Invertebrates of Beaubears Island

The taxonomic order of the invertebrates follows Invertebrates of North America (Milne & Milne, 1972).

Notations:

- * after the scientific name, indicates a voucher specimen is available
- ¶ after the scientific name, indicates a photo is available
- £ after the scientific name, indicates attraction to the ultraviolet light trap
- auct. author(s)
- cf. confer (Latin for compare). It is used to mean that the specimen compares favourably in most respects with the formal description of this taxa, but lacks some feature(s) to make a definitive determination.
- sp. species (singular)
- spp. species (plural)
- W Wilson's Point record

MOLLUSCA (ANIMALS called MOLLUSKS mostly with EXTERNAL SHELLS)

Class: GASTROPODA (Snails and Slugs)

Scientific and common names follow Identifying Land Snails and Slugs in Canada (Grimm, F.W., R.G. Forsyth, F.W. Schueler and A. Karstad, 2009).

Scientific Name	Common Name	Association	Obser. Date
Family: SUCCINEIDAE	AMBERSNAILS		
Novisuccinea ovalis (Say) ¶	Oval Ambersnail	on sand of upper beach	July 4, 2017
Family: ARIONIDAE	ARION SLUGS		
Arion subfuscus (Draparnaud)	Dusky Arion Slug	feeding on False Morel	May 17, 2016

ARTHROPODA (ANIMALS with EXTERNAL SKELETONS and PAIRS of JOINTED LEGS)

Many arthropods in various classes and orders are makers of plant galls which were found on Beaubears Island. For identification of the makers (mites, flies, moths, etc.) listed in the following tables, Plant Galls and Gall Makers (Felt, 2001) was used.

Class: INSECTA

Taxonomic order follows Common Insects of North America (Swan & Papp, 1972).

Many insects, especially moths, are attracted to lights and sugary solutions spread on tree trunks. On the nights of July 13-14, 2017, and Aug. 30-31, 2017, an ultra-violet light trap was set up on the Island at the eastern and western ends respectively. The eastern set-up was in a dominant White Pine area, whereas the other was in a mixed forest habitat. In both cases, a beer-sugar solution was brushed onto the trunks of 25 to 30 trees of various species.

Order: PLECOPTERA (Stoneflies)

Scientific Name	Common Name	Notes	Obser. Date
Family: CHLOROPERLIDAE	GREEN STONEFLIES		
Alloperla sp. (concolor?) ¶£	Green Stonefly	at light trap near river shore	July 13, 2017

Order: HEMIPTERA (True Bugs)

Taxonomic order and nomenclature follow Checklist of the Hemiptera of Canada and Alaska (Maw *et al.*, 2000).

Scientific Name	Common Name	Notes	Obser. Date
Family: CICADIDAE	CICADAS		
Tibicen canicularis (Harris) ¶	Dog-day Cicada	exuvia photo	Sept. 14, 2018
Family: MIRIDAE	PLANT BUGS		
Orthocephalus coriaceus	Fleahopper	on vegetation of	July 12, 2018
(Fabricius). *¶		dune/marsh at E	
		end	

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Order: EPHEMEROPTERA (Mayflies)

Scientific Name	Common Name	Flight Season	Obser. Date
Family: EPHEMERIDAE	GIANT MAYFLIES		
Hexagenia limbata (Serville) ¶	Giant Mayfly	May - July	July 5, 2017

Order: ODONATA (Dragonflies and Damselflies)

Taxonomic order, nomenclature, and common names follow Dragonflies and Damselflies of the East (Paulson, 2011).

Scientific Name	Common Name	Flight Season	Obser. Date
ZYGOPTERA	DAMSELFLIES		
Family: COENAGRIONIDAE	POND DAMSELS		
Enallagma erbium (Hagen) ¶	Marsh Bluet	June – Sept.	July 20, 2016
ANISOPTERA	DRAGONFLIES		
Family: AESHNIDAE	DARNERS		
Aeshna interrupta (Walker) ¶	Variable Darner	June – Oct.	Sept. 6, 2005
Family: GOMPHIDAE	CLUBTAILS		
Hagenius brevistylus Selys ¶	Dragonhunter	June – Oct.	July 4, 2017
Family: CORDULIIDAE	EMERALDS		
Helocordulia uhleri (Selys) *	Uhler's Sundragon	May – July	June 24, 2019

