<i>Apocheiridium</i> sp.	F-cn/F-cn	Pr/Pr		R	A	10
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Taxonomic category	Habitat Ad/Im	Funct group	Plant/ animal		References
			host	Ab Co	
CHELIFERIDAE (2 genera, 3 species)					
<i>Chelifer cancroides</i> (Linnaeus) (I)	F-1t/F-1t	Pr/Pr		R A	40
<i>Parachelifer</i> spp.	F-1t/F-1t	Pr/Pr		R A	10
CHTHONIIDAE (3 genera, 5 species)					
<i>Apochthonius minimus</i> Schuster	F-1t/F-1t	Pr/Pr		A A	40
<i>Apochthonius occidentalis</i> Chamberlin	F-1t/F-1t	Pr/Pr		A A	40
<i>Mundochthonius erosidens</i> Chamberlin	F-1t/F-1t	Pr/Pr		C A	40
<i>Mundochthonius pacificus</i> (Banks)	F-1t/F-1t	Pr/Pr		C A	40
<i>Pseudotyrannochthonius incognitus</i> (Schuster)	F-1t/F-1t	Pr/Pr		U A	40,41
NEOBISIIDAE (2 genera, 2 species)					
<i>Microcreagris</i> sp.	F-1t/F-1t	Pr/Pr		C A	40
<i>Parobisium</i> sp.	F-1t/F-1t	Pr/Pr		A	
SYARINIDAE (1 genus, 1 species)					
<i>Syarinus</i> sp.	F-1t/F-1t	Pr/Pr		U A	40
SCORPIONES					
(1 family, 1 genus, 1 species)					
VEJOVIDAE (1 genus, 1 species)					
<i>Uroctonus mordax</i> Thorell	O-gd/O-gd	Pr/Pr		U A	40
OPILIONES					
(5 families, 11 genera, 12 species)					
ISCHYROPSALIDIDAE (3 genera, 3 species)					
<i>Hesperonemastoma modes turn</i> (Banks)	F-1t/F-1t	Pr/Pr		U A	40
<i>Sabacon siskiyou</i> Sheer	F-1t/F-1t	Pr/Pr		A A	40
<i>Taracus</i> sp.	F-1t/F-1t	Pr/Pr		C A	40
NEMASTOMATIDAE (2 genera, 2 species)					
<i>Ceratolasma tricantha</i> Goodnight & Goodnight	F-1t/F-1t	Pr/Pr		u A	40
<i>Dendrolasma mirabile</i> Banks	F-1t/F-1t	Pr/Pr		C A	40
PHALANGIIDAE (2 genera, 2 species)					
<i>Leiobunum paessleri</i> Roewer	F-1t/F-1t	Pr/Pr		C A	40
<i>Leuronychus parvulus</i> Banks	F-1t/F-1t	Pr/Pr		A A	40

Meadow

The few natural meadows found on the Andrews Forest are primarily at the higher elevations. They range from xeric, shallow-soil types with exposed bedrock and soil as found on ridgetops, to lush, moist, deep-soil types on hillsides. Grasses, sedges, and a variety of annual and perennial flowering plants are the predominant vegetation. Meadows are extremely rich in characteristic arthropods that are generally not shared with the forest habitat. The xeric ridgetop communities contain isolated populations of species generally characteristic of dry habitats east of the Cascade Range, of warm communities to the south, and of scrub communities in the far north. Some species of the meadow fauna, wolf spiders and winged locusts for example, invade newly clearcut regions. However, many of the native meadow insects, such as the grasshopper *Boonacris alticola* (bottom), are flightless and not vagile. They may represent remnants of formerly widespread meadow communities that existed during xeric periods. Meadow communities support diverse and abundant pollinator faunas. Butterflies such as *Parnassius clodius* (top left), syrphid flies, bee-flies, bees, and wasps abound on flowers. Nearly all bee species are generalist foragers, as is the bumble bee *Bombus vosnesenski* (top right). A few bee species specialize on one plant family or even a single genus of plant.



Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
SIRONIDAE (1 genus, 1 species)						
<i>Siro acaroides</i> (Ewing)	F-lt/F-lt	Pr/Pr		A	A	40
TRIAENONYCHIDAE (2 genera, 3 species)						
<i>Metanonychus setulus cascadius</i> Briggs	F-lt/F-lt	Pr/Pr		C	A	40
<i>Metanonychus nigricans oregonus</i> Briggs	F-lt/F-lt	Pr/Pr		A	A	40
<i>Paranonychus brunneus</i> (Banks)	F-lt/F-lt	Pr/Pr		C	A	40
FAMILY UNASSIGNED (1 genus, 1 species)						
<i>Protolophus niger</i> Goodnight & Goodnight	F-lt/F-lt	Pr/Pr		U	A	40
ARANEAE						
(30 families, 134 genera, 260 species)						
AGELENIDAE (11 genera, 20 species)						
<i>Agelenopsis oregonensis</i> Chamberlin & Ivie	O-vg/0-vg	Pr/Pr		C	A	10,40
<i>Blabomma oregonensis</i> Chamberlin & Ivie	F-lt/F-lt	Pr/Pr			A	10,40
<i>Calymmaria em.ert.oni.</i> (Simon)	F-lt/F-lt	Pr/Pr		C	A	10,40
<i>Cicurina jonesi</i> Chamberlin & Ivie	F-lt/F-lt	Pr/Pr			A	10,40
<i>Cicurina simplex</i> Simon	F-lt/F-lt	Pr/Pr			A	10,40
<i>Cicurina tersa</i> Simon	F-lt/F-lt	Pr/Pr		C		10
<i>Cryphoeca peckhami</i> Simon	F-lt/F-lt	Pr/Pr		C	A	10,40
<i>Cybaeina confusa</i> Chamberlin & Ivie	F-lt/F-lt	Pr/Pr		C		10
<i>Cybaeota</i> spp.	F-lt/F-lt	Pr/Pr		C	A	10,40
<i>Cybaeus cascadius</i> Roth	F-lt/F-lt	Pr/Pr		C	A	10,40
<i>Cybaeus eutypus</i> Chamberlin & Ivie	F-lt/F-lt	Pr/Pr		C	A	10,40
<i>Cybaeus morosus</i> Simon	F-lt/F-lt	Pr/Pr		C	A	10,40
<i>Cybaeus multnoma</i> Chamberlin & Ivie	F-lt/F-lt	Pr/Pr		C	A	10,40
<i>Cybaeus reticulatus</i> Simon	F-lt/F-lt	Pr/Pr		C	A	10,40
<i>Cybaeus scopulatus</i> Chamberlin & Ivie	F-lt/F-lt	Pr/Pr		C	A	10,40
<i>Cybaeus simplex</i> Roth	F-lt/F-lt	Pr/Pr			A	40
<i>Hololena</i> sp.						
<i>Novalena intermedia</i> (Chamberlin & Gertsch)	F-cn/F-cn	Pr/Pr		U	A	10,40
<i>Tegenaria domestica</i> (Clerck)	dom/dom	Pr/Pr		R		10
AMAUROBIIDAE (2 genera, 6 species)						
<i>Callioplus macarius</i> Chamberlin	F-lt/F-lt	Pr/Pr			A	40
<i>Callobius deces</i> Chamberlin & Ivie	F-lt/F-lt	Pr/Pr		C		10
<i>Callobius nevadensis</i> (Simon)	F-lt/F-lt	Pr/Pr		C		10
<i>Callobius nomeus</i> (Chamberlin)	F-lt/F-lt	Pr/Pr		C	A	10,40
<i>Callobius pictus</i> (Simon)	F-lt/F-lt	Pr/Pr		U		10
<i>Callobius severus</i> (Simon)	F-lt/F-lt	Pr/Pr		C	A	10,40

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal		References
			host	Ab Co	
ANAPIDAE (1 genus, 1 species)					
<i>Chasmocephalon shantzi</i> Gertsch	F-lt/F-lt	Pr/Pr		R	10
ANTRODIAETIDAE (1 genus, 4 species)					
<i>Antrodiaetus montanus</i> (Chamberlin & Ivie)	F-sl/F-sl	Pr/Pr		R	10
<i>Antrodiaetus occultus</i> Coyle	F-sl/F-sl	Pr/Pr		C A	40
<i>Antrodiaetus pacificus</i> (Simon)	F-sl/F-sl	Pr/Pr		A A	10, 40
<i>Antrodiaetus pugnax</i> (Chamberlin)	F-sl/F-sl	Pr/Pr		R A	10, 40
ANYPHAENIDAE (1 genus, 2 species)					
<i>Anyphaena aperta</i> (Banks)	F-cn/F-cn	Pr/Pr		R	10
<i>Anyphaena pacifica</i> (Banks)	F-cn/F-lt	Pr/Pr		A A	1, 10, 40
ARANEIDAE (11 genera, 20 species)					
<i>Aculepeira packardi</i> (Thorell)	M-vg/M-vg	Pr/Pr		R	10
<i>Araneus bispinosus</i> (Keyserling)	M-vg/M-vg	Pr/Pr		R	10
<i>Araneus diadematus</i> Clerck (I)	F-cn/F-cn	Pr/Pr		A	10
<i>Araneus gemma</i> (McCook)	F-cn/F-cn	Pr/Pr		U	10
<i>Araneus gemmoides</i> Chamberlin & Ivie	F-cn/F-cn	Pr/Pr		A	1, 10
<i>Araneus marmoreus</i> Clerck	F-cn/F-cn	Pr/Pr		C	10
<i>Araneus nordmanni</i> (Thorell)	F-cn/F-cn	Pr/Pr		A	10
<i>Araneus saevus</i> (L.Koch)	F-cn/F-cn	Pr/Pr		A	10
<i>Araneus trifolium</i> (Hentz) (I)	O-vg/O-vg	Pr/Pr		R	10
<i>Araniella displicata</i> (Hentz)	F-cn/F-cn	Pr/Pr		A A	1, 10
<i>Cyclosa conica</i> (Pallas)	F-cn/F-cn	Pr/Pr		A A	1, 10
<i>Eustala anastera</i> (Walckenaer)	F-cn/F-cn	Pr/Pr		R	10
<i>Eustala rosae</i> Chamberlin & Ivie	F-cn/F-cn	Pr/Pr		R	10
<i>Meta</i> sp.		Pr/Pr		R	1
<i>Metellina mimetoides</i> Chamberlin & Ivie	F-cn/F-cn	Pr/Pr		U	10
<i>Metepeira foxi</i> Gertsch & Ivie	M-vg/M-vg	Pr/Pr		R	10
<i>Metepeira grandiosa</i> Chamberlin & Ivie	M-vg/M-vg	Pr/Pr		C	10
<i>Neoscona</i> sp.	dom/dom	Pr/Pr		R	10
<i>Nuctenea patagiata</i> (Clerck)	F-cn/F-cn	Pr/Pr		A	10
<i>Zygiella carpenteri</i> Archer	F-cn/F-cn	Pr/Pr		C	1, 10
CLUBIONIDAE (8 genera, 17 species)					
<i>Agroeca</i> spp.	F-lt/F-lt	Pr/Pr		A	10
<i>Castianeira longipalpa</i> (Hentz)	M-gd/M-gd	Pr/Pr		U A	10, 40
<i>Cheiracanthium inclusum</i> (Hentz) (I)	F-lt/F-lt	Pr/Pr		U	10
<i>Clubiona canadensis</i> Emerton	F-cn/F-cn	Pr/Pr		A	10
<i>Clubiona mimula</i> Chamberlin	F-lt/F-lt	Pr/Pr		U	10
<i>Clubiona trivialis</i> C.L.Koch	F-lt/F-lt	Pr/Pr		U A	10, 40
<i>Clubiona</i> spp.		Pr/Pr		C	1, 10
<i>Corinna</i> spp.	F-lt/F-lt	Pr/Pr			10
<i>Phrurolithus</i> spp.	F-lt/F-lt	Pr/Pr			10
<i>Phrurotimpus borealis</i> (Emerton)	F-lt/F-lt	Pr/Pr		A	10, 40
<i>Phrurotimpus</i> sp.	F-lt/F-lt	Pr/Pr			10
<i>Trachelas</i> spp.	F-lt/F-lt	Pr/Pr		R	10

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
CTENIZIDAE (1 genus, 1 species)						
(literature record only to family)		Pr/Pr				2
DICTYNIDAE (2 genera, 7 species)						
<i>Dictyna annulipes</i> (Blackwall)	M-vg/M-vg	Pr/Pr		R		10
<i>Dictyna calcarata</i> Banks	M-vg/M-vg	Pr/Pr		R	A	10,40
<i>Dictyna major</i> Menge	M-vg/M-vg	Pr/Pr		R		10
<i>Dictyna peragrata</i> (Bishop & Ruderman)	F-cn/F-cn	Pr/Pr		A		1
<i>Dictyna tridentata</i> Bishop & Ruderman	F-cn/F-cn	Pr/Pr		U	A	40
<i>Hallos niveus</i> O.Pickard-Cambridge	M-vg/M-vg	Pr/Pr		R		10
<i>Hallos pallidus</i> Banks	F-cn/F-cn	Pr/Pr		U		10
DIPLURIOAE (1 genus, 1 species)						
<i>Hicrohexura idahoana</i>						
Chamberlin & Ivie	F-lt/F-lt	Pr/Pr		U	A	10,40
GNAPHOSIDAE (9 genera, 16 species)						
<i>Callilepis eremella</i> Chamberlin	F-lt/F-lt	Pr/Pr		u	A	10,40
<i>Callilepis pluto</i> Banks	F-lt/F-lt	Pr/Pr		u	A	10,40
<i>Drassodes</i> spp.	M-gd/M-gd	Pr/Pr		c		10
<i>Gnaphosa californica</i> Banks	F-lt/F-lt	Pr/Pr		c		10
<i>Gnaphosa muscorum</i> (L.Koch)	F-lt/F-lt	Pr/Pr		c	A	10,40
<i>Herpyllus propinquus</i> (Keyserling)	M-gd/M-gd	Pr/Pr		c		10
<i>Micaria pulicaria</i> (Sundevall)	M-vg/M-vg	Pr/Pr		u	A	10,40
<i>Micaria utahna</i> Gertsch	M-vg/M-vg	Pr/Pr		u	A	40
<i>Orodrassus</i> sp.	F-lt/F-lt	Pr/Pr		u	A	10,40
<i>Sergiolus columbianus</i> (Emerton)	F-cn/F-cn	Pr/Pr		c		10
<i>Sergiolus montanus</i> (Emerton)	F-cn/F-cn	Pr/Pr		c		10
<i>Scotophaeus blackwalli</i> (Thorell) (I)	F-cn/F-cn	Pr/Pr		c	A	10,40
<i>Zelotes fraternis</i> Chamberlin	F-lt/F-lt	Pr/Pr		c	A	40
<i>Zelotes josephine</i> Platnick & Shadab	F-lt/F-lt	Pr/Pr		u	A	40
<i>Zelotes puritanus</i> Chamberlin	F-lt/F-lt	Pr/Pr				
HAHNIIDAE (1 genus, 2 species)						
<i>Neoantistea agilis</i> (Keyserling)	F-lt/F-lt	Pr/Pr		R		10
<i>Neoantistea magna</i> (Keyserling)	F-lt/F-lt	Pr/Pr		R		10
HYPOCHILIDAE (1 genus, 1 species)						
<i>Hypochilus petrunkevitchi</i> Gertsch	O-rk/0-rk	Pr/Pr		R		2,10
LEPTONETIDAE (1 genus, 1 species)						
<i>Leptoneta sylva</i> Chamberlin & Ivie	F-lt/F-lt	Pr/Pr		U	A	40
LINYPHIIDAE (+ MICRYPHANTIDAE) (34 genera, 60 species)						
<i>Acartauchenius</i> sp.	F-lt/F-lt	Pr/Pr		U	A	40
<i>Agneta</i> sp.	F-lt/F-lt	Pr/Pr		U	A	40
<i>Aphileta</i> sp.	F-lt/F-lt	Pr/Pr		U	A	40

