Moths and butterflies (Lepidoptera) are one of the most diverse and economically important groups of insects, with approximately 157,000 species worldwide. This book establishes a definitive list of the species that occur in BC, and clarifies erroneous records in past works. It provides a knowledge baseline that will be useful to resource and conservation managers, biodiversity researchers, taxonomists, amateur collectors, and naturalists.

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Checklist of the Lepidoptera of British Columbia, Canada

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Epimartyria bimaculella Davis & Landry, 2012 is a tiny moth (forewing 4.6–5.3 mm long) in the family Micropterigidae, an ancient lineage that retains the ancestral use of functional mandibles. The species was chosen to represent British Columbia Lepidoptera on the cover of the Checklist for several reasons — it is rare and unusual, and in Canada is known only from British Columbia; it is a member of the first family in the list; it was collected by several early resident lepidopterists but only recently described by one of the authors of this list (Jean-François Landry: Davis and Landry 2012) and was photographed by another of the authors (David Holden). Micropterigid adults are diurnal and feed on fern spores and flower pollen, which they crush with their mandibles. Larvae feed on liverworts. The specimen pictured on the cover flew and perched along a shaded seepage where leafy liverworts grew in a forest of Douglas-fir and Western Redcedar at Belcarra, near Vancouver. Epimartyria bimaculella lives from northwestern Washington into southern BC. Most of the BC specimens are from southwestern coastal forests, although a record from Glacier National Park in the Selkirk Mountains suggests the species also lives in the wet Columbia-region forests. Records are from April to August, with most in June.

Abstract

This list documents 2832 Lepidoptera species reported for the province of British Columbia, Canada. It is based on examination of the major public insect collections in the province and the Canadian National Collection of Insects, Arachnids and Nematodes, Ottawa, Ontario. Records from relevant literature sources and online databases have also been examined and reliable ones have been included. The entry for each species includes the scientific name, the author and year of publication of the original description, and occurrence status. Taxonomic, distributional and biological notes are provided for selected species, and 134 species are flagged as introduced from outside North America. An additional 27 species which probably occur in British Columbia are included in the list. A list of 322 species erroneously reported from British Columbia in previous works is provided. Introductory sections provide an overview of the order Lepidoptera, review the province’s ecozones, and discuss the history of lepidopterology in British Columbia and its current state of knowledge. Each of the 70 families occurring in the province is briefly reviewed, along with information on its distinguishing features, general appearance and biology and diversity. An index of higher taxonomic names, genera, species, and common names is included.
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Part I: Introduction

This list compiles information about all Lepidoptera (butterflies and moths) species known or deemed likely to occur in the province of British Columbia (BC), Canada. We provide notes on biology, taxonomy, nomenclature, distribution, and pertinent literature for selected species. We also include a list of species that have been reported in error from BC, with details on their true identities when known.

This publication owes a huge debt to previous lepidopterists in BC, particularly to E. H. Blackmore and J. R. J. Llewellyn Jones, the early compilers of Lepidoptera species lists in BC. Far from being complete, our list is a further resolution of the incompletely known fauna. Undoubtedly, the present work contains errors and omissions, which we hope will be rectified by future workers.

General Overview of the Lepidoptera

The insect Order Lepidoptera contains the butterflies and moths. As adults, they are distinguished from other insects by the dense covering of overlapping scales on the head, body and appendages, including the two pairs of membranous wings. Wingspans range from about 3 mm to 280 mm. A few species have reduced, non-functional wings; these are usually females, but in some species both sexes are flightless. The scales are coloured and arranged in innumerable patterns, from subtle and cryptic to bright and showy.

Mouthparts are almost always the sucking type. A proboscis formed from the elongate, grooved galeae of the maxillae is usually present. This feeding tube is normally long and coiled under the head when not in use. The most primitive moths use mandibles for eating pollen and have not evolved a proboscis for sucking fluids.
The wings are the most prominent lepidopteran attribute. They are usually covered on both the veins and membrane with two layers of minute, socketted, flattened setae (scales). These normally contain colour pigments, are finely ridged, and usually are hollow and microscopically perforated. Iridescent colours, caused by the refraction of light, are the result of scale structure. Many males have specialised scent scales that help spread pheromones produced by associated glands. Scent scales may be scattered among other scales or are concentrated in patches, tufts or wing folds.

Butterflies usually rest with their wings held together above the body; moths usually hold their wings outstretched against the substrate, overlapped and flat—roof-like—over the body, or rolled around the body.

Lepidopterous larvae are commonly called caterpillars. Usually cylindrical, they have a well-developed head, thorax and a 10-segmented abdomen. The top of the prothorax is usually sclerotised. Three pairs of five-segmented legs are attached to the thorax, and usually five pairs of prolegs (segments 3 to 6 and segment 10) are attached to the abdomen. Prolegs are short and fleshy, and their tips usually have tiny hooks (crochets). In some groups, the thoracic legs and/or prolegs may be reduced or lost.

Silk is spun from modified salivary glands that open under a caterpillar’s mouth. The silk is used mainly to make cocoons or other shelters, and aids in transportation. Many larvae pupate in cocoons; others make none. Butterflies usually do not make cocoons; the naked pupa of a butterfly is often called a chrysalis.