Family: LIBELLULIDAE	SKIMMERS		
Libellula quadrimaculata L.¶	Four-spotted Skimmer	May – Aug.	June 15,
	_		2017
Sympetrum obtrusum (Hagen) ¶	White-faced	June – Oct.	
	Meadowhawk		

Order: LEPIDOPTERA (Butterflies & Moths)

The scientific nomenclature and taxonomic order follow Check List of the Lepidoptera of America North of Mexico (Hodges, *et al.*, 1983), with the distinctive Hodges number given in the last column of the table below. However, in the case of a few moths, nomenclature follows Handfield's Papillons du Québec (1999). Common names of butterflies are after The Butterflies of Canada (Layberry, Hall & Lafontaine, 1998), while moth vommon names (when available) follow A Field Guide to the Moths of Eastern North America (Covell Jr., 1984) and the Peterson Field Guide to Moths of Northeastern North America (Beadle & Leckie, 2012).

The host plants named in column 3 are the main vascular plant genera or species mentioned in the literature, although many other secondary species have also been recorded in some cases.

Scientific Name	Common Name	Host Plant(s) and/or Notes	Date	Hodges No.
	BUTTERFLIES			
Family: PAPILIONIDAE	SWALLOWTAILS			
Papilio canadensis Rothschild & Jordan ¶	Canadian Tiger Swallowtail	Birch, Poplar, Willow, Choke Cherry, Ash	July 20, 2016	4176,
Family: PIERIDAE	WHITES and SULPHURS			
Pieris rapae (L.) ¶	Cabbage White	Mustards; captured by Flower Crab Spider	Aug. 23, 2016	4197
Family: NYMPHALIDAE	BRUSH-FOOTED BUTTERFLIES			

<i>Megisto cymela cymela</i> (Cramer) ¶	Little Wood-Satyr	Grasses	July 4, 2016	4578
	MOTHS			
Family: ELACHISTIDAE	GRASS MINER MOTHS			
Psilocorsis reflexella Clem. *£	Dotted Leaftier	Birch, Oak, Maple, Poplar	July 13, 2017	0957
Family: GELECHIIDAE	TWIRLER MOTHS			
Coleotechnites cf. quercivorella (Chambers) ¶	Oak Twirler Moth	Red Oak	June 22, 2018	1828
Family CHOREUTIDAE	METALMARK MOTHS			
Choreutis diana (Hbn.) ¶	Diana's Metalmark Moth	Alder, Birch, Poplar, Willow	Sept. 5, 2017	2651
Family: TORTRICIDAE	ARCHIPS LEAFROLLERS			
Subfamily: OLETHREUTINAE	OLETHREUTINE MOTHS			
Epinotia transmissana (Walker) ¶£	Walker's Epinotia	Willow	July 13, 2017	3310
Subfamily: TORTRICINAE	TORTRIX LEAFROLLERS			
Acleris semipurpurana (Kearfott) ¶£	Oak Leaftier or Leafshredder	Red Oak	June 22- 23, 2018	3503
Choristoneura fractivittana (Clemens) ¶£	Broken-banded Leafroller	Apple, Birch, Raspberry	July 13, 2017	3632
Choristoneura rosaceana (Harr.) *£	Oblique-banded Leafroller	White Pine, Blueberry	July 13, 2017	3635
Choristoneura fumiferana (Clemens) ¶£	Spruce Budworm	Spruce, Balsam Fir	July 13, 2017	3638
Clepsis persicana (Fitch) ¶£	White-triangle Clepsis	Birch, Spruce	July 13, 2017	3682