Taxonomic category	Habitat Ad/Im	Funct group	Plant/ animal host	Ab	Co	References
LINYPHIIDAE (continued)						
<i>Arcuphantes</i> sp.	F-lt/F-lt	Pr/Pr		U	A	40
<i>Bathyphant&s alameda</i> Ivie	F-lt/F-lt	Pr/Pr		u	A	40
<i>Bathyphantes alascensis</i> (Banks)	F-lt/F-lt	Pr/Pr		u	A	40
<i>Bathyphantes chico</i> Ivie	F-lt/F-lt	Pr/Pr		u	A	40
<i>Bathyphantes keeni</i> (Emerton)	F-lt/F-lt	Pr/Pr		u	A	40
<i>Bathyphantes orica</i> Ivie	F-lt/F-lt	Pr/Pr		u	A	40
<i>Centromerus</i> sp.	F-lt/F-lt	Pr/Pr		u	A	40
<i>Ceraticelus armaticeps</i> (Cambridge)	F-cn/F-cn	Pr/Pr		c		10
<i>Ceratinella alaskae</i> Chamberlin & Ivie	0-sl/0-sl	Pr/Pr		u	A	40
<i>Ceratinella</i> sp.	0-sl/0-sl	Pr/Pr		u	A	40
<i>Ceratinops inflata</i> (Emerton)	F-lt/F-lt	Pr/Pr		u	A	40
<i>Coreorgonal monoceros</i> (Simon)	F-lt/F-lt	Pr/Pr		u	A	40
<i>Coreorgonal petulcus</i> (Millidge)	F-lt/F-lt	Pr/Pr		u	A	40
<i>Eperigone trilobata</i> (Emerton)	F-lt/F-lt	Pr/Pr		u	A	40
<i>Erigone dentosa</i> O. Pickard-Cambridge	F-cn/F-lt	Pr/Pr		A	A	10,40
<i>Erigone</i> spp.	F-lt/F-lt	Pr/Pr		A		10
<i>Frontinella</i> spp.	F-cn/F-cn	Pr/Pr		A		10
<i>Gnathantes ferosa</i> Chamberlin & Ivie	F-cn/F-cn	Pr/Pr		C		1,10
<i>Helophora orinoma</i> (Chamberlin)	F-lt/F-lt	Pr/Pr		U	A	40
<i>Lepthyphantes mercedes</i> Chamberlin & Ivie	F-lt/F-lt	Pr/Pr		U	A	40
<i>Lepthyphantes tenuis</i> (Blackwall)	F-lt/F-lt	Pr/Pr		U	A	40
<i>Lepthyphantes zebra</i> (Emerton)	F-lt/F-lt	Pr/Pr		U	A	40
<i>Lepthyphantes zelatus</i> Zorsch	F-lt/F-lt	Pr/Pr		u	A	40
<i>Lepthyphantes zibus</i> Zorsch	F-lt/F-lt	Pr/Pr		u	A	40
<i>Linyphantes pualla</i> Chamberlin & Ivie	F-lt/F-lt	Pr/Pr		C	A	40
<i>Linyphantes</i> sp.	F-lt/F-lt	Pr/Pr		u	A	40
<i>Meioneta</i> spp. (3)	F-lt/F-lt	Pr/Pr		u	A	40
<i>Microlinyphia dana</i> (Chamberlin & Ivie)	F-cn/F-cn	Pr/Pr		A		10
<i>Microneta viaria</i> (Blackwall)	F-lt/F-lt	Pr/Pr		U	A	40
<i>Neriene litigiosa</i> (Keyserling)	F-cn/F-cn	Pr/Pr		A		1,10
<i>Oreonetides filicatus</i> (Crosby)	F-cn/F-cn	Pr/Pr		U	A	40
<i>Pelecopsis sculptum</i> (Emerton)	F-lt/F-lt	Pr/Pr		U	A	40
<i>Pimoa altiocolata</i> (Keyserling)	F-cn/F-cn	Pr/Pr		A	A	10,40
<i>Pityohyphantes costatus</i> (Hentz)	F-cn/F-cn	Pr/Pr		A	A	10
<i>Pityohyphantes rubrofasciatus</i> Keyserling	F-cn/F-cn	Pr/Pr		A		1
<i>Pocadicnemis pumila</i> (Blackwall)	F-lt/F-lt	Pr/Pr		U	A	40
<i>Scironis sima</i> Chamberlin	F-lt/F-lt	Pr/Pr		U	A	40
<i>Scotinotylus</i> spp.	F-lt/F-lt	Pr/Pr		U	A	10,40
<i>Spirembolus demonologicus</i> (Crosby)	F-lt/F-lt	Pr/Pr		U	A	40
<i>Spirembolus mendax</i> Millidge	F-lt/F-lt	Pr/Pr		U	A	40
<i>Spirembolus mundus</i> Chamberlin & Ivie	F-cn/F-cn	Pr/Pr		C		10
<i>Spirembolus vasingtonius</i> Chamberlin	F-lt/F-lt	Pr/Pr		U	A	40
<i>Symmigma minimum</i> (Emerton)	F-lt/F-lt	Pr/Pr		U	A	40
<i>Tachygyna sonoma</i> Millidge	F-lt/F-lt	Pr/Pr		U	A	40
<i>Tachygyna vancouverana</i> Chamberlin & Ivie	F-lt/F-lt	Pr/Pr		U	A	40
<i>Walckenaeria Columbia</i> Millidge	F-lt/F-lt	Pr/Pr		U	A	40
<i>Walckenaeria monoceras</i> (Chamberlin & Ivie)	F-lt/F-lt	Pr/Pr		U	A	40
<i>Walckenaeria oregona</i> Millidge	F-lt/F-lt	Pr/Pr		U	A	40

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	References		References
				Ab	Co	
LINYPHIIDAE (continued)						
<i>Walckenaeria subspiralis</i> Millidge	F-lt/F-lt	Pr/Pr		u	A	40
<i>Wubana atypica</i> Chamberlin & Ivie	F-lt/F-lt	Pr/Pr		u	A	40
<i>Wubana pacifica</i> (Banks)	F-cn/F-cn	Pr/Pr		u	A	10,40
<i>Zygottus corvallis</i> Chamberlin	F-lt/F-lt	Pr/Pr		u	A	40
LYCOSIDAE (8 genera, 15 species)						
<i>Allocosa subparva</i> Dondale & Redner	O-gd/O-gd	Pr/Pr		u	A	40
<i>Alopecosa kochi</i> (Keyserling)	M-gd/M-gd	Pr/Pr		c	A	10,40
<i>Arctosa</i> spp.	M-gd/M-gd	Pr/Pr		A		10
<i>Lycosa</i> spp.	M-gd/M-gd	Pr/Pr		A		2
<i>Pardosa californica</i> Keyserling	M-gd/M-gd	Pr/Pr		U	A	40
<i>Pardosa dorsal is</i> Banks	M-gd/M-gd	Pr/Pr		A	A	10,40
<i>Pardosa dorsuncata</i> Lowrie & Dondale	M-gd/M-gd	Pr/Pr		A		10
<i>Pardosa lowriei</i> Kronestedt	M-gd/M-gd	Pr/Pr		C		40
<i>Pardosa mackenziana</i> (Keyserling)	M-gd/M-gd	Pr/Pr		A		10
<i>Pardosa wyuta</i> Gertsch	M-gd/M-gd	Pr/Pr		C	A	40
<i>Pirata piraticus</i> (Clerk)	S-Aq/S-Aq	Pr/Pr		R		10
<i>Schizocosa mccooki</i> (Montgomery)	O-gd/O-gd	Pr/Pr		U	A	40
<i>Trochosa Cerricola</i> Thorell	M-gd/M-gd	Pr/Pr		u		10
MECICOBOTHRIDAE (1 genus, 2 species)						
<i>Hexura picea</i> Simon	F-lt/F-lt	Pr/Pr		u		10
	F-lt/F-lt	Pr/Pr		R		10
<i>Hexura rothi</i> Gertsch & Platnick						
MIMETIDAE (1 genus, 1 species)						
<i>Mimetus hesperus</i> Chamberlin	F-cn/F-cn	Pr/Pr	A-SPID	R		10
NESTICIDAE (1 genus, 1 species)						
<i>Nesticus</i> sp.	F-lt/F-lt	Pr/Pr		U	A	40
OECOBIIDAE (1 genus, 1 species)						
<i>Oecobius annulipes</i> Lucas	F-cn/F-cn	Pr/Pr		R		1,10
OXYOPIDAE (1 genus, 1 species)						
<i>Oxyopes scalaris</i> Hentz	M-vg/M-vg	Pr/Pr		A		10
PHILODROMIDAE (5 genera, 15 species)						
<i>Apollophanes margareta</i> Lowrie & Gertsch	F-cn/F-cn	Pr/Pr		A		10
<i>Ebo evansae</i> Sauer & Platnick	F-lt/F-lt	Pr/Pr		U	A	10,40
<i>Philodromus alascensis</i> Keyserling	M-gd/M-gd	Pr/Pr		R		10
<i>Philodromus californicus</i> Keyserling	F-cn/F-cn	Pr/Pr		R		10
<i>Philodromus cespitum</i> (Walckenaer)	M-vg/M-vg	Pr/Pr		R		10
<i>Philodromus gertschi</i> Schick	F-cn/F-cn	Pr/Pr		U		10
<i>Philodromus insperatus</i> Schick (I)	O-vg/O-vg	Pr/Pr		R		10
<i>Philodromus rufus pacificus</i> Banks	F-cn/F-cn	Pr/Pr		A	A	1,10,40

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
PHILODROMIDAE (continued)						
<i>Philodromus quercicola</i> Schick	F-cn/F-cn	Pr/Pr		U	A	40
<i>Philodromus speciosus</i> Gertsch	F-cn/F-cn	Pr/Pr		A		10
<i>Philodromus spectabilis</i> Keyserling	F-cn/F-cn	Pr/Pr		A	A	1, 10, 40
<i>Thanatus formicinus</i> (Clerck)	O-rk/0-rk	Pr/Pr		U	A	40
<i>Thanatus striatus</i> C.L.Koch	O-rk/0-rk	Pr/Pr		R		10
<i>Tibellus gertschi</i> Chamberlin & Ivie	M-vg/M-vg	Pr/Pr		R		10
<i>Tibellus oblongus</i> (Walckenaer)	M-vg/M-vg	Pr/Pr		A		10
PHOLCIDAE (1 genus, 1 species)						
<i>Pholcus phalangioides</i> (Fuesslin) (I)	dom/dom	Pr/Pr		U		10
SALTICIDAE (13 genera, 22 species)						
<i>Eris marginata</i> (Walckenaer)	M-vg/M-vg	Pr/Pr		C		10
<i>Euophrys monadnock</i> Emerton	F-lt/F-lt	Pr/Pr		u	A	40
<i>Evarcha hoyi</i> (G. & E. Peckham)	M-vg/M-vg	Pr/Pr		C	A	10, 40
<i>Habronattus hirsutus</i> (Peckham)	F-cn/F-cn	Pr/Pr		u		10
<i>Habronattus oregonensis</i> (G. & E. Peckham)	F-lt/F-lt	Pr/Pr		u	A	40
<i>Habronattus</i> spp. (2)	F-cn/F-cn	Pr/Pr		u	A	40
<i>Icius similis</i> Banks	M-vg/M-vg	Pr/Pr		R		10
<i>Metaphidippus aeneolus</i> Curtis	F-cn/F-cn	Pr/Pr		A	A	1, 10, 40, 49
<i>Metaphidippus albeolus</i> Maddison	F-cn/F-cn	Pr/Pr		C		10
<i>Metaphidippus dematus</i> Maddison	M-vg/M-vg	Pr/Pr		R		10
* <i>Metaphidippus</i> n.sp.	F-cn/F-cn	Pr/Pr		U		1, 10
<i>Neon ellamae</i> Gertsch & Ivie	F-lt/F-lt	Pr/Pr		U		10
<i>Neon pixii</i> Gertsch & Ivie	F-lt/F-lt	Pr/Pr		U		10
<i>Neon reticulatus</i> Blackwall	F-lt/F-lt	Pr/Pr		U	A	40
<i>Peckhamia</i> sp.	M-vg/M-vg	Pr/Pr		R		10
<i>Pellenes</i> spp.	M-gd/M-gd	Pr/Pr		A		10
<i>Phidippus johnsoni</i> (G. & E. Peckham)	M-vg/M-vg	Pr/Pr		A	A	10, 40
<i>Platycryptus californicus</i> (Peckham)	M-vg/M-vg	Pr/Pr		U		10
<i>Sassacas papenhoei</i> G. & E. Peckham	M-vg/M-vg	Pr/Pr		u		10
<i>Synagles</i> sp.	F-lt/F-lt	Pr/Pr		u	A	40
TELEMIDAE (1 genus, 1 species)						
<i>Usofila pacifica</i> (Banks)	F-lt/F-lt	Pr/Pr		R	A	40
TETRAGNATHIDAE (1 genus, 4 species)						
<i>Tetragnatha laboriosa</i> Hentz	M-vg/M-vg	Pr/Pr		U		10
<i>Tetragnatha versicolor</i> (Walckenaer)	S-Aq/R-vg	Pr/Pr		C	A	1, 40
<i>Tetragnatha</i> spp.		Pr/Pr				z
THERIDIIDAE (7 genera, 19 species)						
<i>Achaeearanea tepidariorum</i> (C.L.Koch)	dom/dom	Pr/Pr		U		10
<i>Argyrodes fictilium</i> (Hentz)	F-cn/F-cn	Pr/Pr		U		10
<i>Dipoena malkini</i> Levi	F-cn/F-cn	Pr/Pr	I-FORMI	U		10
<i>Dipoena nigra</i> (Emerton)	F-cn/F-cn	Pr/Pr	I-FORMI	A		10
<i>Enoplognatha ovata</i> (Clerck) (I)	F-cn/F-cn	Pr/Pr		R		10