About 157 000 species of living Lepidoptera have been described in 134 families (van Nieukerken et al. 2011). At the species level, this is about 17% of the world’s known insect fauna. However, estimates suggest that there may be two or three times this number of species in the order. The Lepidoptera comprise the largest lineage of plant-eating organisms, rivalled only by the huge clade of phytophagous beetles. Angiosperm plants are the main hosts. The fossil record of Lepidoptera is sparse and is best represented by amber inclusions and leaf mines in fossil leaves. Although the first-known moth fossils are from the early Jurassic, 190 million years ago, the order largely diversified in the Cretaceous Period and early Tertiary, alongside flowering plants.
Contrary to the popular belief that butterflies and moths are two disparate groups in the Lepidoptera, butterflies represent a small branch emerging from the midst of the phylogenetic tree of all Lepidoptera. They are more closely related to some moths than many moths are to each other. Butterflies are simply a distinctive group of colourful, day-flying Lepidoptera that have been given a name in many languages. Moths, on the other hand, is the catch-all name for the remaining diverse group of “non-butterfly Lepidoptera”.

Lepidoptera species use all parts of plants—roots, trunk, bark, branches, twigs, leaves, buds, flowers, fruits, seeds, galls and fallen material. Larvae feeding in concealed situations—wood borers, leaf and bark miners, case-bearers, leaf tiers and leaf rollers—usually belong to more primitive families. Exposed feeders, especially those that feed by day, belong to more recent lineages.

Some caterpillars are carnivorous and eat egg masses of other Lepidoptera (some Pyralidae) or spiders (some Oecophoridae). Others kill ant larvae (some Lycaenidae) or scale insects (some Batrachedridae, Oecophoridae, Noctuidae). Still others (Epipyropidae) are ectoparasites on planthoppers and leafhoppers. Some groups—e.g., Tineidae—feed on material of animal origin such as wool and keratin. The family Pyralidae is especially diverse in its diet. In addition to plants and fresh and decaying plant material of all sorts, their foods range from the wax combs of bees to caterpillar spines and processed grains, from scale insects to sloth and bat dung. Among the Crambidae, several hundred species have aquatic larvae that feed on water plants.

Adults feed mainly on nectar and other liquid food such as fermenting tree sap, insect honeydew, and food-rich fluids in mud and dung. Adult moths in the Southeast Asian noctuid genus Calyptra have tearing hooks on the proboscis: they suck juice from thick-skinned fruit and blood from mammals. In some lepidopteran groups, adults do not feed.

The natural enemies of Lepidoptera are many and varied. Eggs are parasitised by wasps in the Chalcidoidea and Platygastroidea; larvae are killed by mites, spiders, wasps (especially Vespidae and Sphecidae) and vertebrates (mainly birds). Larvae and pupae are heavily parasitised by nematodes, hymenopterous parasitoids in the Chalcidoidea, Braconidae and Ichneumonidae, and by flies in the Tachinidae. Bacterial and viral diseases
kill huge numbers of Lepidoptera. Adults are preyed on by predaceous plants, insects and spiders, birds, bats, and many other organisms.

To defend against these attacks, members of the order are masters of concealment and deception. Some larvae live in silken cases or webs, others roll or tie leaves and hide in them. Many adults and immatures are amazingly camouflaged as bark, lichen, leaves, and twigs. Some even mimic dangerous vertebrates, such as snakes, using eyespots and other markings. Adult sesiids, especially, can be convincing mimics of stinging wasps. Many larvae and adults sequester distasteful or poisonous chemicals to discourage vertebrate predation. Hundreds of diurnal species, distasteful or otherwise, gain some protection from predators by mimicking poisonous species or by exhibiting bright, warning colours. Most adult moths avoid bird predators by flying at night, but bats pose a serious problem for them. Many groups have tympanal organs that allow moths to hear bat sonar pulses and take evasive actions; some tiger moths emit counter pulses to confuse attacking bats.

The Lepidoptera is a major group of plant-eating organisms and thus is immensely economically important in agriculture, horticulture and forestry. Agricultural pests of grains and vegetables are numerous and include the armyworms and cutworms of the Noctuidae. The list of orchard-crop pests is headed by the tortricid *Cydia pomonella* (Linnaeus), the Codling Moth. Many forest defoliators also exist. Among the most damaging are *Choristoneura fumiferana* (Clemens) (Spruce Budworm) and its western relative *C. freemani* Razowski (Western Spruce Budworm), the geometrid *Lambdina fiscellaria lugubrosa* (Hulst) (Western Hemlock Looper), *Orgyia pseudotsugata* (McDunnough) (Douglas-fir Tussock Moth) and the tent caterpillars of the Lasiocampidae. Several introduced, cosmopolitan moths are serious pests of stored goods in households and warehouses; e.g., the clothes moths of the Tineidae and the meal moths of the Pyralidae.

Lepidoptera species are overwhelmingly herbivorous, but only a few have been used successfully in the biological control of weeds. An example is *Tyria jacobaeae* (Linnaeus), introduced into BC to control Tansy Ragwort.

Many moths and butterflies frequently visit flowers for nectar, and they are probably important pollinators. In some cases, the relationship is so specific that some plant species can be pollinated by only certain moth species; e.g., yucca species and yucca moths of the Prodoxidae.
Ecozones of British Columbia

The most useful summaries of British Columbia’s environment are found in Meidinger and Pojar (1991), BC Ministry of Forests and Range (2013), Demarchi (1996), and Cannings and Cannings (2015). The following details are mostly taken from these publications.