Cenopis pettitana (Robinson)	Maple-Basswood Leafroller	Maple, Apple	July 3, 2020	3725
Family: HESPERIIDAE	SKIPPERS			
Erynnis icelus (Scudder & Burgess)	Dreamy Duskywing	Willow, Birch, Poplar	June 24, 2019	3945
Family: LIMACODIDAE	SLUG MOTHS			
Lithacodes fasciola (HS.) ¶£	Yellow-shouldered Slug Moth	Deciduous trees, shrubs	July 13, 2017	4665
Family: CRAMBIDAE	CRAMBID MOTHS			
Scoparia biplagialis Walker¶	Double-striped Scoparia	Mosses	June 22, 2018	4716
Subfamily: PYRAUSTINAE	PYRAUSTINE MOTHS			
Lygropia rivulalis Hampson ¶	Bog Lygropia	Unknown	July 16, 2019	5250
Subfamily: CRAMBINAE	GRASS-VENEERS			
Crambus praefectellus (Zincken)	Common Grass-Veneer	Grasses	July 13, 2017	5355
Crambus saltuellus Zell. ¶£	Pasture Grass-Veneer	Grasses	July 13, 2017	5363
Chrysoteuchia topiarius (Zell.) ¶	Cranberry Girdler	Cranberry, Blueberry	July 4, 2016	5391
Family: PTEROPHORIDAE	PLUME MOTHS			
Gillmeria pallidactyla (Haworth) ¶£	Yarrow Plume Moth	Yarrow, Tansy?	July 13, 2017	6107
Family: DEPRANIDAE	THYATIRIDS & HOOKTIPS			
Pseudothyatira cymatophoroides (Gn.) *£	Tufted Thyatirid	Birch, Alder, Poplar, Maple	July 13, 2017	6237

Family: GEOMETRIDAE	GEOMETER MOTHS			
Subfamily: ENNOMINAE	TYPICAL GEOMETERS			
Speranza pustularia (Gn.) ¶£	Lesser Maple Spoanworm	Maple, Birch, Poplar	Aug. 31, 2017	6273
Speranza brunneata (Thunb.) *¶	Rannoch Looper	Poplar, Birch, Blueberry	July 4, 2016	6286
<i>Macaria</i> prob. <i>aemulataria</i> Wlk., or poss. n <i>otata</i> (L.) ¶£	Common Angle, or possibly Birch Angle	Maple, Birch, Poplar, Alder	July 13, 2017	6326, 6330
<i>Macaria signaria</i> (Hübner) ¶£	Pale-marked Angle	most conifers	July 13, 2017	6344
Iridopsis ephyraria (Wlk.) ¶£	Pale-winged Gray	Balsam Fir, Maple, Ash	July 13, 2017	6583
Protoboarmia porcelaria indicataria (Wlk.) ¶£	Porcelain Gray	Balsam Fir, other Conifers	July 13, 2017	6598a
Eufidonia discospilata (Wlk.) ¶£	Sharp-lined Powder Moth	Blueberry, Choke Cherry	July 13, 2017	6639
Lomographa vestaliata (Gn.)	White Spring Moth	Choke Cherry, Snowberry	June 22, 2018	6667
Cabera variolaria Gn. *£	Pink-striped Willow Spanworm	Willow, Poplar	July 14, 2017	6678
Euchlaena muzaria (Wlk.) ¶£*	Muzaria Euchlaena	Choke Cherry	July 13, 2017	6725
Euchlaena marginaria (Minot) *£	Margined Euchlaena	Willow, Spiraea, Dogwood	July 13, 2018	6734
Xanthotype sospeta (Drury) *£	Crocus Geometer	Spiraea, Cherry, Willow	July 13, 2017	6743
Campaea perlata (Gn.) ¶£	Pale Beauty	Poplar, Willow, Birch	Aug. 13, 2017	6796
Ennomos magnaria Gn.	Maple Spanworm	Caterpillar ¶; Maple, other deciduous spp.	June 22- 23, 2018	6797
Lambdina fiscellaria (Gn.) ¶£	Hemlock Looper	Hemlock, Fir, Spruce	Aug. 30, 2017	6888
Nepytia canosaria (Wlk.) ¶£	False Hemlock Looper	Hemlock, Fir, Spruce	Aug. 30, 2017	6906
Cyclophora pendulinaria (Gn.) ¶£	Sweetfern Geometer	Sweetfern, White Birch	Aug 31, 2017	7139
Subfamily: STERRHINAE	WAVES			
Scopula limboundata (Haw.) ¶	Large Lace-border	Bedstraw, Cherry, Blueberry, Apple	July 3, 2020	7159