Taxonomic category	Habitat Ad/Im	Funct group	Plant/ animal host	Ab	Co	References
THERIDIIDAE (continued)						
<i>Euryopsis formosa</i> Banks	F-cn/F-cn	Pr/Pr	I-FORMI	C	A	1,10,40
<i>Steatoda albomaculata</i> (DeGeer)	F-cn/F-cn	Pr/Pr		R	A	10,40
<i>Steatoda fulva</i> (Keyserling)	F-cn/F-cn	Pr/Pr		U		10
<i>Steatoda hespera</i> Chamberlin & Ivie	F-cn/F-cn	Pr/Pr		A		10
<i>Theridion aurantium</i> Emerton	F-cn/F-cn	Pr/Pr		U		10
<i>Theridion californicum</i> Banks	F-cn/F-cn	Pr/Pr		U		10
<i>Theridion differens</i> Emerton	F-cn/F-cn	Pr/Pr		A		1,10
<i>Theridion crispulum</i> Simon	F-cn/F-cn	Pr/Pr		U		1,10
<i>Theridion lawrencei</i> (Gertsch & Archer)	F-cn/F-cn	Pr/Pr		A		1,10
<i>Theridion melanurum</i> Hahn	M-vg/M-vg	Pr/Pr		C		10
<i>Theridion michelbacheri</i> Levi	M-vg/M-vg	Pr/Pr		R		10
<i>Theridion murarium</i> Emerton (I)	F-cn/F-cn	Pr/Pr		A		1,10
<i>Theridion neomexicanum</i> Banks	F-cn/F-cn	Pr/Pr		U		10
<i>Theridion sexpunctatum</i> Emerton	F-cn/F-cn	Pr/Pr		A	A	10,40
THOMISIDAE (6 genera, 16 species)						
<i>Coriarachne brunneipcs</i> Banks	F-lt/F-lt	Pr/Pr		A		10
<i>Coriarachne utahensis</i> (Gertsch)	F-lt/F-lt	Pr/Pr		U		10
<i>Misumena vatia</i> (Clerck) (I)	O-vg/O-vg	Pr/Pr		C	A	10,40
<i>Misumenops celer</i> (Hentz)	M-vg/M-vg	Pr/Pr		A		10
<i>Misumenops importunus</i> (Keyserling)	M-vg/M-vg	Pr/Pr		C		10
<i>Misumenops sierrensis</i> Schick	M-vg/M-vg	Pr/Pr		U	A	10,40
<i>Ozyptila yosemitica</i> Schick	F-lt/F-lt	Pr/Pr		U	A	40
<i>Tmarus angulatus</i> (Walckenaer)	F-cn/F-cn	Pr/Pr		C		1,10
<i>Xysticus benefactor</i> Keyserling	O-gd/O-gd	Pr/Pr		U	A	40
<i>Xysticus californicus</i> Keyserling	F-lt/F-lt	Pr/Pr		U	A	40
<i>Xysticus gosiutus</i> Gertsch	M-vg/M-vg	Pr/Pr		U	A	10,40
<i>Xysticus gulosus</i> Keyserling	F-lt/F-lt	Pr/Pr		U		10
<i>Xysticus locuples</i> Keyserling	F-cn/F-cn	Pr/Pr		A	A	10,40
<i>Xysticus montanensis</i> Keyserling	F-cn/F-cn	Pr/Pr		A	A	10,40
<i>Xysticus pretiosus</i> Gertsch	F-lt/F-lt	Pr/Pr		U	A	40
<i>Xysticus punctatus</i> Keyserling	F-cn/F-cn	Pr/Pr		R		10
ULOBORIDAE (1 genus, 1 species)						
<i>Hyptiotes gertschi</i> Chamberlin & Ivie	F-cn/F-cn	Pr/Pr		A		10
ZORIDAE (1 genus, 1 species)						
<i>Zora</i> sp.	F-lt/F-lt	Pr/Pr		U	A	40

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/animal host	References	
				Ab	Co

ACARI

(2 orders, 5 suborders, 28 superfamilies (ORIBATIDA only) + 23 families (all except ORIBATIDA), 118 genera, 165 species)

PARASITIFORMES

(2 suborders, 6 families, 6 genera, 6 species)

(suborder **IXODIDA**) (1 family, 1 genus, 1 species)

IXODIDAE (1 genus, 1 species)

Ixodes pacificus Cooley & Kohls anim/anim Pa/Pa C A

(suborder **GAMASIDA (=MESOSTIGMATA)**) (5 families, 5 genera, 5 species)

PARASITIDAE (1 genus, 1 species)

Schizothetus vicarius Athias-Henriot F-cn/F-cn Pr/Pr 1

PHYTOSEIIDAE (1 genus, 1 species)

Typhlodromus sp. F-cn/F-cn Pr/Pr C 1

SCUTACARIDAE (1 genus, 1 species)

undetermined specimens A

UROPODIDAE (1 genus, 1 species)

undetermined specimens A

ZERCONIDAE (1 genus, 1 species)

Zercon sp. F-cn/F-cn Fu/Fu 1

(SEE ALSO APPENDIX B)

ACARIFORMES

(3 suborders, 28 superfamilies (ORIBATIDA only) + 17 families (ACTENIDIDA + ACARIDIDAonly), 113 genera, 159 species)

(suborder **ACTINEDIDA (=PROSTIGMATA)**) (15families, 18 genera, 19 species)

BDELLIDAE (3 genera, 3 species)

Bdella sp. F-cn/F-cn Pr/Pr U 1

Cyta sp. nr. *latirostris* (Herman) F-cn/F-cn Pr/Pr U 1

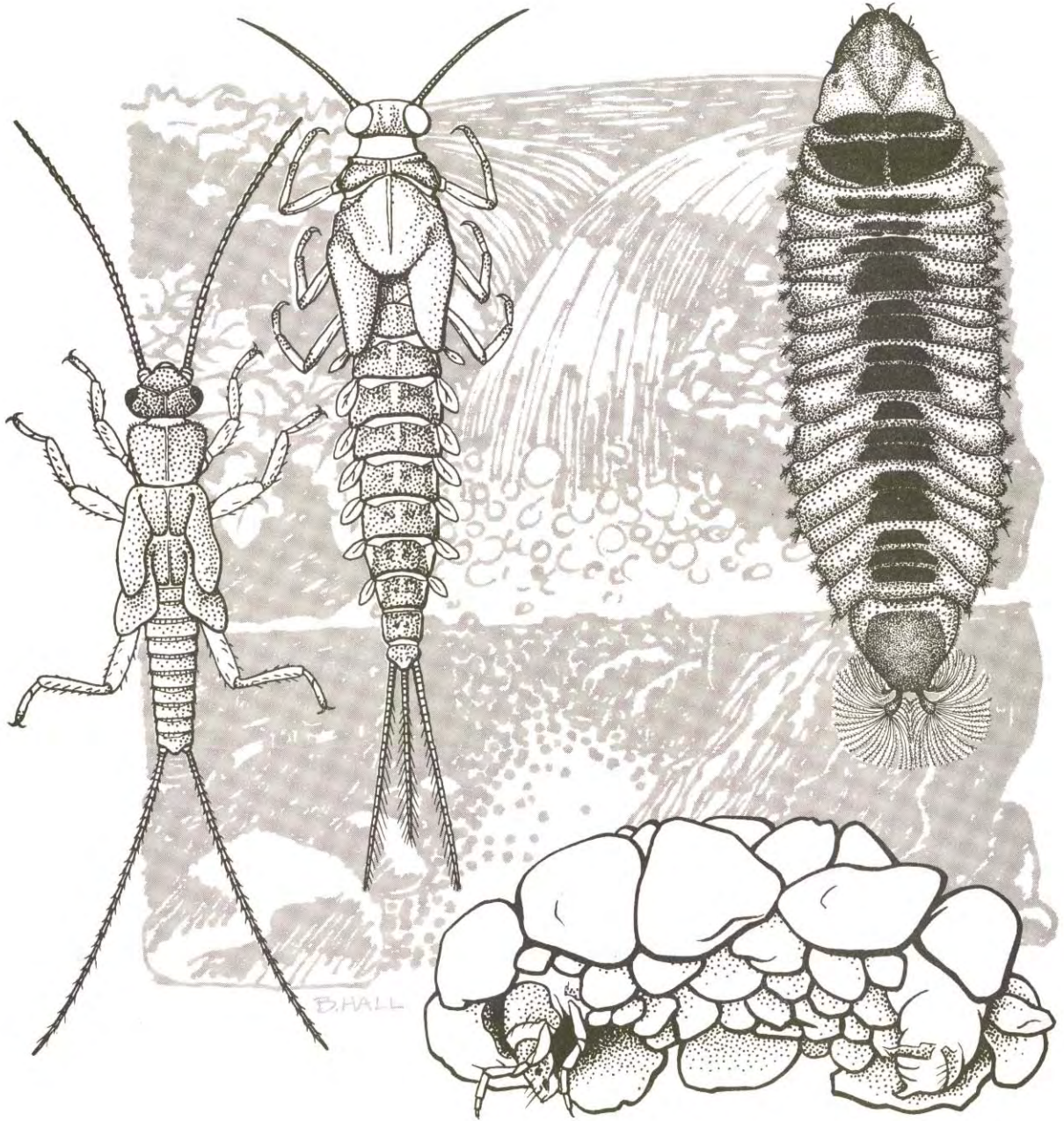
Spinibdella sp. F-cn/F-cn Pr/Pr U 1

CAECULIDAE (1 genus, 1 species)

Caeculus krantzi Coineau F-lt/F-lt Pr/Pr U A 40

Aquatic

Aquatic habitats on the Andrews Forest are dominated by cold, clear, steep-gradient streams. Flows are typically high after fall rains and winter snow-melt, and low during the summer. Large amounts of coarse woody debris along with boulders of all sizes create a diverse habitat of riffles, falls, and pools. Substrates are mostly gravels and sands. The forest and clearcuts provide various degrees of shading to the streams, with abundant riparian vegetation contributing organic material. The full array of aquatic and semi-aquatic microhabitats is effectively used by a rich and abundant fauna, which has been intensively studied. Mayflies, stoneflies, and caddisflies are especially well represented, as are the stream-dwelling Diptera. Many unique adaptations are exhibited for coping with the rigors of the stream environment. Larvae of the psychodid fly *Maruina lanceolata* (upper right) inhabit rocks in the splash zone where they maintain position by means of ventral sucker-like disks. Glossosomatid caddisfly larvae (bottom) use materials at hand for building protective cases carried about as they graze on plant and animal material. Stoneflies (left) patrol the substrate where some are shredders of organic material and others prey on aquatic organisms. Mayfly naiads (center) are found in strong current, feeding on passing organic particles.



Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
CALIGONELLIDAE (1 genus, 1 species)						
<i>Caligonella</i> sp.	F-cn/F-cn	Pr/Pr		C		1
CHEYLETIDAE (1 genus, 1 species)						
<i>Cheletogenes</i> sp.	F-cn/F-cn	Pr/Pr		U		1
CRYPTOGNATHIDAE (1 genus, 2 species)						
<i>Cryptognathus</i> (<i>imbricatus</i> group) sp.	F-cn/F-cn			C		1
<i>Cryptognathus</i> sp.	F-cn/F-cn			C		1
CUNAXIDAE (1 genus, 1 species)						
<i>Cunaxoides</i> sp.	F-cn/F-cn	Pr/Pr		U		1
ENDEOSTIGMATIDES (1 genus, 1 species)						
(literature record only to supercohort)	F-cn/F-cn					1
NANORCHESTIDAE (1 genus, 1 species)						
<i>Nanorchestes</i> sp.	F-cn/F-cn	Fu/Fu		C		1
PARATYDEIDAE (1 genus, 1 species)						
<i>Tanytydeus</i> sp.	F-cn/F-cn	Fu/Fu		C		1
PENTHALODIDAE (1 genus, 1 species)						
<i>Penthalodes</i> sp.	F-cn/F-cn	Pr/Pr		U		1
RHAGIDIIDAE (1 genus, 1 species)						
(literature record only to family)	F-cn/F-cn	Pr/Pr		C		1
SMARIDIDAE (1 genus, 1 species)						
<i>Sphaerotarsus</i> sp.	F-cn/ins	Pr/Pa		U		1
TERPNACARIDAE (1 genus, 1 species)						
*N.Gen. (?)	F-cn/F-cn	Fu/Fu		U		1
TETRANYCHIDAE (1 genus, 1 species)						
(literature record only to family)	F-cn/F-cn	H/H		U		1
TYDEIDAE (2 genera, 2 species)						
<i>Homotydeus</i> sp.	F-cn/F-cn			C		1
<i>Metatriphytydeus</i> sp.	F-cn/F-cn			U		1

(SEE ALSO APPENDIX B)

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
(suborder ACARIDIDA (=ASTIGMATA)) (2 families, 2 genera, 2 species)						
ACARIDAE (1 genus, 1 species)						
(literature record only to family)	F-cn/F-cn	Fu/Fu		U		1
GLYCYPHAGIDAE (1 genus, 1 species)						
(literature record only to family)	F-cn/F-cn	Fu/Fu		U		1
(SEE ALSO APPENDIX B)						
(suborder ORIBATIDA (=CRYPTOSTIGMATA)) (28 superfamilies, 92 genera, 138 species)						
ARCHEONOTHROIDEA (2 genera, 2 species)						
<i>Acaronychus tragardhi</i> Grandjean	F-1t/F-1t	Mi/Mi		U		22,26
<i>Zachvatkinella</i> sp.	F-1t/F-1t	Mi/Mi		U		22,26
ATOPOCHTHONOIDEA (=PHYLLOCHTHONOIDEA) (2 genera, 2 species)						
<i>Atopochthonius artiodactylus</i> Grandjean	F-1t/F-1t	Mi/Mi		u		22
				u		26
<i>Pterochthonius</i> sp.	F-1t/F-1t	Mi/Mi				
BRACHYCHTHONOIDEA (5 genera, 5 species)						
<i>Brachychthonius</i> sp.	F-1t/F-1t	Mi/Mi		c		22,, 25
<i>Eobrachychthonius</i> sp.	F-1t/F-1t	Mi/Mi		u		22
<i>Liochthonius</i> sp.	F-1t/F-1t	Mi/Mi		c		22
<i>Sellnickochthonius</i> sp.	F-1t/F-1t	Mi/Mi		R		22
<i>Synchthonius</i> sp.	F-1t/F-1t	Mi/Mi		U		22
CARABODOIDEA (3 genera, 4 species)						
<i>Carabodes</i> spp. (2)	F-1t/F-1t	Fu/Fu		A		22, 25,, 26
<i>Exechocephus</i> sp.	F-1t/F-1t	Fu/Fu		R		22
<i>Tectocephus</i> sp.	F-1t/F-1t	Fu/Fu		A		22, 25,, 26
CEPHEOIDEA (2 genera, 3 species)						
<i>Eupterotegaeus</i> sp.	F-1t/F-1t	Fu/Fu		U		22
<i>Sphodrocephus anthelionus</i> Woolley & Higgens	F-1t/F-1t	Fu/Fu		U		22, 25,, 26
<i>Sphodrocephus tridactylus</i> Woolley & Higgens	F-1t/F-1t	Fu/Fu		U		22, 25
CERATOZETOIDEA (8 genera, 13 species)						
<i>Ceratozetes</i> spp. (4)	F-1t/F-1t	Fu/Fu		A		22, 25, 26
<i>Dentizetes</i> sp.	F-1t/F-1t	Fu/Fu		R		26
<i>Hypozetes</i> sp.	F-cn/F-cn	Li/Li		C		1
<i>Jugatala tuberosa</i> Ewing	F-cn/F-cn	Li/Li		A		1, 22
<i>Jugatala</i> sp.				U		22

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
CERATOZETOIDEA (continued)						
<i>Melanozetes</i> sp.	F-lt/F-lt	Fu/Fu		R		22
<i>Mycobates</i> sp.	F-cn/F-cn	Li/Li		U		22
<i>Propelops canadensis</i> (Hammer)	F-lt/F-lt	Mi/Mi		C		22, 25, 26
<i>Propelops monticolus</i> (Ewing)	F-lt/F-lt	Mi/Mi		U		22
<i>Sphaerozetes</i> sp.	F-lt/F-lt	Fu/Fu		U		22, 23
CROTONIOIDEA (=NOTHROIDEA) (6 genera, 10 species)						
<i>Camisia carrolli</i> Andre	F-cn/F-cn	Li/Li		A		1, 22, 27, 28, 49
<i>Camisia horrida</i> (Hermann)	F-lt/F-lt	Fu/Fu		U		22
<i>Camisia segnis</i> (Hermann)	F-cn/F-cn	Li/Li		R		22
<i>Camisia</i> sp.	F-lt/F-lt	Fu/Fu		R		26
<i>Malaconothrus monodactylus</i> (Michael)				U		22
<i>Nothrus sylvestris</i> Nicolet	F-lt/F-lt	D/D		C		22
<i>Platynothrus banksi</i> (Michael)	F-lt/F-lt	D/D		R		22
<i>Platynothrus peltifer</i> (Koch)	F-lt/F-lt	D/D		R		22
<i>Trhypochthonius americanus</i> Ewing	F-lt/F-lt	Fu/Fu		R		22
<i>Trimalaconothrus simplex</i> (Banks)				U		22
CTENACAROIDEA (2 genera, 2 species)						
<i>Aphelacrus acarinus</i> (Berlese)				R		22
<i>Ctenacarus</i> sp.				R		22
CYMBAEREMAEOIDEA (2 genera, 3 species)						
<i>Ametroproctus oresbios</i> Higgins & Woolley	F-cn/F-cn	Fu/Fu		C		1, 26
<i>Ametroproctus</i> sp.	F-lt/F-lt	Fu/Fu		U		22
<i>Scapheremaeus</i> sp.	F-cn/F-cn	Li/Li		A		1, 22
DAMAEOIDEA (=BELBOIDEA) (5 genera, 9 species)						
<i>Belba californica</i> (Banks)	F-lt/F-lt	Fu/Fu		R		22
<i>Caenobelba</i> spp. (3)	F-lt/F-lt	Fu/Fu		A		22, 25
<i>Epidamaeus</i> spp. (3)	F-lt/F-lt	Fu/Fu		C		22, 26
<i>Hungarobelba</i> sp.	F-lt/F-lt	Fu/Fu		C		22, 25
*undescribed new genus & species	F-lt/F-lt	Fu/Fu		U		22
EPILOHMANNIOIDEA (1 genus, 1 species)						
<i>Epilohmannia</i> sp.	wood/wood	X/X		C		22, 25
EREMAEOIDEA (2 genera, 4 species)						
<i>Eremaeus</i> sp. (arboreal)	F-cn/F-cn	Li/Li		A		1
<i>Eremaeus</i> spp. (2) (ground)	F-lt/F-lt	Fu/Fu		C		22, 25, 26
<i>Megereremaeus</i> sp.	F-lt/F-lt	Fu/Fu		u		22
EULOHMANNIOIDEA (1 genus, 1 species)						
<i>Eulohmannia ribagai</i> Berlese	F-sl/F-sl	Mi/Mi		U		22

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
EUPHTHIRACAROIDEA (4 genera, 6 species)						
<i>Euphthiracarus tanythrix sierriensis</i> Walker	wood/wood	X/X		A		22, 25, 26
<i>Maerkelotritia</i> sp. nr. <i>gibbera</i> (Walker)	wood/wood	X/X		C		22
<i>Maerkelotritia</i> sp.	wood/wood	X/X		C		22, 26
<i>Microtrititia paeniminnia</i> (Walker)	wood/wood	X/X		u		22, 26
<i>Microtrititia</i> sp.	wood/wood	X/X		A		22
<i>Oribotrititia megale</i> (Walker)	wood/wood	X/X		C		22, 25
GALUMNOIDEA (2 genera, 2 species)						
<i>Galumna</i> sp.	F-lt/F-lt	Fu/Fu		R		22
<i>Pergalumna</i> sp.	F-lt/F-lt	Pr/Pr		R		22
GUSTAVIOIDEA (=LIACAROIDEA) (11 genera, 15 species)						
<i>Ceratoppia</i> sp. nr. <i>bipilis</i> (Hermann)	F-lt/F-lt	Fu/Fu		C		22, 25, 26
<i>Cultroribula</i> sp. (<i>biculturata</i> complex)	F-lt/F-lt	Fu/Fu		U		22, 26
<i>Furcoribula</i> sp.	F-lt/F-lt	Fu/Fu		U		22
<i>Gustavia microcephala</i> (Nicolet)	F-lt/F-lt	Mi/Mi		C		22, 25, 26
<i>Leuroxenillus</i> sp. nr. <i>trichionus</i> Woolley & Higgins	F-lt/F-lt	Fu/Fu		C		22, 26
<i>Liacarus bidentatus</i> Woolley	F-lt/F-lt	Fu/Fu		C		22, 26
<i>Liacarus</i> sp. nr. <i>robustus</i> Woolley	F-lt/F-lt	Fu/Fu		C		22, 26
<i>Liacarus</i> sp. nr. <i>spiniger</i> Jacot	F-lt/F-lt	Fu/Fu		C		22
<i>Liacarus</i> spp. (2)	F-lt/F-lt	Fu/Fu		C		22
<i>Metrioppia oregonensis</i> Woolley & Higgins	F-lt/F-lt	Fu/Fu		A		22, 25, 26
<i>Peltenuiala pacifica</i> Norton	F-lt/F-lt	Fu/Fu		C		22, 26,
<i>Stonyxenillus</i> sp.	F-lt/F-lt	Fu/Fu		C		22
<i>Tenuiala nuda</i> Ewing	F-lt/F-lt	Fu/Fu		R		22
<i>Xenillus</i> sp.	F-lt/F-lt	Fu/Fu		C		22
HERMANNIELLOIDEA (1 genus, 3 species)						
<i>Hermanniella</i> spp. (3)	F-lt/F-lt	Fu/Fu		A		22
HYPOCHTHONIOIDEA (5 genera, 5 species)						
<i>Cosmochthonius</i> sp. nr. <i>lanatus</i> (Michael)	F-lt/F-lt	Mi/Mi		R		22
<i>Eniochthonius minutissimus</i> (Berlese)	F-lt/F-lt	Mi/Mi		U		22, 26
<i>Eohypochthonius</i> sp.	F-lt/F-lt	Mi/Mi		U		22, 25
<i>Hypochthonius rufulus</i> Koch	F-lt/F-lt	D/D		C		22, 25
<i>Sphaerochthonius</i> sp.	F-lt/F-lt	Mi/Mi		u		22
LIODOIDEA (1 genus, 1 species)						
<i>Platyliodes macroprionus</i> Woolley & Higgins	F-cn/F-cn	Li/Li		A		1, 22

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
NANHERMANNIOIDEA (1 genus, 1 species)						
<i>Nanhermannia</i> sp.	F-1t/F-1t	Fu/Fu		U		22,26
ORIBATELLOIDEA (3 genera, 9 species)						
<i>Achipteria</i> sp.	F-1t/F-1t	Fu/Fu		A		22,25,26
<i>Anachipteria</i> spp. (3)	F-1t/F-1t	Fu/Fu		A		22,25,26
<i>Oribatella</i> spp. (5)	F-1t/F-1t	Fu/Fu		A		22,25,26
ORIPODOIDEA (=ORIBATULOIDEA) (5 genera, 12 species)						
<i>Eporibatula</i> sp.	F-1t/F-1t	Fu/Fu		U		22
<i>Oribatula</i> sp.	F-1t/F-1t	Fu/Fu		R		26
<i>Phauloppia</i> spp. (2)	F-cn/F-cn	Li/Li		A		1
<i>Scheloribates</i> sp. (arboreal)	F-cn/F-cn _s	Li/Li		A		1
<i>Scheloribates</i> spp. (6) (ground)	F-1t/F-1t	Fu/Fu		A		1,22, 25,26
<i>Zygoribatula</i> sp.	F-1t/F-1t	Fu/Fu		C		22,25
PARHYPOCHTHONOIDEA (2 genera, 2 species)						
<i>Gehyepochthonius rhadamanthus</i> Jacot	wood/wood	XX		C		22
<i>Parhyepochthonius</i> sp.	wood/wood	XX		U		22
PELOPOIDEA (2 genera, 2 species)						
<i>Eupelops</i> sp.	F-1t/F-1t	Mi/Mi		U		22,26
<i>Peloptulus</i> sp.	F-1t/F-1t	Mi/Mi		R		22
PERLOHMANNIOIDEA (1 genus, 2 species)						
<i>Perlohmanna</i> spp. (2)	F-1t/F-1t			U		22
PHTHIRACAROIDEA (1 genus, 2 species)						
<i>Phthiracarus</i> spp. (2)	wood/wood	X/X		A		22,25,26
PLATEREMEOIDEA (=GYMNODAMAEOIDEA) (3 genera, 3 species)						
<i>Jacotella</i> sp.	F-1t/F-1t	Fu/Fu		C		22,25
<i>Joshuella</i> sp.	F-1t/F-1t	Fu/Fu		R		22
<i>Odontodamaeus veriornatus</i> Hammer	F-1t/F-1t	Fu/Fu		A		1,22
THYRISOMOIDEA (=OPPIOIDEA) (9 genera, 14 species)						
<i>Autogneta</i> sp.	F-1t/F-1t	Fu/Fu		R		26
<i>Oppia</i> sp.	F-1t/F-1t	Fu/Fu		C		22
<i>Oppiella nova</i> (Oudemans)	F-1t/F-1t	Fu/Fu		A		22,25,26
<i>Oppiella</i> spp. (3)	F-1t/F-1t	Fu/Fu		A		22,25,26
<i>Oribella</i> sp.	F-cn/F-cn	Li/Li		U		1
<i>Quadroppia</i> sp. nr. <i>quadricarinata</i> (Michael)	F-1t/F-1t	Mi/Mi		A		1,22, 25,26
<i>JRhinosuctobelba</i> sp. nr. <i>dicerosa</i> Woolley & Higgins	F-1t/F-1t	Mi/Mi		A		22,25,26
<i>Rhynchobelba</i> sp.	F-1t/F-1t	Mi/Mi		C		22

Taxonomic category	Habitat		Funct	Plant/	Ab	Co	References
	Ad/Im	Ad/Im	group	animal			

THYRISOMOIDEA (continued)

<i>Suctobelba</i> sp.	F-lt/F-lt	Mi/Mi			R		22
<i>Suctobelbella</i> spp.	F-lt/F-lt	Mi/Mi			A		22, 25, 26
<i>Veloppia</i> sp.	F-lt/F-lt	Fu/Fu			R		26

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APPENDIX A: HOST ACRONYMS

Listed below are all the acronyms used under the host category in this list. They are subdivided into Animal (A-), Insect (I-), and Plant (P-) hosts. Acronyms generally relate to a family, genus, or specific name for the host, although sometimes a more general name is used. The acronym "polylec" is included at the end of the plant list.