Large and diverse, BC is exceptionally variable, physically and biologically. Covering almost 950,000 km², the province spans 11 degrees of latitude and 25 degrees of longitude. The province extends about 1300 km, from the southern tip of Vancouver Island to the northern boundary at 60° N. Along this latitude, the boundary with the Yukon and the Northwest Territories stretches almost 1100 km. Mountains and an island-studded coastline epitomise BC. The region is mostly cool, moist, forested, and mountainous.

Such generalities fail to capture the province’s diversity. Wet and dry forests, grasslands, wetlands, scrub, and alpine tundra form complex habitat mosaics across the vast plateaus, valleys and plains. These lie between and among several northwest–southeast-trending mountain ranges. Climates range from semi-arid and Mediterranean to subarctic and alpine. The complex interaction of geology, physiography, climate and glaciations, along with subsequent colonisation by organisms and competition among them, has produced ecosystems that support a tremendous variety of life.

The Pacific Ocean and the mountains shape BC’s climates. The ocean acts as a reservoir of heat and moisture. In winter, frontal systems from the North Pacific move eastwards. They encounter successive mountain barriers. These mountains determine the general distribution of precipitation and the balance between oceanic and continental air masses in the province’s different regions. British Columbia’s wettest climates occur along the coast, especially on the windward slopes of the mountains of Vancouver Island, Haida Gwaii and the mainland coast. As water-laden air climbs the mountains, it drops large quantities of rain and snow, but as the drier air descends over the eastern slopes, it warms by compression.

These high Coast Mountains produce a rain shadow that creates the province’s driest climates in the bottoms of Southern Interior valleys, especially the Fraser, Thompson and Okanagan valleys. More moisture is released as the air continues its journey eastwards, ascending ranges such as the
Skeena, Cassiar, Columbia and others before encountering the most massive of the BC mountain barriers, the Rocky Mountains.

The mountains also restrict the westward flow of cold continental Arctic air masses from east of the Rocky Mountains. Except in northeastern BC’s Great Plains region, the province has a more moderate winter climate than most of western and central Canada. In summer, the prevailing westerlies weaken, and the climate is controlled by a strong high-pressure centre in the northeast Pacific that greatly reduces the frequency and intensity of Pacific storms.

There have been several major attempts to capture the essence of BC’s physical and biological diversity through the identification and mapping of ecosystems, including Munro and Cowan’s (1947) biotic-areas concept developed for birds, the detailed botanical biogeoclimatic zone concept (Meidinger and Pojar 1991), and Demarchi’s (1996) ecoregion scheme. A useful summary of BC’s geological and glacial history is given in Cannings et al. (2011). The wetlands of BC are classified by MacKenzie and Moran (2004). No distribution patterns of Lepidoptera have yet been correlated with the wetland associations defined in this classification, although this has been done for dragonflies (Cannings et al. 2008).

In this Checklist, we use the ecozone treatment for Canada that was published by the Ecological Stratification Working Group (1995). It is allied to the Demarchi scheme. The Ecological Stratification Working Group divides Canada into 15 separate terrestrial ecozones, which are discrete systems resulting from interplay of geologic, landform, soil, vegetation, climatic, water and human factors. There are five ecozones in BC (Fig. 1). They, and the biogeoclimatic zones that each contains, are described below.
Pacific Maritime Ecozone
The Pacific Maritime Ecozone borders the Pacific Ocean. Two parallel mountain belts (the discontinuous St. Elias–Insular Mountains and the Coast–Cascade Mountains) and a central, mostly submerged coastal trough, form this ecozone. In the west, it includes the coastal islands; the eastern boundary lies along the height of land in the massive Coast Mountains. Covering more than 195 000 km², in BC, the Pacific Maritime Ecozone runs virtually the entire north–south length of the province, from southern Vancouver Island almost to the 60th parallel. To the north, a small piece of Yukon Territory is also included in the ecozone. The Coast Mountains, capped by glaciers at the highest elevations, dominate much of the landscape, rising steeply from the fiords and channels that indent the
coastline. Mount Waddington (4019 m) is the highest point in the ecozone and is the highest mountain completely within BC.

The main biogeoclimatic zone here is the **Coastal Western Hemlock** (CWH) zone, which occurs at low to middle elevations, up to 900 m on windward slopes in the south and mid-coast, and up to 300 m in the north, mostly west of the Coast Mountains. On average, this is the wettest biogeoclimatic zone in BC, and experiences cool summers and mild winters. Mean annual temperature in the zone is about 8° C, with a mean monthly temperature above 10° C for half the year, and a mean temperature of 0.2° C during the coldest month. Mean annual precipitation for the zone as a whole averages about 2230 mm, with less than 15% of the total falling as snow in the south, but up to 50% falling as snow in the north.

Characteristic features are the predominant Western Hemlock (*Tsuga heterophylla* (Raf.) Sarg.) and a sparse herb layer. The most common wetter maritime forests are dominated by mixtures of Western Hemlock, Western Redcedar (*Thuja plicata* Donn ex D. Don), Sitka Spruce (*Picea sitchensis* (Bong.) Carr.), and variable amounts of Yellow-cedar (*Chamaecyparis nootkatensis* (D. Don) Spach.) and Amabilis Fir (*Abies amabilis* (Douglas ex Loudon)), the latter two species being most abundant in wetter areas. This vegetation type features a well-developed shrub layer of ericaceous species, such as Red Huckleberry (*Vaccinium parvifolium* Sm.) and Salal (*Gaultheria shallon* Pursh). Bogs are abundant in much of the hypermaritime landscape, especially on the coastal lowlands.