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Scopula inductata (Gn.) ¶	Soft-lined Wave	Dandelion,	July 13,	7169
		Sweet Clover	2017	
Subfamily: LARENTIINAE	CARPETS & PUGS			
Dysstroma citrata (L.) ¶£	Dark Marbled Carpet	Alder, Willow	Aug. 30, 2017	7182
Spargania magnoliata Gn. ¶£	Double-banded Carpet	Willowherb, E. Primrose	Aug. 31, 2017	7312
<i>Xanthorhoe abrasaria</i> (HS.) ¶£	Abrasive Carpet	Bedstraw spp.	July 13, 2017	7370
<i>Hydrelia condensata</i> (Wlk.) ¶£	Condensed Carpet	Red Oak	June 22- 23, 2018	7420
Pasiphila rectangulata (L.) ¶£	Green Pug	Cherry, Rosa spp.	July 13, 2017	7625
Family: SATURNIIDAE	GIANT SILKWORM MOTHS			
Antheraea polyphemus (Cram.) ¶	Polyphemus Moth	found dead by wharf	June 28, 2017	7757
Actias luna (L.) ¶	Luna Moth	found dead on shoreline rocks	July 5, 2017	7758
Family: SPHINGIDAE	SPHINX MOTHS			
Paonias excaecata (J.E. Smith) ¶*£	Blinded Sphinx	many deciduous spp.	July 14, 2017	7824
Paonias myops (J.E. Smith) *£	Small-eyed Sphinx	Cherry spp., Serviceberry	July 13, 2017	7825
Family: EREBIDAE				
Subfamily: ARCTIINAE	TIGER & TUSSOCK MOTHS			
<i>Hypoprepia fucosa tricolor</i> (Fitch) *£	Painted Lichen Moth	tree lichens,	July 13, 2017	93- 0205b
Grammia virgo (L.) *£	Virgin Tiger Moth	clover, plantain, Lamb's Quarters	July 13, 2017	93- 0244
Estigmene acrea (Drury) *£	Salt Marsh Moth	herbaceous plants	July 13, 2017	93- 0317
Lophocampa maculata Harr.	Spotted Tussock Moth	deciduous trees / photo of caterpillar	Sept. 11, 2018	93- 0373

Ctenucha virginica (Esper) *£	Virginia Ctenucha	Grasses, Iris, Sedges	July 14, 2017	93- 0435
Subfamily:HERMENIINAE	LITTER MOTHS			
•				
Zanclognatha lituralis auct., not Hbn. ¶£	Lettered Fan-foot or Zanclognatha	dead leaves	July 13, 2017	93- 0489, 1
Chytolita morbidalis (Gn.) ¶£	Morbid Owlet	dead leaves	June 22- 23, 2018	93- 0502
Subfamily: EREBINAE	UNDERWINGS & OWLETS			
Catocala unijuga Wlk.¶	Once-married Unerwing	Poplar, Willow	Aug. 14, 2020	93- 0797
Catocala concumbens Wlk. *¶	Pink or Sleepy Underwing	came to sugar	Aug. 30, 2017	93- 0814
Euclidia cuspidea (Hbn.) ¶	Toothed Somberwing	Clover	July 4, 2017	93- 0929
	NO CONTINUE A COMPTE			
Family: NOCTUIDAE	NOCTUID MOTHS			
Panthea furcilla (Pack.) ¶£	Eastern Panthea	Pine, Spruce, Tamarack	July, 13, 2017	93- 1396
Panthea acronyctoides (Wlk.) ¶£	Black Zigzag	Pine, Spruce, Hemlock	July 13, 2017	93- 1398
Acronicta dactylina Grt. *£	Fingered Dagger Moth	Birch, Alder	July 14, 2017	93- 1424
Acronicta impleta Wlk.¶W	Yellow-haired Dagger	deciduous trees & shrubs	June 22- 23, 2018	93- 1474
Cucullia convexipennis G. & R.	Brown Hooded Owlet	Caterpillar ¶ on Goldenrod	Sept. 19, 2017	93- 1513
Leuconycta lepidula (Grt.) ¶£	Marbled-green Leuconycta	Dock, Dandelion	July 13, 2017	93- 2027
Sunira bicolorago (Gn.) ¶	Bicolored Sallow	Maple, Elm, Cherry	Sept. 11, 2020	93- 2616
Eurois occulta (L.) *£	Great Brocade	Tamarack, Poplar, Alder	July 13, 2017	93- 3560
Graphiphora augur (F.) *£	Double Dart Moth	White Birch, Willow	July 13, 2017	93- 3563
Anaplectoides prasina (D. & S.) *£	Green Arches	Blueberry, Hazel, Maple	July 13, 2017	93- 3564
Aplectoides condita (Gn.) *£	Quivering Dart Moth	Balsam Fir, Tamarack	July 13, 2017	93- 3567