ANIMAL (A-)

A-ACARI = mites
A-BIRD = birds
A-Clca = *Clethrionomys californicus* (Merriam), California red-backed vole
A-DEER = deer and elk(?)
A-DIPLO = DIPLOPODA - millipedes
A-Euto = *Eutamias townsendii* (Bachman), Townsend chipmunk
A-Glsa = *Glaucomys sabrinus* (Shaw), northern flying squirrel
A-Mior = *Microtus oregoni* (Bachman), creeping vole
A-Negi = *Neurotrichus gibbsii* (Baird), shrew-mole
A-ORIBA = oribatid mites
A-Pema = *Peromyscus maniculatus* (Wagner), deer mouse
A-RODNT = rodents (+/- shrews)
A-Scor = *Scapanus orarius* True, coast mole
A-SNAIL = snails and slugs
A-Sorex = *Sorex* spp., shrews
A-Spbe = *Spermophilus beechyi* (Richardson), California ground squirrel
A-SPID = spiders (ARANEAE)
A-SQUIR = squirrels and chipmunks
A-Thma = *Thomomys mazama* Merriam, Mazama pocket gopher
A-WORM = annelid worms
A-Zatr = *Zapus trinotatus* Rhoads, Pacific jumping mouse

INSECT (I-)

I-ACRID = ACRIDIDAE (ORTHOPTERA), grasshoppers
I-Adco = *Adelges cooleyi* (Gillette) (HEMIPTERA:HOMOPTERA;ADELIGIDAE)
I-AGROM = AGROMYZIDAE (DIPTERA), agromyzid leafminer flies
I-Altic = *Altica* spp. (COLEOPTERA;CHRYSOMELIDAE), flea beetles
I-ALEYR = ALEYRODIDAE (HEMIPTERA:HOMOPTERA), whiteflies
I-Andre = *Andrena* spp. (HYMENOPTERA;ANDRENIDAE), andrenid bees
I-Antho = *Anthophora* spp. (HYMENOPTERA;ANTHOPHORIDAE), anthophorid bees
I-APHID = APHIDOIDEA (HEMIPTERA:HOMOPTERA), aphids, adelgids, etc.
I-ARCTI = ARCTIIDAE (LEPIDOPTERA), tiger moths
I-BEES = various bees (HYMENOPTERA;APOIDEA)
I-BRACO = BRACONIDAE (HYMENOPTERA), braconid parasitic wasps
I-Bombu = *Bombus* spp. (HYMENOPTERA;APIDAE), bumble bees
I-BUPR = BUPRESTIDAE (COLEOPTERA), metallic wood-boring beetles
I-CECID = CECIDIOMYIDAE (DIPTERA), cecidiomyid gall midges
I-CERAM = CERAMBYCIDAE (COLEOPTERA), long-horned wood-boring beetles
I-CHRY = CHRYSOMELIDAE (COLEOPTERA), leaf beetles
I-CICDL = CICAPELLIDAE (HEMIPTERA:HOMOPTERA), leaf hoppers
I-COCCD = COCCOIDEA (HEMIPTERA:HOMOPTERA), scale insects
I-COLEO = COLEOPTERA, beetles
I-Colle = *Colletes* spp. (HYMENOPTERA;COLLETIDAE), colletid bees
I-CURC = CURCULIONIDAE (COLEOPTERA), weevils
I-CYNIP = CYNIPIDAE (HYMENOPTERA), gall wasps
I-DIASP = DIASPIDIDAE (HEMIPTERA:HOMOPTERA), armored scales

I-DIPRI = DIPRIONIDAE (HYMENOPTERA), conifer sawflies
 I-DIPT = DIPTERA, flies
 I-EGGS = insect eggs
 I-EUCER - EUCERINI (HYMENOPTERA;ANTHOPHORIDAE), *Melissodes* & *Synhalonia* spp.
 I-EUMEN = EUMENIDAE (HYMENOPTERA), eumenid wasps
 I-Formi = *Formica* spp. (HYMENOPTERA;FORMICIDAE), thatch nest ants
 I-FORMI = FORMICIDAE (HYMENOPTERA), ants
 I-GALL = gall forming insects (DIPTERA, HYMENOPTERA)
 I-GEOM = GEOMETRIDAE (LEPIDOPTERA), measuring worms
 I-HALIC = HALICTIDAE (HYMENOPTERA), halictid bees
 I-HETER = HEMIPTERA:HETEROPTERA, true bugs
 I-HOMOP = HEMIPTERA:HOMOPTERA, leafhoppers, aphids, scales, etc.
 I-HYMEN = HYMENOPTERA, bees and wasps
 I-ICHNE = ICHNEUMONIDAE (HYMENOPTERA), ichneumonid parasitic wasps
 I-LEAFM = leafmining insects (LEPIDOPTERA, DIPTERA)
 I-LEPID = LEPIDOPTERA, moths and butterflies
 I-LYGAE = LYGAEIDAE (HEMIPTERA:HETEROPTERA), seed bugs
 I-MEGAC = MEGACHILIDAE (HYMENOPTERA), megachilid leafcutting bees
 I-Megac = *Megachile* spp. (HYMENOPTERA,MEGACHILIDAE), leafcutting bees
 I-MYCET = MYCETOPHILIDAE (DIPTERA) fungus gnats
 I-NEURO = NEUROPTERA, lacewings
 I-NOCT = NOCTUIDAE (LEPIDOPTERA), noctuid moths
 I-NYMPH = NYMPHALIDAE (LEPIDOPTERA), brush-footed butterflies
 I-ORTH - ORTHOPTERA, grasshoppers, crickets, etc.
 I-Osmia = *Osmia* spp. (HYMENOPTERA;MEGACHILIDAE), bees
 I-PCOCC = PSEUDOCOCCIDAE (HEMIPTERA:HOMOPTERA), mealybugs
 I-PENT = PENTATOMIDAE (HEMIPTERA:HETEROPTERA), stink bugs
 I-PSOC - PSOCOPTERA, bark lice
 I-SCOLY = SCOLYTIDAE (COLEOPTERA), bark beetles
 I-SIMUL = SIMULIIDAE (DIPTERA), black flies
 I-SIRIC = SIRICIDAE (HYMENOPTERA), horntail wasps
 I-SPHEC = SPHECIDAE (HYMENOPTERA), sphecid wasps
 I-SYRPH = SYRPHIDAE (DIPTERA), syrphid flies
 I-TENTH = TENTHREDINOIDEA (HYMENOPTERA), sawflies
 I-THRIP = THRIPIDAE (THYSANOPTERA), thrips
 I-THYSP = THYSANOPTERA, thrips

PLANT (P-)

P-Abam - *Abies amabilis* (Dougl.) Forbes (PINACEAE), Pacific silver fir
 P-Abpr = *Abies procera* Rehder (PINACEAE), noble fir
 P-Abies = *Abies* spp. (PINACEAE), firs
 P-Acci = *Acer circinatum* Pursh (ACERACEAE), vine maple
 P-Acer = *Acer* spp. (ACERACEAE), maples
 P-Alnus = *Alnus* spp. (BETULACEAE), alder
 P-APOCY = APOCYNACEAE, dogbane Family
 P-Arcto = *Arctostaphylos* spp. (ERICACEAE), manzanita
 P-Arme = *Arbutus menziesii* Pursh (ERICACEAE), Pacific madrone
 P-Arceu = *Arceuthobium* sp. (LORANTHACEAE), dwarf mistletoe
 P-Ascle - *Asclepias* spp. (ASCLEPIADACEAE), milkweed
 P-Berbe = *Berberis* spp. (BERBERIDACEAE), barberry, Oregon grape
 P-Cach = *Castanopsis chrysophylla* (Dougl.) A.DC. (FAGACEAE), golden chinkapin
 P-Caloc = *Calocortus* spp. (LILIACEAE), mariposa lily
 P-Campa = *Campanula* spp. (CAMPANULACEAE), bellflower
 P-CAPRI = CAPRIFOLIACEAE, honeysuckle Family
 P-Casti - *Castilleja* spp. (SCROPHULARIACEAE), paintbrush
 P-Ceano = *Ceanothus* spp. (RHAMNACEAE), ceanothus, buckbrush
 P-Cirsi = *Cirsium* spp. (COMPOSITAE), thistles
 P-COMP = COMPOSITAE, aster Family

P-*Thpl* = *Thuja plicata* Donn. (CUPRESSACEAE), western redcedar
P-TREES = a variety of tree hosts
P-*Trifo* = *Trifolium* spp. (LEGUMINOSAE), clover
P-UMBEL - UMBELLIFERAE, parsley Family
P-URTIC - URTICACEAE, nettle Family
P-*Vacci* = *Vaccinium* spp. (ERICACEAE), blueberry, huckleberry
P-*Vame* = *Vaccinium membranaceum* Dougl. (ERICACEAE), big whortleberry
P-*Vicia* = *Vicia* spp. (LEGUMINOSAE), vetch
P-VIOLA = VIOLACEAE, violet Family
polylec = polylectic: gathers pollen from a wide range of flowers (generalist)

**APPENDIX B:
LIST OF PARASITES ASSOCIATED WITH HOSTS
KNOWN TO BE PRESENT IN THE ANDREWS FOREST**

These parasites are known to be associated with hosts present on the Andrews Forest. Most parasites are fairly specific in their host associations and probably are present wherever their hosts are found. No actual collections of these parasites have been made in the few studies where the hosts were collected. Most of these parasite/host associations have been made on hosts collected elsewhere in Oregon, and thus probability is high that they also occur here. Those parasites definitely known from collections of hosts from the Andrews are included in the main list. This information was provided by Chris Maser, Forest Science Laboratory, Oregon State University (see Emerson and others 1984, and Whitaker and Maser 1985). Species followed by an asterisk (*) are associated with hosts known to be present, however, these parasites have not yet been recorded from Oregon but could occur here. A host list with scientific names is given at the end of the parasite list. Mammal host names are from Hall 1981 and Chapman and Feldhamer 1982.

Taxonomic category of parasite	Hosts at Andrews Forest
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PHTHIRAPTERA (from Emerson and others 1984)

(suborder) MALLOPHAGA

BOOPIDAE

Heterodoxus spiniger (Enderlein) dog, coyote

TRICHODECTIDAE

Bovicola concavifrons (Hopkins) * elk
Bovicola longicornis (Nitzsch) * elk
Eutrichophilus setosus (Giebel) porcupine
Felicola spp. * mountain lion, bobcat
Neotrichodectes minutus (Paine) long-tailed weasel
Neotrichodectes osborni Keler spotted skunk
Stachiella erminea Hopkins short-tailed weasel
Stachiella larseni Emerson mink
Stachiella retusa martis Werneck * marten
Trichodectes canis (de Geer) coyote
Trichodectes octomaculatus Paine * racoon
Tricholipeurus lipeuroides (Megnin) mule deer
Tricholipeurus parallelus (Osborn) mule deer
Tricholipeurus pinquiseuarctidos
(Hopkins) * black bear

(suborder) ANOPLURA

ENDERLEINELLIDAE

Enderleinellus osborni
Kellogg & Ferris Beechy ground squirrel
Enderleinellus tamiasciuri Kim chickaree
Microphthirus incinatus (Ferris) northern flying squirrel

HOPLOPLEURIDAE

Hoplopleura hesperomydis (Osborn) deer mouse
Hoplopleura sciuricola Ferris chickaree
Hoplopleura trispinosa
(Kellogg & Ferris) northern flying squirrel

Taxonomic category of parasite	Hosts at Andrews Forest
LINOGNATHIDAE	
<i>Linognathus setosus</i> (van Olfers)	coyote, dog
POLYPLACIDAE	
<i>Neohaematopinus inornatus</i>	Kellogg & Ferris bushy-tailed woodrat
<i>Neohaematopinus sciuropteri</i> (Osborn)	northern flying squirrel
<i>Neohaematopinus semifasciatus</i> Ferris	chickaree
<i>Polyplax auricularis</i> Kellogg & Ferris	deer mouse
ACARI (from Whitaker & Maser, 1985)	
ACARIDAE	
<i>Acotyledon</i> sp. nr. <i>paradoxus</i> Oudemans	northern flying squirrel
CHEYLETIDAE	
<i>Acaropsellina summersi</i>	Smiley & Whitaker northern, flying squirrel (nest)
<i>Camincheyletus glaucomys</i>	Smiley & Whitaker northern flying squirrel (nest)
<i>Eucheyletia bishoppi</i> Baker	Trowbridge's shrew, spotted skunk
<i>Eucheyletia oregonensis</i>	Smiley & Whitaker northern flying squirrel (nest)
CHIRODISCIDAE	
<i>Alabidocarpus calcaratus</i> Lawrence	California myotis bat
CHORTOGLYPHIDAE	
<i>Aplodontopus latus</i> Fain	mountain beaver
DERMANYSSIDAE	
<i>Dermanyssus gallinoides</i> Moss	northern flying squirrel
GLYCYPHAGIDAE	
<i>Dermacarus hylandi</i> Fain	creeping vole
<i>Dermacarus jonesi</i> Fain & Whitaker	Townsend's chipmunk
<i>Dermacarus newyorkensis</i> Fain	Pacific jumping mouse
<i>Dermacarus spermophilus</i>	Fain & Whitaker Townsend's chipmunk, golden-mantled ground squirrel
<i>Dermacarustamiasciuri</i>	Rupes, Yunker & Wilson northern flying squirrel, chickaree
<i>Glycyphagus hypudaei</i> (Koch)	shrews, many rodents, short-tailed weasel
<i>Gohieria</i> sp.	northern flying squirrel
<i>Microlabidopus americanus</i> Fain	mountain beaver
<i>Orycteroxenus soricis</i> (Oudemans)	shrews
<i>Xenorytes latiporus</i> Fain & Whitaker	spotted skunk
<i>Zibethacarus ondatrae</i>	(Rupes & Whitaker) creeping vole
LAELAPIDAE	
<i>Alphaelaps aplodontiae</i> (Jellison)	shrews, mountain beaver, Townsends chipmunk
<i>Androlaelaps casalis</i> (Berlese)	mole, shrews, northern flying squirrel, deer mouse