The other lowland biogeoclimatic zone is the **Coastal Douglas-fir** (CDF) zone, limited to small regions of southeastern Vancouver Island, some islands in the Gulf of Georgia, and a narrow strip of the nearby mainland, where it lies mostly below 150 m elevation. The zone experiences warm, dry summers and mild, wet winters. The mean annual temperature ranges from 9.2 to 10.5° C. Mean annual precipitation varies from about 650 to 1250 mm; only about 5% of this falls as snow.

Most modern forests in the CDF have regenerated after logging, and old growth is rare. Douglas-fir is the most common tree species in upland forests. Western Redcedar, Grand Fir (*Abies grandis* (Douglas ex D. Don) Lindley), Arbutus (*Arbutus menziesii* Pursh), Garry Oak (*Quercus garryana* Douglas ex Hook.) and Red Alder (*Alnus rubra* Bong.) are common species. The tree-species composition of forest stands varies considerably
as a result of widespread human disturbance. The Garry Oak meadows and associated ecosystems contain many rare plant species; e.g., Deltoid Balsamroot (Balsamorhiza deltoidea Nutt.) and Golden Paintbrush (Castilleja levisecta Greenm.).

The subalpine elevations of the coastal mountains fall in the Mountain Hemlock (MH) zone, occurring all along the BC coast, from 900 to 1800 m in the south and from 400 to 1000 m in the north. The coastal subalpine climate is characterised by short, cool summers and long, cool, wet winters. Mean annual temperature varies from 0 to 5° C. Mean annual precipitation ranges from 1700 to 5000 mm, of which up to 70% comprises snow. The result is a long-lasting snowpack and a short growing season.

Mountain Hemlock (Tsuga mertensiana (Bong.) Carr.), Amabilis Fir and Yellow-cedar are the most common tree species. Lodgepole Pine (Pinus contorta Douglas ex Loudon) thrives on very dry sites and Subalpine Fir (Abies lasiocarpa (Hook.) Nutt.) and Whitebark Pine (Pinus albicaulis Engelm.) grow near timberline. Forests are largely confined to lower elevations in the zone. With increasing elevation, trees grow in patches, forming a mosaic with subalpine heath, meadow and fen vegetation. The predominance of ericaceous shrubs is characteristic of the zone.

The Alpine Tundra (AT) zone occurs on high mountains in the ecozone above about 2250 m in the south and above about 1000 m in the north. The AT has recently been split into three zones (MacKenzie 2006): the AT zone that occurs in the mountains of the Pacific Maritime Ecozone is now called the Coastal Mountain–Heather Alpine (CMA) zone. Low temperatures during the growing season and a very short frost-free period characterise the harsh alpine climate here. Mean annual temperature usually ranges from –4 to 0° C, and the average temperature remains below 0° C for seven to eleven months. Mean annual precipitation is 700 to 3000 mm; 70 to 80% of this falls as snow. Huge areas at the higher elevations comprise rock, snow and ice.

Although the CMA zone is, by definition, treeless, it supports stunted, shrub-like tree species such as Mountain Hemlock and Whitebark Pine at lower elevations. Important dwarf shrubs include mountain heathers (Cassiope spp. and Phyllocladus spp.). Herb meadows dominated by broad-leaved forbs are also common, especially at middle and lower elevations. They grow on sites with deep soils, in seepage areas, or along alpine streams. Few species of vascular plants have adapted to the extreme
conditions in the highest parts of the alpine zone, and those that have are mostly cushion- or mat-formers. Some mosses, liverworts and numerous lichens persist at the upper limits of vegetation.

Characteristic Lepidoptera species that are more or less restricted in Canada to the Pacific Maritime Ecozone include Sara’s Orangetip (*Anthocharis sara* Lucas) and the underwing moth, *Catocala aholibah* Strecker, whose caterpillar eats the foliage of Garry Oak. Many other species that are monophagous on plants such as Garry Oak and Arbutus are restricted to the ecoregion. *Xanthorhoe clarkeata* Ferguson and *Mompha nancyae* Clarke are globally endemic to Haida Gwaii. Several species and subspecies are considered “species at risk” in the region, including Taylor’s Checkerspot (*Euphydryas editha taylori* (W.H. Edwards)), Johnson’s Hairstreak (*Callophrys johnsoni* (Skinner)), which feeds on mistletoe (*Arceuthobium* spp.) growing on Western Hemlock; and the Sand-verbena Moth (*Copablepharon fuscum* Troubridge & Crabo), which inhabits some coastal dune localities. The mild winters of the zone allow many species to fly in the coldest months of the year. The holarctic geometrid *Triphosa haesitata* (Guenée) appears on many mid-winter days in the region, and the introduced *Operophtera brumata* (Linnaeus) (Winter Moth)—a pest of many trees and shrubs, including Garry Oak and various tree fruits—is active in low temperatures.