Xestia badicollis Grote ¶£	Northern Variable Dart	White Pine,	Aug. 31,	93-
"		Fir, Spruce	2017	3584
Xestia c-nigrum (L.) ¶£	Setaceous Hebrew	herbaceous	July 13,	93-
"	Character	spp., grasses	2017	3588

Order: COLEOPTERA (Beetles)

Taxonomic order, nomenclature, and common names follow Beetles of Eastern North America (Evans, 2014).

Scientific Name	Common Name	Notes	Date
Family: CARABIDAE	GROUND and TIGER BEETLES		
Carabus nemoralis Müller¶	Woodland Worm and Slug Hunter	on bark at sugar; Wilson's Point	June 22-23, 2018
Cicindela sp.	Tiger Beetle	running over	Aug. 26, 2016
Platynus tenuicollis (LeConte) ¶£	Shiny Black Ground Beetle	on bark at sugar; Wilson's Point	June 22-23, 2018
Family: LEIODIDAE	ROUND FUNGUS BEETLES		
Leiodes sp. *£		feeds on fungi in forest litter	July13-14, 2017
Family: SILPHIDAE	BURYING and CARRION BEETLES		
Nicrophorus orbicollis (Say) *£	Burying Beetle		July 14, 2017
Nicrophorus tomentosus Weber ¶	Tomentose Carrion Beetle	carrying mites on wing covers	Aug. 29, 2016
Family: SCARABAEIDAE	SCARAB BEETLES		
Serica sp. ¶£	none found	east end of Island	July 13, 2017
Phyllophaga anxia (LeConte) ¶£	May Beetle or June Bug	Wilson's Point; common	June 22-23, 2018

CLICK BEETLES		
CEICH BEETEES		
none found	on bark at sugar; Wilson's Point	June 22-23, 2018
FIREFLIES and LIGHTNINGBUGS		
Winter Firefly	on bark at sugar; Wilson's Point	June 22-23, 2018
T ONGTON DEPENDE		
LONGHORN BEETLES		
none found	Pair copulating on Viburnum flowers	June 22, 2018
none found	resting on <i>Rubus</i> leaf, larvae feed on wood of decaying conifer and deciduous trees	July 4, 2017
Northeastern Borer	under White Pine	July 14, 2017
White-spotted Sawyer	White Pine forest	Sept. 16, 2017
LEAF and SEED BEETLES		
D ALL TOP I	A 1 1	17 2017
Dogbane Beetle	on Alder on Dogbane	May 17, 2017 2014
WEEVILS, SNOUT & BARK BEETLES		
Poplar and Willow Borer	Poplar, Willow, Birch	June 22, 2018
	FIREFLIES and LIGHTNINGBUGS Winter Firefly LONGHORN BEETLES none found none found Northeastern Borer White-spotted Sawyer LEAF and SEED BEETLES Russet Alder Leaf Beetle Dogbane Beetle WEEVILS, SNOUT & BARK BEETLES	none found on bark at sugar; Wilson's Point FIREFLIES and LIGHTNINGBUGS Winter Firefly on bark at sugar; Wilson's Point LONGHORN BEETLES none found Pair copulating on Viburnum flowers none found resting on Rubus leaf, larvae feed on wood of decaying conifer and deciduous trees Northeastern Borer under White Pine White-spotted Sawyer White Pine forest LEAF and SEED BEETLES Russet Alder Leaf Beetle On Alder On Dogbane WEEVILS, SNOUT & BARK BEETLES Poplar and Willow Borer Poplar, Willow,

Order: HYMENOPTERA (Bees, Ants, Wasps, and Horntails)

Taxonomy and nomenclature for the ants follow "A Field Guide to the Ants of New England" (Ellison et al., 2012).