Taxonomic category of parasite	Hosts at Andrews Forest
LAELAPIDAE (continued)	
<i>Androlaelaps fahrenheitzi</i> (Belese)	mole, shrews, many rodents, carnivores
<i>Androlaelaps geomys</i> (Strandtmann)	Mazama pocket gopher
<i>Echinonyssus affinis</i> (Jameson)	Townsend's chipmunk
<i>Echinonyssus cynomys</i> (Radford)	long-tailed weasel
<i>Echinonyssus</i> nr. <i>cynomys</i>	northern flying squirrel
<i>Echinonyssus isabellinus</i> (Oudemans)	shrews, many rodents
<i>Echinonyssus longichelae</i> (Allred & Beck)	northern flying squirrel, gopher, long-tailed weasel
<i>Echinonyssus neotomae</i> (Eads & Hightower)	bushy-tailed woodrat
<i>Echinonyssus obsoletus</i> (Jameson)	shrews, California red-backed vole, deer mouse, weasels
<i>Echinonyssus Staffordi</i> (Strandtmann & Hunt)	long-tailed weasel, spotted skunk
<i>Echinonyssus thomomys</i> (Allred & Beck)	Mazama pocket gopher, long-tailed weasel
<i>Echinonyssus utahensis</i> (Allred & Beck)	pica, deer mouse, short-tailed weasel
<i>Eubrachylaelaps debilis</i> Jameson	Trowbridge's shrew, chipmunk, deer mouse, weasel
<i>Eubrachylaelaps stabularis</i> (Koch)	shrews, mole, many rodents, weasel, skunk
<i>Haemogamasus occidentalis</i> (Keegan)	shrews, moles, many rodents
<i>Haemogamasus onychmydis</i> (Ewing)	Mazama pocket gopher
<i>Haemogamasus pontiger</i> (Berlese)	northern flying squirrel, bushy-tailed woodrat
<i>Haemogamasus reidi</i> Ewing	many shrews, moles, rodents
<i>Haemogamasus thomomysi</i> Williams, Smiley, & Redington	Mazama pocket gopher
<i>Haemogamasus</i> sp.	mountain beaver
<i>Haemogamasus</i> n.sp.	California red-backed vole, <i>Microtus</i> spp.
<i>Laelaps alaskensis</i> Grant	water vole, Mazama pocket gopher
<i>Laelaps kochi</i> Oudemans	shrew-mole, <i>Microtus</i> spp., deer mouse
<i>Patriyssus hubbardi</i> (Jameson)	mountain beaver
LISTROPHORIDAE	
<i>Aplodontochirus borealis</i> Fain & Hyland	mountain beaver
<i>Leporacarus sylvilagi</i> Fain, Whitaker, & Lukoschus	brush rabbit
<i>Listrophorus mexicanus</i> Fain	Pacific water shrew, <i>Microtus</i> spp.
<i>Lynxacarus mustelae</i> (Megnin)	long-tailed weasel
<i>Lynxacarus nearcticus</i> Fain & Hyland	mink
<i>Quasilistrophorus microticolus</i> Fain, Whitaker, & Lukoschus	white-footed vole, red tree vole
MACRONYSSIDAE	
<i>Cryptonyssus desultorius</i> Radovsky	big brown bat, California myotis bat
<i>Macronyssus crosbyi</i> (Ewing & Stover)	big brown bat, California myotis bat
<i>Macronyssus macrodactylus</i> Rhadovsky & Beck	silver-haired bat
<i>Steatonyssus furmani</i> Tipton & Boese	hoary bat
<i>Steatonyssus occidentalis</i> (Ewing)	big-brown bat
" <i>Macronyssid</i> " n.sp.	big-brown bat, silver-haired bat, Calif myotis bat

Taxonomic category of parasite	Hosts at Andrews Forest
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MYOBIIDAE

<i>Acanthopthirius caudatus eptesicus</i> Fain & Whitaker	big brown bat
<i>Amorphacarus hengererorum</i> Jameson	shrews
<i>Amorphacarus soricis</i> Fain & Whitaker	Pacific water shrew
<i>Eadiea neurotrichus</i> Lukoschus, Klompen, & Whitaker	shrew-mole
<i>Eutalpacarus peltatus</i> Jameson	shrew-mole
<i>Protomyobia brevisetosa</i> Jameson	shrews, California red-backed vole
<i>Pteracarus aculeus</i> Dusbabeck & Lukoschus	big brown bat
<i>Pteracarus</i> sp. nr. <i>minutus daubentoni</i> Dusbabeck	long-legged myotis bat
<i>Radfordia ewingi</i> (Fox)	Pacific jumping mouse
<i>Radfordia hylandi</i> Fain & Lukoschus	creeping vole

MYCOPTIDAE

<i>Mycoptes japonensis</i> Radford	water vole, California red-backed vole
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OTOEDRIDAE

<i>Notoedres (Bakeracarus)</i> sp.	big brown bat
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PYGMEPHORIDAE

<i>Pygmephorus designatus</i> Mahunka	Trowbridge's shrew, California red-backed vole, spotted skunk
<i>Pygmephorus horridus</i> Mahunka	coast mole, Trowbridge's shrew, vagrant shrew
<i>Pygmephorus johnstoni</i> Smiley & Whitaker	shrew-mole
<i>Pygmephorus scalopi</i> Mahunka	coast mole
<i>Pygmephorus whitakeri</i> Mahunka	coast mole

SPINTURNICIDAE

<i>Spinturnix americanus</i> (Banks)	big brown bat
<i>Spinturnix bakeri</i> Rudnick	big brown bat

SCIENTIFIC NAMES OF HOST SPECIES

INSECTIVORA

<i>Neurotrichus gibbsi</i> (Baird)	shrew-mole
<i>Scapanus orarius</i> True	coast mole
<i>Sorex bendirei</i> (Merriam)	Pacific water shrew
<i>Sorex trowbridgii</i> Baird	Trowbridge's shrew
<i>Sorex vagrans obscurus</i> (Merriam)	dusky shrew
<i>Sorex vagrans vagrans</i> Baird	vagrant shrew
<i>Sorex vagrans yaquinae</i> (Jackson)	Yaquina shrew

CHIROPTERA

<i>Eptesicus fuscus</i> (Palisot de Beauvois)	big brown bat
<i>Lasionycteris noctivagens</i> (LeConte)	silver-haired bat
<i>Lasiurus cinereus</i> (Palisot de Beauvois)	hoary bat
<i>Myotis californicus</i> (Audubon and Bachman)	California myotis

LAGOMORPHA

<i>Ochotona princeps</i> (Richardson)	pika
<i>Sylvilagus bachmani</i> (Waterhouse)	brush rabbit

RODENTIA

<i>Aplodontia rufa</i> (Rafinesque)	mountain beaver
<i>Arborimus albipes</i> Merriam	white-footed vole
<i>Arborimus longicaudus</i> True	red tree vole
<i>Clethrionomys californicus</i> Merriam	Calif, red-backed vole
<i>Erethizon dorsatum</i> (Linnaeus)	porcupine
<i>Eutamias townsendii</i> (Bachman)	Townsend's chipmunk
<i>Glaucomys sabrinus</i> (Shaw)	northern flying squirrel
<i>Microtus oregoni</i> (Bachman)	creeping vole
<i>Microtus richardsoni</i> (DeKay)	water vole
<i>Neotoma cinerea</i> (Ord)	bushy-tailed woodrat
<i>Peromyscus maniculatus</i> (Wagner)	deer mouse
<i>Spermophilus beechyi</i> (Richardson)	Calif, ground squirrel
<i>Spermophilus lateralis</i> (Say)	Golden-mantled ground squirrel
<i>Tamiasciurus douglasii</i> (Bachman)	chickaree
<i>Thomomys mazama</i> Merriam	Mazama pocket gopher
<i>Zapus trinotatus</i> Rhoads	Pacific jumping mouse

CARNIVORA

<i>Canis latrans</i> Say	coyote
<i>Felis concolor</i> Linnaeus	mountain lion
<i>Lynx rufus</i> (Schreber)	bobcat
<i>Martes americana</i> (Turton)	marten
<i>Mustela erminea</i> Linnaeus	short-tailed weasel
<i>Mustela frenata</i> Lichtenstein	long-tailed weasel
<i>Mustela vison</i> Schreber	mink
<i>Procyon lotor</i> Linnaeus	raccoon
<i>Spilogale putorius</i> (Linnaeus)	spotted skunk
<i>Ursus americanus</i> Pallas	black bear

ARTIODACTYLA

<i>Cervus elaphus canadensis</i> Erxleben	elk
<i>Odocoileus hemionus</i> (Rafinesque)	mule (black-tailed) deer

APPENDIX C:

LIST OF APOIDEA PRESUMED TO BE ON THE ANDREWS FOREST

During 1980, A.R. Moldenke (Department of Entomology, Oregon State University) collected and compiled a list of bees (Hymenoptera: Apoidea) from the McKenzie River drainage of the Willamette national Forest, in which the HJ Andrews Forest is located (Reference #29). The Apoidea species included on the list below are those he believes should be present on the Andrews Forest. This is based on habitats and host plants present on the Andrews, and on his field notes, personal collections and literature reviews. These species have not been included in the main list because there are no actual records or voucher specimens verifying their presence on the Andrews Forest. This list represents a robust picture of the bee fauna of the central Cascades, and as such may include rare taxa that may not indeed be found lit all times on the Andrews Forest (principally bees of the valley floor/low altitude and those from subalpine fell fields -- regions poorly represented within the Andrews Forest). Within the conifer zone, the vast majority of bee species are ephemeral colonists in open regions following clear-cutting, landslides/avalanches and floods. Most species are encountered as wandering males, and their presence on the Andrews would not necessarily imply stable resident populations. The large unmonographed genera Andrena (some subgenera), Lasioglossum (s. lato), Steli; and Nomada are not treated.

Taxonomic category	Habitat Ad/Im	Funct group	Plant/ animal		References
			host	Ab Co	
ANDRENIDAE (3 genera, 56 species)					
<i>Andrena amphibola</i> (Vierick)	0-vg/0-sl	Fl/A	polylec	C	29
<i>Andrena auricoma</i> Smith	0-vg/0-sl	Fl/A	polylec	U	29
<i>Andrena buckelli</i> Vierick	0-vg/0-sl	Fl/A		U	29
<i>Andrena caerulea</i> Smith	0-vg/0-sl	Fl/A	P-Ranun	A	29
<i>Andrena candidia</i> Smith	0-vg/0-sl	Fl/A	P-Salix	A	29
<i>Andrena candidiformis</i> Vierick & Cockerell	0-vg/0-sl	Fl/A	P-Ceano	R	29
<i>Andrena chlorogaster</i> Vierick	0-vg/0-sl	Fl/A	polylec	U	29
<i>Andrena chlorura</i> Cockerell	0-vg/0-sl	Fl/A	polylec	U	29
<i>Andrena cleodora cleodora</i> (Viereck)	0-vg/0-sl	Fl/A	P-Ceano	u	29
<i>Andrena columbiana</i> Viereck	0-vg/0-sl	Fl/A	P-COMP	u	29
<i>Andrena crataegi</i> Robertson	0-vg/0-sl	Fl/A	polylec	A	29
<i>Andrena cristata</i> Viereck	0-vg/0-sl	Fl/A	P-Arcto	R	29
<i>Andrena cupreotincta</i> Cockerell	0-vg/0-sl	Fl/A	polylec	R	29
<i>Andrena cyanophila</i> Cockerell	0-vg/0-sl	Fl/A	P-Poten	R	29
<i>Andrena forbesii</i> Robertson	0-vg/0-sl	Fl/A	polylec	R	29
<i>Andrena frigida</i> Smith	0-vg/0-sl	Fl/A		C	29
<i>Andrena fuscicauda</i> (Viereck)	0-vg/0-sl	Fl/A	polylec	R	29
<i>Andrena hemileuca</i> Viereck	0-vg/0-sl	Fl/A		C	29
<i>Andrena hippotes</i> Robertson	0-vg/0-sl	Fl/A	polylec	A	29
<i>Andrena knuthiana</i> Cockerell	0-vg/0-sl	Fl/A	polylec	U	29
<i>Andrena lupinorum</i> Cockerell	0-vg/0-sl	Fl/A	P-Lupin	R	29
<i>Andrena macoupinensis</i> Robertson	0-vg/0-sl	Fl/A		R	29
<i>Andrena mariae</i> Robertson	0-vg/0-sl	Fl/A	P-Salix	U	29
<i>Andrena medionitens</i> Cockerell	0-vg/0-sl	Fl/A	polylec	U	29
<i>Andrena melanochroa</i> Cockerell	0-vg/0-sl	Fl/A	polylec	R	29
<i>Andrena mirandia</i> Smith	0-vg/0-sl	Fl/A	polylec	R	29
<i>Andrena miserabilis</i> Cresson	0-vg/0-sl	Fl/A	P-ROSAC	U	29
<i>Andrena nevadensis</i> Cresson	0-vg/0-sl	Fl/A	P-Salix	R	29
<i>Andrena nigrihirta</i> (Ashmead)	0-vg/0-sl	Fl/A	polylec	R	29