The Pacific Maritime Ecozone has an unusually high number of alien Lepidoptera species, many of which were first introduced into North America in the region; e.g., the sphingid *Deilephila elpenor* (Linnaeus), the oecophorid *Oecophora bractella* (Linnaeus), and the tortricids *Acleris variegana* ([Denis & Schiffermüller]) and *Pandemis cerasana* (Hübner). Other species that were introduced first into eastern North America have colonised the West independently, from Eastern Asia, or secondarily, from eastern North America, through the Vancouver area (e.g., *Noctua pronuba* (Linnaeus)). Some have been purposefully introduced as biological control agents; e.g., *Tyria jacobaeae* (Linnaeus), a day-flying tiger moth that feeds on Tansy Ragwort (*Senecio jacobaeae* Linnaeus).

The Lepidoptera of the Pacific Maritime Ecozone have been studied since the early days of entomological activity on Vancouver Island and the adjacent mainland. Early publications include Taylor (1884), Danby (1894) and Harvey (1904). Most other published information is found in subsequent provincial lists and systematic or behavioural studies on specific genera or species (e.g., Blackmore 1927; Hardy 1959; R. Guppy 1956; C. Guppy
1998; Shepard 1977; Miskelly 2009), and much useful information on economically important species has been documented by the Canadian Forest Service (e.g., Duncan 2006), Agriculture and Agri-Food Canada, and other agencies. Beginning in the 1990s, considerable research for conservation purposes has occurred, at least in the southern coastal region (Shepard unpublished report A; COSEWIC 2000, 2003; Miskelly 2004).

**Montane Cordillera**

The Montane Cordillera Ecozone in BC stretches from the eastern slopes of the Coast and Cascade mountains eastwards to the Rocky Mountains, and from the USA border at 49° N northwards to about 57° N. It also includes the eastern slopes of the Rockies in Alberta and, altogether, covers an area of 473 000 km². It is the largest and most diverse ecozone in BC, with ecosystems ranging from alpine tundra and cold conifer forests to riparian woodland, dry sagebrush steppes, and arid grasslands. The Montane Cordillera Ecozone is mountainous around the edges, especially in the southeast quadrant. Its centre contains an extensive system of plateaus, about 300 km wide and 650 km long, lying at altitudes of 600 to 1200 m. The Fraser River and its major tributaries bisect the southern region; other large rivers, such as the Skeena, which flows west, and the tributaries of the Peace, which flow east, drain relatively smaller areas in the north.

The mountain systems along the eastern parts of the ecozone consist of ranges that trend north–south and are separated by large valleys. There are two main mountain units: the Cassiar–Columbia mountains, with the Rocky Mountain Trench immediately to their east; and the Rocky Mountains on the eastern boundary of the ecozone. The highest mountain elevations generally occur in the south, where summits can reach 3000 m. The highest point is Mt. Robson, at 3954 m. Between latitudes 54° N and 56° N, the mountains are less rugged, and the peaks usually are below 2000 m.

This complex topography produces large differences in temperature and precipitation. Much of the ecozone has an interior continental climate dominated by easterly moving air masses. These produce cool, wet winters and warm, dry summers. In the rain shadow of the Coast Mountains, the Interior Plateau has less than 300 mm mean annual precipitation in some areas. However, in the Selkirk Mountains, precipitation reaches 2500 to 3500 mm, and 1500 to 2500 mm falls in the Rocky Mountains. Most of interior BC is strongly influenced by both continental and maritime air masses, with the latter more prevalent in the south. The southern interior valleys thus
experience warmer winter temperatures than those in the north. The valley bottoms are characterised by hot, dry summers and moderately cold winters with little snowfall. Summer temperatures above 30° C are common. In the South Okanagan, the mean July daily temperature is above 22° C.

The Montane Cordillera Ecozone is vast and variable, and contains 11 biogeoclimatic zones. The Bunchgrass (BG) biogeoclimatic zone is confined to lower elevations of the driest and hottest valleys of the southern parts of the ecozone. Bluebunch Wheatgrass (*Pseudoroegneria spicata* (Pursh) A. Löve) is the dominant bunchgrass on undisturbed sites. At lower elevations, Big Sagebrush (*Artemisia tridentata* Nutt.) is common, particularly in overgrazed areas.

The Ponderosa Pine (PP) biogeoclimatic zone is confined to a narrow band in the driest and warmest valleys. It usually borders the Bunchgrass Zone. Ponderosa Pine is the dominant tree, but Douglas-fir is common on cooler and moister sites. Where not overgrazed, the understorey includes abundant grasses such as Bluebunch Wheatgrass and Rough Fescue (*Festuca scabrella* Rydb.).

The Interior Douglas-fir (IDF) biogeoclimatic zone is the second warmest forest zone of the ecozone. Douglas-fir is the dominant tree. Fires have resulted in even-aged Lodgepole Pine stands at higher elevations in many areas. Ponderosa Pine is the common seral tree at lower elevations. Pinegrass (*Calamagrostis* spp.) dominates the understorey.

The Engelmann Spruce–Subalpine Fir (ESSF) biogeoclimatic zone occurs over most of the Montane Cordillera Ecozone’s mountains. The climate is severe, with short, cool growing seasons and long, cold winters. At upper elevations, the forest is open parkland, with trees clumped and interspersed with meadow, heath and grassland. Engelmann Spruce (*Picea engelmannii* Parry ex Engelm.), Subalpine Fir and Lodgepole Pine are the dominant trees.