Common Name	Notes	Date
ICHNEUMON WASPS		
Orange-legged Wasp	♀; sugaring at Wilson's Pt.	June 22-23, 2018
PELECINID WASPS		
American Pelecinid	female	Aug., 2014
VESPID WASPS		
Eastern Yellowjacket	at ground nest	Aug. 9, 2015
ANTS		
The Somewhat Silky Ant	0.5m D x 15cm mound nest, in clearing by trail	July 16, 2019
European Honey Bee	in exposed cavity of broken tree trunk	2017
	ICHNEUMON WASPS Orange-legged Wasp PELECINID WASPS American Pelecinid VESPID WASPS Eastern Yellowjacket ANTS The Somewhat Silky Ant	ICHNEUMON WASPS Orange-legged Wasp ♀; sugaring at Wilson's Pt. PELECINID WASPS American Pelecinid female VESPID WASPS Eastern Yellowjacket at ground nest ANTS The Somewhat Silky Ant onest of the clearing by trail European Honey Bee in exposed cavity of broken

Order: DIPTERA (Flies, Mosquitoes, Gnats, and Midges)

Scientific Name	Common Name	Notes	Date
Family: TIPULIDAE	CRANE FLIES		
Cladura flavoferruginea Osten	Autumn Crane Fly	conifer forest at	Sept. 21-22,
Sacken ¶£		E end of island	2018

HANTOM CRANE LIES nantom Crane Fly IOSQUITOES Toodland Pool Mosquito LACK FLIES lack Fly	flying near wharf adults later than other species bitten at east	June 22, 2017 July 13, 2017
TooQUITOES Toodland Pool Mosquito LACK FLIES	adults later than other species	July 13, 2017
oodland Pool Mosquito LACK FLIES	other species	2017
LACK FLIES	other species	2017
	bitten at east	July 12,
lack Fly	bitten at east	July 12,
	end of Island	2018
UNGUS GNATS		
	conifer forest at E end of island	Sept. 21-22, 2018
OBBER FLIES		
umblebee Robber Fly	White Pine area	July 12, 2018
ANCE FLIES		
alloon Fly	east end of Island	July 13, 2017
()	OBBER FLIES umblebee Robber Fly ANCE FLIES	conifer forest at E end of island OBBER FLIES Imblebee Robber Fly White Pine area ANCE FLIES alloon Fly east end of

Class: ARACHNIDA (Spiders, Harvestmen, Mites, and Ticks)

The nomenclature and taxonomic order for mites follow How To Know Mites and Ticks (McDaniel, 1979), and for spiders, How to Know the Spiders, 2^{nd} . ed. (Kaston, 1972).

Scientific Name	Common Name	Notes	Date
Family: ARANEIDAE	ORB WEAVERS		
Araneus nordmanni (Thorell) ¶ Larinioides cornutus	Nordman's Orbweaver Furrow Orbweaver	White Pine area at east end of Island at Wilson's Point	Sept. 21, 2018 June 22-23,
(Clerck) ¶ Family: PISAURIDAE	NURSERY-WEB SPIDERS		2018
Dolomedes tenebrosus Hentz¶	Fishing Spider	came to sugar on White Birch at Wilson's Point	June 22-23, 2018
Family: THOMISIDAE	CRAB SPIDERS		
Misumena vatia (Clerck) ¶	Flower Crab Spider	On Purple Loosestrife with captured Cabbage White Butterfly	23/08/2016
Subclass: ACARI	MITES		
Order: PROSTIGMATA	WIIIES		
Suborder: MESOSTIGMATA	PERITREME MITES		
Family: MACROCHELIDAE	PARASITIC MITES		
Macrocheles sp. (probably M. willowae sp. n.)		many attached to wing covers of Tomentose Carrion Beetle	29/08/2016
Family: ERIOPHYIDAE	GALL MITES		

Eriophyes padi Nal.	Wild Cherry Pouch Gall	Choke Cherry leaf ¶	6/16/2016

Class: DIPLOPODA (Millipedes)

Nomenclature follows the Checklist of the Millipeds of North America (Chamberlin & Hoffman, 1958)

Family: JULIDAE

Diploiulus sp. (probably caeruleocinctus (Wood) *¶

Collected Oct. 13, 2017 from the porous underside of the polypore fungus *Abortiporus biennis* on which it was feeding.

Class: CRUSTACEA

Subclass: MALACOSTRACA (Sowbugs)

Order: ISOPODA

Family: ONISCIDAE (Sowbugs or Woodlouse)

Oniscus sp.