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
ANDRENIDAE (continued)						
<i>Andrena nigrocaerulea</i> Cockerell	O-vg/0-sl	Fl/A	polylec	C		29
<i>Andrena nivalis</i> Smith	O-vg/0-sl	Fl/A	polylec	C		29
<i>Andrena obscuripostica</i> Viereck	O-vg/0-sl	Fl/A	P-Arcto	R		29
<i>Andrena perplexa</i> Smith	O-vg/0-sl	Fl/A	polylec	A		29
<i>Andrena pertristis</i> Cockerell	O-vg/0-sl	Fl/A	polylec	R		29
<i>Andrena prunorum</i> Cockerell	O-vg/0-sl	Fl/A	polylec	A		29
<i>Andrena quintiliformis</i> Viereck	O-vg/0-sl	Fl/A	polylec	U		29
<i>Andrena rufosignata</i> Cockerell	O-vg/0-sl	Fl/A		R		29
<i>Andrena regularis</i> Malloch	O-vg/0-sl	Fl/A	polylec	R		29
<i>Andrena salicifloris</i> Cockerell	O-vg/0-sl	Fl/A	P-Salix	A		29
<i>Andrena scutellinitens</i> Viereck	O-vg/0-sl	Fl/A	P-COMP	C		29
<i>Andrena semipunctata</i> Cockerell	O-vg/0-sl	Fl/A	P-Salix	R		29
<i>Andrena sigmundi</i> Cockerell	O-vg/0-sl	Fl/A	P-Salix	R		29
<i>Andrena striatifrons</i> Cockerell	O-vg/0-sl	Fl/A	P-Salix	U		29
<i>Andrena subaustralis</i> Cockerell	O-vg/0-sl	Fl/A'	P-Salix	C		29
<i>Andrena subtilis</i> Smith	O-vg/0-sl	Fl/A	polylec	U		29
<i>Andrena thaspiae</i> Graenicher	O-vg/0-sl	Fl/A		U		29
<i>Andrena transnigra</i> Viereck	O-vg/0-sl	Fl/A	polylec	C		29
<i>Andrena trevoris</i> Cockerell	O-vg/0-sl	Fl/A		U		29
<i>Andrena trizonata</i> (Ashmead)	O-vg/0-sl	Fl/A	P-Salix	U		29
<i>Andrena vicina</i> Smith	O-vg/0-sl	Fl/A	polylec	U		29
<i>Andrena vierecki</i> Cockerell	O-vg/0-sl	Fl/A	polylec	U		29
<i>Andrena washingtoni</i> Cockerell	O-vg/0-sl	Fl/A		U		29
<i>Andrena w-scripta</i> Viereck	O-vg/0-sl	Fl/A	polylec	A		29
<i>Nomadopsis edwardsii</i> (Cresson)	O-vg/0-sl	Fl/A	P-Poten	A		29
ANTHOPHORIDAE (10 genera, 39 species)						
<i>Anthophora bomboides stanfordiana</i> Cockerell	O-vg/0-sl	Fl/A	polylec	U		29
<i>Anthophora californica californica</i> Cresson	O-vg/0-sl	Fl/A	polylec	R		29
<i>Anthophora crotchii</i> Cresson	O-vg/0-sl	Fl/A	polylec	R		29
<i>Anthophora edwardsii</i> Cresson	O-vg/0-sl	Fl/A	polylec	U		29
<i>Anthophora furcata pernigra</i> Cresson	O-vg/0-sl	Fl/A	polylec	R		29
<i>Anthophora furcata syringae</i> (Cockerell)	O-vg/0-sl	Fl/A	polylec	C		29
<i>Anthophora furcata terminalis</i> Cresson	O-vg/0-sl	Fl/A	polylec	R		29
<i>Anthophora pacifica pacifica</i> Cresson	O-vg/0-sl	Fl/A	polylec	A		29
<i>Anthophora urbana urbana</i> Cresson	O-vg/0-sl	Fl/A	polylec	A		29
<i>Anthophora ursina simillima</i> Cresson	O-vg/0-sl	Fl/A	polylec	C		29
<i>Ceratina acantha</i> Provancher	O-vg/0-vg	Fl/A	polylec	A		29
<i>Ceratina nanula</i> Cockerell	O-vg/0-vg	Fl/A	polylec	C		29
<i>Diadasia nigrifrons</i> (Cresson)	O-vg/0-sl	Fl/A	P-Sidal	R		29
<i>Epeolus americanus</i> (Cresson)	O-vg/nest	Fl/KP	I-Colle	R		29
<i>Epeolus minimus</i> (Robertson)	O-vg/nest	Fl/KP	I-Colle	R		29
<i>Melecta separata callura</i> (Cockerell)	O-vg/nest	Fl/KP	I-Antho	R		29
<i>Melissodes communis alopex</i> (Cockerell)	O-vg/0-sl	Fl/A'	polylec	U		29
<i>Melissodes glenwoodensis</i> Cockerell	O-vg/0-sl	Fl/A	P-COMP	R		29
<i>Melissodes lupina</i> Cresson	O-vg/0-sl	Fl/A	P-COMP	A		29
<i>Melissodes lustra</i> LaBerge	O-vg/0-sl	Fl/A	P-COMP	C		29
<i>Melissodes lutulenta</i> LaBerge	O-vg/0-sl	Fl/A	P-COMP	U		29

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
ANTHOPHORIDAE (continued)						
<i>Melissodes metenua</i> Cockerell	O-vg/0-sl	Fl/A	P-COMP	A		29
<i>Melissodes microsticta</i> Cockerell	O-vg/0-sl	Fl/A	P-COMP	A		29
<i>Melissodes pallidisignata</i> Cockerell	O-vg/0-sl	Fl/A	P-COMP	A		29
<i>Melissodes rivalis</i> Cresson	O-vg/0-sl	Fl/A	<i>P-Cirsii</i>	U		29
<i>Melissodes robustior</i> Cockerell	O-vg/0-sl	Fl/A	P-COMP	A		29
<i>Melissodes steamsi</i> Cockerell	O-vg/0-sl	Fl/A	polylec	R		29
<i>Synhalonia acerba</i> (Cresson)	O-vg/0-sl	Fl/A	P-Arcto	C		29
<i>Synhalonia actuosa</i> (Cresson)	O-vg/0-sl	Fl/A	polylec	A		29
<i>Synhalonia cordleyi</i> Viereck	O-vg/0-sl	Fl/A	polylec	A		29
<i>Synhalonia delphinii</i> Timberlake	O-vg/0-sl	Fl/A	polylec	R		29
<i>Synhalonia edwardsii</i> (Cresson)	O-vg/0-sl	Fl/A	polylec	A		29
<i>Synhalonia frater lata</i> (Provancher)	O-vg/0-sl	Fl/A	polylec	C		29
<i>Synhalonia hurdi</i> Timberlake	O-vg/0-sl	Fl/A	polylec	R		29
<i>Synhalonia stretchii</i> (Cresson)	O-vg/0-sl	Fl/A	polylec	U		29
<i>Triepeolus</i> spp.	O-vg/nest	Fl/KP	I-EUCER	A		29
APIDAE (3 genera, 14 species)						
<i>Bombus californicus californicus</i> Smith	O-vg/0-sl	Fl/A	polylec	A		29
<i>Bombus edwardsii</i> Cresson	O-vg/0-sl	Fl/A	polylec	U		29
<i>Bombus flavifrons dimidiatus</i> Ashmead	O-vg/0-sl	Fl/A	polylec	C		29
<i>Bombus sylvicola</i> (Kirby)	O-vg/0-sl	Fl/A	polylec	U		29
<i>Bombus vandykei</i> (Frison)	O-vg/0-sl	Fl/A	polylec	R		29
<i>Psithyrus suckleyi</i> (Greene)	O-vg/nest	Fl/Pa	<i>I-Bombu</i>	U		29
COLLETIDAE (2 genera, 19 species)						
<i>Colletes compactus hesperius</i> Swenk	O-vg/0-sl	Fl/A	P-COMP	R		29
<i>Colletes consors pascoensis</i> Cockerell	O-vg/0-sl	Fl/A	<i>P-Phace</i>	U		29
<i>Colletes fulgidus fulgidus</i> Swenk	O-vg/0-sl	Fl/A	P-COMP	A		29
<i>Colletes gypsicolens</i> Cockerell	O-vg/0-sl	Fl/A	P-COMP	R		29
<i>Colletes hyalinus hyalinus</i> Provancher	O-vg/0-sl	Fl/A	polylec	R		29
<i>Colletes inaequalis</i> Say	O-vg/0-sl	Fl/A	polylec	R		29
<i>Colletes nigrifrons</i> Titus	O-vg/0-sl	Fl/A	<i>P-Poten</i>	R		29
<i>Colletes paniscus sculleni</i> Timberlake	O-vg/0-sl	Fl/A	<i>P-Merte</i>	U		29
<i>Colletes simulans nevadensis</i> Swenk	O-vg/0-sl	Fl/A	P-COMP	R		29
<i>Colletes slevini</i> Cockerell	O-vg/0-sl	Fl/A	polylec	U		29
<i>Hylaeus affinis</i> (Smith)	O-vg/0-vg	Fl/A	polylec	R		29
<i>Hylaeus basalis</i> (Smith)	O-vg/0-vg	Fl/A	polylec	U		29
<i>Hylaeus coloradensis</i> (Cockerell)	O-vg/0-vg	Fl/A	polylec	U		29
<i>Hylaeus episcopal is episcopal is</i> (Cockerell)	O-vg/0-vg	Fl/A	polylec	A		29
<i>Hylaeus modestus citrinifrons</i> (Cockerell)	O-vg/0-vg	Fl/A	polylec	C		29
<i>Hylaeus nevadensis</i> (Cockerell)	O-vg/0-vg	Fl/A	polylec	A		29
<i>Hylaeus rudbeckiae</i> (Cockerell & Casad)	O-vg/0-vg	Fl/A	polylec	A		29
<i>Hylaeus timberlakei</i> Snelling	O-vg/0-vg	Fl/A	polylec	R		29
<i>Hylaeus verticalis</i> (Cresson)	O-vg/0-vg	Fl/A	polylec	A		29

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
HALICTIDAE (7 genera, 23 species)						
<i>Agapostemon femoratus</i> Crawford	0-vg/0-sl	Fl/A	polylec	U		29
<i>Agapostemon texanus texanus</i> Cresson	0-vg/0-sl	Fl/A	polylec	U		29
<i>Agapostemon virescens</i> (Fabricius)	0-vg/0-sl	Fl/A	polylec	R		29
<i>Dufourea afasciata</i> Bohart	0-vg/0-sl	Fl/A	<i>P-Trifo</i>	R		29
<i>Dufourea calochorti sculleni</i> (Cockerell)	0-vg/0-sl	Fl/A	<i>P-Caloc</i>	R		29
<i>Dufourea campanulae</i> (Cockerell)	0-vg/0-sl	Fl/A-	<i>P-Campa</i>	R		29
<i>Dufourea dilatipes</i> Bohart	0-vg/0-sl	Fl/A	<i>P-Campa</i>	R		29
<i>Dufourea fimbriata sierrae</i> (Michener)	0-vg/0-sl	Fl/A	<i>P-Poten</i>	R		29
<i>Dufourea holocyanea</i> (Cockerell)	0-vg/0-sl	Fl/A	<i>P-Symph</i>	R		29
<i>Dufourea trochantera</i> Bohart	0-vg/0-sl	Fl/A	<i>P-Phace</i>	R		29
<i>Halictus confusus arapahonum</i> Cockerell	0-vg/0-sl	Fl/A	polylec	A		29
<i>Halictus farinosus</i> Smith	0-vg/0-sl	Fl/A	polylec	A		29
<i>Halictus rubicundus</i> (Christ)	0-vg/0-sl	Fl/A	polylec	A		29
<i>Halictus tripartitus</i> Cockerell	0-vg/0-sl	Fl/A	polylec	A		29
<i>Halictus virgatellus</i> Cockerell	0-vg/0-sl	Fl/A	polylec	R		29
MEGACHILIDAE (15 genera, 121 species)						
<i>Anthidiellum notatum robertsoni</i> (Cockerell)	0-vg/0-vg	Fl/A	polylec	U		29
<i>Anthidium tenuiflorae</i> Cockerell	0-vg/0-sl	Fl/A	polylec	U		29
<i>Anthidium utahense</i> Swenk	0-vg/0-sl	Fl/A	<i>P-Phace</i>	U		29
<i>Anthocopa abjecta abjecta</i> (Cresson)	0-vg/	Fl/A	<i>P-Penst</i>	R		29
<i>Anthocopa copelandica copelandica</i> (Cockerell)	0-vg/	Fl/A	<i>P-Phace</i>	U		29
<i>Anthocopa elongata</i> (Michener)	0-vg/	Fl/A	<i>P-Penst</i>	R		29
<i>Anthocopa triodonta shastensis</i> (Cockerell)	0-vg/	Fl/A	<i>P-Penst</i>	R		29
<i>Ashmeadiella aridula astragali</i> Michener	0-vg/	Fl/A	polylec	U		29
<i>Ashmeadiella buconis denticulata</i> (Cresson)	0-vg/	Fl/A	<i>P-COMP</i>	C		29
<i>Ashmeadiella cactorum cactorum</i> (Cockerell)	0-vg/	Fl/A	polylec	R		29
<i>Ashmeadiella californica californica</i> (Ashmead)	0-vg/	Fl/A	polylec	C		29
<i>Ashmeadiella cubiceps cubiceps</i> (Cresson)	0-vg/	Fl/A	<i>P-COMP</i>	R		29
<i>Chelostoma phaceliae</i> Michener	0-vg/0-vg	Fl/A	<i>P-Phace</i>	R		29
<i>Chelostoma minutum minutum</i> Crawford	0-vg/0-vg	Fl/A	<i>P-Phace</i>	R		29
<i>Chelostomoides angelarum</i> (Titus)	0-vg/0-rk	Fl/A	polylec	U		29
<i>Coelioxys alternata</i> Say	0-vg/nest	Fl/KP	<i>I-Megac</i>	R		29
<i>Coelioxys apacheorum</i> Cockerell	0-vg/nest	Fl/KP	<i>I-Megac</i>	R		29
<i>Coelioxys banksi</i> Crawford	0-vg/nest	Fl/KP	<i>I-Megac</i>	R		29
<i>Coelioxys edita</i> Cresson	0-vg/nest	Fl/KP	<i>I-Megac</i>	R		29
<i>Coelioxys erysimi</i> Cockerell	0-vg/nest	Fl/KP	<i>I-Megac</i>	R		29
<i>Coelioxys funeraria</i> Smith	0-vg/nest	Fl/KP	<i>I-Megac</i>	R		29
<i>Coelioxys grindeliae</i> Cockerell	0-vg/nest	Fl/KP	<i>I-Megac</i>	R		29
<i>Coelioxys mesae</i> Cockerell	0-vg/nest	Fl/KP	<i>I-Megac</i>	R		29
<i>Coelioxys moesta</i> Cresson	0-vg/nest	Fl/KP	<i>I-Megac</i>	R		29
<i>Coelioxys novomexicana</i> Cockerell	0-vg/nest	Fl/KP	<i>I-Megac</i>	R		29