The adjacent Alpine Tundra zone is designated the Boreal Altai Fescue Alpine (BAFA) biogeoclimatic zone in the northern Rocky Mountains and along the lee side of the Coast Mountains as far south as the Chilcotin. Vegetation here consists primarily of dwarf willows, grasses, sedges and lichens.
The **Interior Mountain-Heather Alpine** (IMA) biogeoclimatic zone occupies the Columbia Mountains, the southern Rocky Mountains, and the lee side of the southern Coast Mountains and Cascade Mountains, where it lies above 2500 m in the south and above 1800 m in the north. Vegetation is variable, depending on snow depth, with mountain heather (*Phyllodoce* spp.) typical in the snowier climates, and mountain avens (*Dryas* spp.) typical in the driest climates.

The **Sub-boreal Pine–Spruce** (SBPS) biogeoclimatic zone occurs mostly in the Chilcotin, the high plateau of the west–central region of the Montane Cordillera Ecozone, in the rain shadow of the Coast Mountains. Many even-aged Lodgepole Pine stands characterise the zone, the result of extensive fire history. Pinegrass and Kinnikinnick (*Arctostaphylos uva-ursi* (L.) Spreng.) are also common. These forests and those of the **Sub-boreal Spruce** (SBS) biogeoclimatic zone have been badly damaged by recent Mountain Pine Beetle outbreaks.

The SBS zone occurs in the central plateau, centred around Prince George. Although the climate is severe, winters here are shorter and the growing season longer than in the boreal zones. Hybrid Engelmann–White Spruce and Subalpine Fir are the dominant trees, although extensive stands of Lodgepole Pine grow in the drier parts of the zone.

The **Boreal White and Black Spruce** (BWBS) biogeoclimatic zone occupies the valleys in the extreme northern part of the ecozone; e.g., in the Omineca Mountains. Winters here are long and cold, and growing seasons are short, with the ground remaining frozen for much of the year. Where flat, the landscape is typically a mosaic of Black Spruce (*Picea mariana* (Mill.) Britton, Sterns & Poggenb.), White Spruce (*Picea glauca* (Moench) Voss) and Trembling Aspen (*Populus tremuloides* Michx.) stands.

The **Montane Spruce** (MS) biogeoclimatic zone occurs in the south–central interior of BC at middle elevations, and is most extensive on plateau areas. Winters are cold, and summers are moderately short and warm. Engelmann and hybrid spruce and varying amounts of Subalpine Fir are the characteristic tree species. Because of past wildfires, successional forests of Lodgepole Pine, Douglas-fir and Trembling Aspen are common.

In southeastern BC, the **Interior Cedar–Hemlock** (ICH) biogeoclimatic zone predominates at lower to middle elevations. This is often called the
Interior Wet Belt: winters are cool and wet, and summers are generally warm and dry. Western Hemlock and Western Redcedar are characteristic climax trees, but spruce (White–Engelmann hybrids) and Subalpine Fir are common. Western Larch (\textit{Larix occidentalis} Nutt.), Douglas-fir and Western White Pine are common seral species in the central and southern portions of the zone, and usually occur on mesic and drier sites. The ICH zone also occurs in the farthest reaches of the northwestern part of the Montane Cordillera Ecozone, in the coastal-influenced, central-to-upper Skeena and Nass river drainages. The ESSF is the subalpine zone above the ICH.

The Lepidoptera of the Montane Cordillera in Canada are discussed in some detail by Lafontaine and Troubridge (2011). Characteristic species usually not found in other ecozones in BC include \textit{Danaus plexippus} (Linnaeus), the Monarch; \textit{Papilio multicaudata} Kirby, a large swallowtail typical of the southern valleys; \textit{Papilio machaon oregonia} Edwards, a species of southern grasslands; and \textit{Papilio indra} Reakirt, primarily a Great Basin montane swallowtail that reaches the northern limits of its range in Manning Provincial Park. Moths include \textit{Hypercompe permaculata} (Packard), an aridland tiger moth of the Great Plains known in BC only in the Columbia Valley, and \textit{Acronicta cyanesens} (Hampson), a noctuid that feeds on \textit{Ceanothus} from BC, south to New Mexico. Most of the threatened and endangered species in the ecozone are Great Basin species that are associated with grasslands in the southern valleys, especially the Okanagan. Much of this habitat has been converted to agriculture or urban environments. Butterflies are better known than moths in this context. Guppy et al. (1994) listed 52 species and subspecies of conservation concern in BC; 17 of these occur in the Montane Cordillera Ecozone (Lafontaine and Troubridge 2011). Species most at risk are probably the Mormon Metalmark (\textit{Apodemia mormo} (Felder & Felder)), Behr’s Hairstreak (\textit{Satyrium behrii} (Edwards)), the Sagebrush Sooty Hairstreak (\textit{Satyrium semifluna} Klots), the Grey Copper (\textit{Lycaena dione} (Scudder)), the Sonoran Skipper (\textit{Polites sonora} (Scudder)) and the California Hairstreak (\textit{Satyrium californica} (Edwards)).

The Montane Cordillera Ecozone is now home to many alien Lepidoptera. A significant number of these are agricultural pests—particularly those associated with fruit trees and grapes—that have been introduced into the ecozone, probably with host plants or their fruit. Examples of pests of apples include Codling Moth (\textit{Cydia pomonella} (Linnaeus)) and Apple Clearwing Moth (\textit{Synanthedon myopaformis} (Borkhausen)).
A notable characteristic of the flora and fauna of the Montane Cordillera Ecozone is the presence of Boreal and Cordilleran species pairs. A Boreal species often ranges across the northern forests of the continent and south into the western mountains for varying distances, frequently meeting a closely related Montane Cordilleran species in central regions of the ecozone. Hybrids often occur where the species overlap. Some Lepidoptera species show this pattern, a result of post-glacial recolonisation of the west. Examples of Boreal–Cordilleran species pairs are the White Admiral (Limenitis arthemis (Drury)) and Lorquin’s Admiral (Limenitis lorquini Boisduval), and the Canadian Tiger Swallowtail (Papilio canadensis Rothschild & Jordan) and Western Tiger Swallowtail (Papilio rutulus Lucas).