Taxonomic category	Habitat Ad/Im	Funct group	Plant/ animal		References
			host	Ab Co	
MEGACHILIDAE (continued)					
<i>Coelioxys octodentata</i> Say	0-vg/nest	Fl/KP	<i>I-Megac</i>	R	29
<i>Coelioxys porterae</i> Cockerell	0-vg/nest	Fl/KP	<i>I-Megac</i>	R	29
<i>Coelioxys rufitarsis</i> Smith	0-vg/nest	Fl/KP	<i>I-Megac</i>	A	29
<i>Coelioxys serricauda</i> Baker	0-vg/nest	Fl/KP	<i>I-Megac</i>	R	29
<i>Coelioxys sodalis</i> Cresson	0-vg/nest	Fl/KP	<i>I-Megac</i>	R	29
<i>Dianthidium singulare</i> (Cresson)	0-vg/0-vg	Fl/A	P-COMP	R	29
<i>Heriades carinata</i> Cresson	0-vg/0-vg	Fl/A	polylec	U	29
<i>Heriades cressoni</i> Michener	0-vg/0-vg	Fl/A	P-COMP	R	29
<i>Heriades variolosa variolosa</i> (Cresson)	0-vg/0-vg	Fl/A	polylec	R	29
<i>Heteranthidium timberlakei</i> Schwarz	0-vg/0-sl	Fl/A	polylec	R	29
<i>Hoplitis albifrons argentifrons</i> Cresson	0-vg/0-vg	Fl/A	polylec	C	29
<i>Hoplitis fulgida fulgida</i> (Cresson)	0-vg/0-vg	Fl/A	polylec	C	29
<i>Hoplitis grinnelli septentrionalis</i> Michener	0-vg/0-vg	Fl/A	polylec	R	29
<i>Hoplitis hypocrita</i> (Cockerell)	0-vg/0-vg	Fl/A	polylec	R	29
<i>Hoplitis louisae</i> (Cockerell)	0-vg/0-vg	Fl/A	polylec	R	29
<i>Hoplitis producta subgracilis</i> Michener	0-vg/0-vg	Fl/A	polylec	R	29
<i>Hoplitis sambuci</i> Titus	0-vg/0-vg	Fl/A	polylec	R	29
<i>Megachile brevis brevis</i> Say	0-vg/	Fl/A	polylec	U	29
<i>Megachile brevis onobrychidis</i> Cockerell	0-vg/	Fl/A	polylec	C	29
<i>Megachile centuncularis</i> (Linnaeus)	0-vg/	Fl/A	polylec	R	29
<i>Megachile cleomis</i> Cockerell	0-vg/	Fl/A	polylec	R	29
<i>Megachile coquilletti</i> Cockerell	0-vg/	Fl/A	polylec	U	29
<i>Megachile fidelis</i> Cresson	0-vg/	Fl/A	P-COMP	U	29
<i>Megachile frigida frigida</i> Smith	0-vg/	Fl/A	polylec	U	29
<i>Megachile gemula cressonii</i> Dal.Torre	0-vg/	Fl/A	polylec	R	29
<i>Megachile inermis</i> Provancher	0-vg/	Fl/A	polylec	R	29
<i>Megachile latimanus</i> Say	0-vg/	Fl/A	P-COMP	A	29
<i>Megachile melanophaea calogaster</i> Cockerell	0-vg/	Fl/A	P-LEGUM	C	29
<i>Megachile montivaga</i> Cresson	0-vg/	Fl/A	polylec	U	29
<i>Megachile parallela</i> Smith	0-vg/	Fl/A	P-COMP	U	29
<i>Megachile perihirta</i> Cockerell	0-vg/	Fl/A	P-COMP	A	29
<i>Megachile pseudonigra</i> Mitchell	0-vg/	Fl/A		R	29
<i>Megachile pugnata</i> Say	0-vg/	Fl/A	P-COMP	U	29
<i>Megachile relativa</i> Cresson	0-vg/	Fl/A	polylec	C	29
<i>Megachile subnigra angelica</i> Mitchell	0-vg/	Fl/A	P-COMP	R	29
<i>Megachile subnigra subnigra</i> Cresson	0-vg/	Fl/A	P-COMP	U	29
<i>Megachile texana</i> Cresson	0-vg/	Fl/A	polylec	U	29
<i>Megachile wheeleri</i> Mitchell	0-vg/	Fl/A	P-COMP	C	29
<i>Osmia albolateralis albolateralis</i> Cockerell	0-vg/	Fl/A		U	29
<i>Osmia albolateralis visenda</i> Sandhouse	0-vg/	Fl/A		R	29
<i>Osmia atrocyanea atrocyanea</i> Cockerell	0-vg/	Fl/A		U	29
<i>Osmia brevis brevis</i> Cresson	0-vg/	Fl/A	polylec	R	29
<i>Osmia bruneri</i> Cockerell	0-vg/	Fl/A		R	29
<i>Osmia bucephala</i> Cresson	0-vg/	Fl/A		R	29
<i>Osmia californica</i> Cresson	0-vg/	Fl/A	<i>P-Cirsi</i>	U	29
<i>Osmia calla</i> Cockerell	0-vg/	Fl/A		R	29

Taxonomic category	Habitat Ad/Im	Funct group Ad/Im	Plant/ animal host	Ab	Co	References
MEGACHILIDAE (continued)						
<i>Osmia cobaltina</i> Cresson	0-vg/	Fl/A		R		29
<i>Osmia coloradensis</i> Cresson	0-vg/	Fl/A	P-COMP	A		29
<i>Osmia cyanella</i> Cockerell	0-vg/	Fl/A		U		29
<i>Osmia cyaneonitens</i> Cockerell	0-vg/	Fl/A		R		29
<i>Osmia cyanopoda</i> Cockerell	0-vg/	Fl/A		R		29
<i>Osmia densa densa</i> Cresson	0-vg/	Fl/A		U		29
<i>Osmia dolerosa</i> Sandhouse	0-vg/	Fl/A		u		29
<i>Osmia exigua</i> Cresson	0-vg/	Fl/A		R		29
<i>Osmia gabrielis</i> Cockerell	0-vg/	Fl/A		U		29
<i>Osmia grindeliae</i> Cockerell	0-vg/	Fl/A		R		29
<i>Osmia hendersoni</i> Cockerell	0-vg/	Fl/A		U		29
<i>Osmia hesperos</i> Sandhouse	0-vg/	Fl/A		R		29
<i>Osmia hurdi</i> White	0-vg/	Fl/A	P-LEGUM	R		29
<i>Osmia indepressa</i> Sandhouse	0-vg/	Fl/A		R		29
<i>Osmia inermis</i> (Zetterstedt)	0-vg/	Fl/A	P-ERICA	R		29
<i>Osmia integra</i> Cresson	0-vg/	Fl/A	P-LEGUM	U		29
<i>Osmia inurbana</i> Cresson	0-vg/	Fl/A		u		29
<i>Osmia juxta juxta</i> Cresson	0-vg/	Fl/A		u		29
<i>Osmia juxta subpurpurea</i> Cockerell	0-vg/	Fl/A		u		29
<i>Osmia kenoyeri</i> Cockerell	0-vg/	Fl/A	P-LEGUM	R		29
<i>Osmia kincaidii</i> Cockerell	0-vg/	Fl/A		R		29
<i>Osmia lacus</i> Sandhouse	0-vg/	Fl/A		R		29
<i>Osmia lignaria propinqua</i> Cresson	0-vg/	Fl/A	polylec	A		29
<i>Osmia longula</i> Cresson	0-vg/	Fl/A	P-LEGUM	R		29
<i>Osmia malina</i> Cockerell	0-vg/	Fl/A		R		29
<i>Osmia marginipennis</i> Cresson	0-vg/	Fl/A	P-COMP	u		29
<i>Osmia melanopleura</i> Cockerell	0-vg/	Fl/A		u		29
<i>Osmia montana montana</i> Cresson	0-vg/	Fl/A	P-COMP	u		29
<i>Osmia montana quadriceps</i> Cresson	0-vg/	Fl/A	P-COMP	C		29
<i>Osmia nanula</i> Cockerell	0-vg/	Fl/A		R		29
<i>Osmia nemoris</i> Sandhouse	0-vg/	Fl/A	P-LEGUM	U		29
<i>Osmia nigrifrons</i> Cresson	0-vg/	Fl/A	P-LEGUM	u		29
<i>Osmia obliqua</i> White	0-vg/	Fl/A	P-LEGUM	u		29
<i>Osmia odontogaster</i> Cockerell	0-vg/	Fl/A	P-LEGUM	u		29
<i>Osmia paradisiaca</i> Sandhouse	0-vg/	Fl/A		R		29
<i>Osmia penstemonis</i> Cockerell	0-vg/	Fl/A	P-Penst	C		29
<i>Osmia physariae</i> Cockerell	0-vg/	Fl/A	P-LEGUM	U		29
<i>Osmia pikei</i> Cockerell	0-vg/	Fl/A		U		29
<i>Osmia proxima</i> Cresson	0-vg/	Fl/A		U		29
<i>Osmia pulsatillae</i> Cockerell	0-vg/	Fl/A		u		29
<i>Osmia pusilla</i> Cresson	0-vg/	Fl/A		u		29
<i>Osmia ribifloris biedermani</i> Michener	0-vg/	Fl/A	polylec	u		29
<i>Osmia seclusa</i> Sandhouse	0-vg/	Fl/A		u		29
<i>Osmia sedula</i> Sandhouse	0-vg/	Fl/A	P-LEGUM	u		29
<i>Osmia simillima</i> Smith	0-vg/	Fl/A		u		29
<i>Osmia sladeni</i> Sandhouse	0-vg/	Fl/A	P-LEGUM	u		29
<i>Osmia subaustralis</i> Cockerell	0-vg/	Fl/A	P-COMP	u		29
<i>Osmia tersula</i> Cockerell	0-vg/	Fl/A		u		29
<i>Osmia texana</i> Cresson	0-vg/	Fl/A	P-COMP	u		29
<i>Osmia trevoris</i> Cockerell	0-vg/	Fl/A		u		29
<i>Osmia tristella tristella</i> Cockerell	0-vg/	Fl/A		u		29
<i>Osmia unca</i> Michener	0-vg/	Fl/A	P-LEGUM	u		29
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<i>Chrysura</i>	97	COLYDIIDAE	46	CRYPTOGNATHIDAE	126
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CICADIDAE	36	<i>Conicera</i>	90	<i>Cryptomyzus</i>	34
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<i>Cimberis</i>	47	CONOPIDAE	86	CRYPTOSTIGMATA	127
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<i>Epeolus</i>	148	EUGLENIDAE	52	<i>Exenterus</i>	101
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<i>Gonia</i>	93	<i>Hemipenthes</i>	83	<i>Hydatophylax</i>	64
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<i>Ostracerca</i>	23	<i>Parhypochthonius</i>	130	<i>Phausis</i>	53
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<i>Oxacis</i>	56	<i>Parobisium</i>	113	<i>Pheosia</i>	77
<i>Oxybelus</i>	107	<i>Parthenicus</i>	31	<i>Pherbellia</i>	92
<i>Oxylaemus</i>	46	<i>Parthina</i>	65	<i>Phidippus</i>	121
<i>Oxyopes</i>	120	<i>Parydra</i>	88	<i>Phigalia</i>	69
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<i>Oxytelus</i>	60	<i>Patelloa</i>	93	<i>Philetus</i>	87
<i>Oxythrips</i>	26	<i>Patriyssus</i>	144	<i>Philocasca</i>	65
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<i>Pachybrachis</i>	45	<i>Pediacus</i>	47	<i>Philonthus</i>	60

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<i>Philorus</i>	83	PIPUNCULIDAE	90	POLYDESMIDAE	111
<i>Philygria</i>	88	Pirata	120	<i>Polyergus</i>	100
<i>Phlaeopterus</i>	60,61	<i>Pisonopsis</i>	107	<i>Polygonia</i>	78
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<i>Phloeonomus</i>	61	Pithanus	31	<i>Polynema</i>	103
<i>Phloeosinus</i>	59	<i>Pityobius</i>	52	<i>Polypedilum</i>	86
<i>Phlogophora</i>	76	<i>Pityohyphantes</i>	119	<i>Polyphylla</i>	58
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<i>Psychomyia</i>	65	<i>Rheotanytarsus</i>	86	<i>Scatella</i>	88
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<i>Psyllaephagus</i>	98	<i>Rhinosuctobelba</i>	130	<i>Scelio</i>	106
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<i>Psyllobora</i>	46	RHIZOPHAGIDAE	58	<i>Scelolyperus</i>	45
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<i>Pteryngium</i>	47	<i>Rhynchagrotis</i>	76	<i>Sciophila</i>	89
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<i>Ptilinus</i>	40	<i>Rhynchobelba</i>	130	<i>Scironis</i>	119
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<i>Ptinus</i>	57	<i>Rhynocoris</i>	33	<i>Scleroracrus</i>	35
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<i>Scythropus</i>	48	<i>Spathius</i>	97	<i>Stictocephala</i>	36
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<i>Serratella</i>	19	SPHINGIDAE	79	<i>Stygnocoris</i>	30
<i>Serromyia</i>	84	<i>Sphinx</i>	79	STYLOPIDAE	62
<i>Serropalpus</i>	55	<i>Sphodrocephus</i>	127	<i>Subhaida</i>	61
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Parson, Gary L.; Cassis, Gerasimos; Moldenke, Andrew R.; Lattin, John D.; Anderson, Norman H.; Miller, Jeffrey C.; Hammond, Paul; Schowalter, Timothy D. 1991. Invertebrates of the H.J. Andrews Experimental Forest, western Cascade Range, Oregon. V: An annotated list of insects and other arthropods. Gen. Tech. Rep. PNW-GTR-290. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 168 p.

An annotated list of species of insects and other arthropods that have been collected and studies on the H.J. Andrews Experimental forest, western Cascade Range, Oregon. The list includes 459 families, 2,096 genera, and 3,402 species. All species have been authoritatively identified by more than 100 specialists. Information is included on habitat type, functional group, plant or animal host, relative abundances, collection information, and literature references where available. There is a brief discussion of the Andrews Forest as habitat for arthropods with photographs of representative habitats within the Forest. Illustrations of selected arthropods are included as is a bibliography.

Keywords: Invertebrates, insects, H.J. Andrews Experimental forest, arthropods, annotated list, forest ecosystem, old-growth forests.

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