The highly diverse fauna of the ecozone has been well documented. Some of the earliest collectors and compilers include Danby and Green (1893), who worked in the Kootenay and Okanagan regions, among other places, and published an early BC list. Dyar and Cockle documented early material from the Kootenay region (Dyar 1904). Phair (1919) and McDunnough (1927a) collected extensively around Lillooet. Molliet (1947) collected in the North Thompson area, and Buckell in the Shuswap region (Buckell 1947). As in other parts of BC, much useful information on economically important species in the ecozone has been documented by Canadian Forest Service entomologists (e.g., Ross and Evans 1954, 1956a, 1956b, 1957a, 1957b, 1957c, 1958, 1959, 1961, Sugden 1964, 1966, 1968, 1970, and Sugden and Ross 1963). Other reports of studies in the Montane Cordillera include Threatful (1989) in Mount Revelstoke and Glacier national parks, Kondla (1999) in the Pend d’Oreille Valley, and Fischer et al. (unpublished report) in the Chilcotin.

**Boreal Cordillera**

The Boreal Cordillera Ecozone occupies northern BC from about 56° N northwards to the Yukon border and from the crest of the Coast Mountains eastwards to the eastern slopes of the Rocky Mountains. It also extends into the southern Yukon. In BC, the Skeena, Cassiar, Ominica, and northern Rocky mountains are included; these ranges are lower and less rugged than the Coast Mountains and the systems of southeastern BC. Most associated plateaus, such as the Stikine, show well-eroded, moderate relief. Basins, such as the Liard, have low-lying, gentle topography. Major rivers include the Stikine, Dease, and Ketchika; the latter flows north in the Rocky Mountain Trench.

Three main biogeoclimatic zones occur in the Boreal Cordillera Ecozone. At the lowest elevations, the **Boreal White and Black Spruce** (BWBS) zone
occupies the major river and lake valleys, from about 1000 to 1100 m. The
majority of the zone lies above 600 m. Forests cover the better-drained
sections of the BWBS zone, where mixed Trembling Aspen and White
Spruce forests dominate. Relatively open pine-and-lichen forests occur
on the driest sites, which are usually on rapidly drained outwash deposits.
Mixed pine and Black Spruce stands are common on north-facing sites on
moraines or lacustrine soils. Dense Black Spruce and moss communities
develop on poorly drained sites. Grassland and scrub communities occur
on steep, south-facing slopes above many of the major rivers. Forest fires
occur frequently throughout the zone, maintaining most of the forests in
various successional stages.

In the mid-elevation Spruce–Willow–Birch (SWB) biogeoclimatic zone,
winters are long and cold, and summers are brief and cool. Mean annual
temperature ranges from −0.7 to −0.3° C; average temperatures usually rise
above 10° C for only one month a year. Mean annual precipitation is 460 to
700 mm, with 35 to 60% of this falling as snow. Moist Pacific air produces
frequent summer storms; more stable air prevails in winter.

The SWB zone is the most northerly subalpine zone in BC. Here, it occu-
pies the middle elevations of the northern Rocky Mountains, the Cassiar
and northernmost Omineca and Skeena mountains, the part of the St. Elias
Mountains that extends into the Haines Triangle, and much of the Stikine
and Liard plateaus. Elevations of the SWB in northern BC range from 900
to 1700 m. It usually occurs in the subalpine above the BWBS zone over
most of its range in northern BC, occupying a position comparable to that
of the ESSF zone above the lower-elevation biogeoclimate zones farther
south. In the far western edge of the ecozone—on the eastern slopes of the
Coast Mountains—the SWB is replaced in some valleys by the Sub-boreal
Spruce (SBS) zone, and subalpine slopes are in the ESSF zone.

The SWB zone is generally forested with White Spruce and variable
amounts of pine and aspen in the valley bottoms and on lower slopes,
with Subalpine Fir growing higher on the slopes. Upper elevations of the
SWB—which form a scrub–parkland subzone—are dominated by fairly
tall deciduous shrubs, mainly Scrub Birch (*Betula glandulosa* Michx.) and
several willows. Subalpine grasslands are frequent but not extensive in
this zone, especially on steep south-facing slopes: *Festuca altaica* Trin. is
typical.
The **Alpine Tundra** biogeoclimatic zone in the Boreal Cordillera Ecozone has been designated since 2006 as the **Boreal Altai Fescue** biogeoclimatic zone. It is extensive on the landscape above 1000 m elevation, and lies above treeline. It is characterised by dwarf willows (especially *Salix reticulata* L. and *S. polaris* Wahlenb.), grasses (especially *Festuca altaica*), sedges, and lichens.

Characteristic butterfly species more or less restricted in BC to the Boreal Cordillera Ecozone are mostly species of the alpine tundra. They include *Parnassius phoebus* (Fabricius), *Pieris angelika* Eitschberger, *Colias hecla* Lefèbvre, *Boloria polaris* (Boisduval), *Erebia rossii* (Curtis), and *E. pavaloskii* Ménétríés. *Euchloe naina* Kozhantshikov, *Boloria natazhati* (Gibson), *Erebia mackinleyensis* Gunder, and *Oeneis philipi* Troubridge & Parshall are Beringian species; i.e., they occur mainly in unglaciated regions of the far northwest. *Parnassius eversmanni* Ménétríés and *Papilio machaon alaiska* Scudder are typically northern species with more widespread ranges; the former also lives in some areas of the northern Montane Cordillera Ecozone, and the latter also occurs east of the Rockies in BC. Little is known of the moth fauna in this region.

A few early naturalists made collections in the ecozone; e.g., E. M. Anderson brought back specimens to the Provincial Museum from a trip to Atlin in 1914 (Provincial Museum 1916). However, most records from the ecozone were documented after World War II, when roads such as the Alaska Highway opened up much of the North. At this time, the Northern Insect Survey (Canadian National Collection) made surveys across northern BC, from Atlin to Summit Lake and Fort Nelson (the last locality is in the Taiga Plains Ecozone). Lepidopterists such as C. Guppy, J. Shepard, N. Kondla, J. Troubridge and others have collected in the ecozone, looking especially for seldom-observed northern endemics and Beringian species at places such as Pink Mountain, Stone Mountain, Atlin, and the Haines Road.

**Taiga Plains**

The Taiga Plains Ecozone is a low-lying region centered on the Mackenzie River and its many tributaries. The Northwest Territories contains about 90% of the Taiga Plains Ecozone; relatively small sections lie in northeastern BC and northern Alberta. In BC, the ecozone is bounded by the Rocky Mountains to the west and the Boreal Plains Ecozone to the south. About 10% of BC lies east of the Rockies, and the Taiga Plains roughly comprises the northern half of this region. The ecozone is a northern extension of the

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interior plains that characterise the Prairie provinces. Its typically subdued relief includes broad lowlands and plateaus crossed by numerous rivers, particularly the Liard River and its large tributary, the Fort Nelson River. Extensive wetlands, especially peatlands, are common in the lowland areas. Differences in drainage, precipitation and fire history create complex mosaics of wetlands and forest types.

The subarctic climate is characterised by short, cool summers and long, cold winters. Mean annual temperature is –2.9 to 2°C. Although daily maximum temperatures can be high in mid-summer, monthly averages remain below 0°C for about half the year. Annual precipitation averages between 330 and 570 mm, with 35 to 55% falling as snow. The ground freezes deeply for much of the year, and discontinuous permafrost is common in the northeastern parts of the zone.

The **Boreal White and Black Spruce** (BWBS) zone is the sole biogeoclimatic zone in BC’s Taiga Plains Ecozone. In northeastern BC, this lowland-to-montane zone ranges from about 230 to 1300 m. White Spruce, Trembling Aspen, Lodgepole Pine, Black Spruce, Balsam Poplar (*Populus balsamifera* L.), Tamarack (*Larix laricina* (Du Roi) K. Koch), Subalpine Fir and Common Paper Birch (*Betula papyrifera* Marshall) are the major tree species in forested areas. Forest fires occur frequently, maintaining most of the forests in various successional stages. The poorly drained lowlands are characterised by accumulations of peat that insulate frozen ground, resulting in lenses of permafrost. Black Spruce and occasionally Tamarack are the main trees on organic terrain. On better drained sites at higher elevations, mixed Trembling Aspen–White Spruce forests dominate. The most productive forests—White Spruce and Balsam Poplar—occur on rich alluvial sites, and Tamarack forms pure stands only in minerotrophic fens. Common plant species growing in these fens are Scrub Birch, Swamp Birch (*Betula pumila* L.), Leatherleaf (*Chamaedaphne calyculata* (L.) Moench), Sweet Gale (*Myrica gale* L.), and Labrador Tea (*Ledum groenlandicum* Oeder).

Butterflies characteristic of BC’s Taiga Plans Ecozone are boreal or more widespread species that mainly occur east of the Rocky Mountains. Examples include *Callophrys niphon* (Hübner), whose larvae feed on pines, and *Phyciodes batesii* (Reakirt), a denizen of aspen woodland. *Plebejus optilete* (Knoch) feeds on *Vaccinium* and lives in peatlands at lower elevations; in the Boreal Cordillera, it is also found in higher-elevation meadows. *Papilio machaon* Linnaeus, the Old World Swallowtail,
is widespread in northern BC; it is a typical inhabitant of openings in the boreal forest of the Taiga Plains Ecozone.

**Boreal Plains**
The Boreal Plains Ecozone consists of low-lying valleys and plains stretching across the northern Great Plains from Manitoba to northeastern BC. It contains much of the huge boreal forests in western Canada. The Saskatchewan, Beaver, Athabasca, Slave and Peace river watersheds drain this region from west to east. In BC, the ecozone occupies the southern half of the region east of the Rocky Mountains, an area largely drained by the Peace River and its tributaries. The region’s continental climate is determined by the Rocky Mountains to the west, which block moisture from the Pacific and leave the region vulnerable to Arctic air masses in the winter. General descriptions of climate and vegetation are similar to those of the adjacent Taiga Plains Ecozone (see above), although the BC part of the Boreal Plains Ecozone usually has milder temperatures. Mean annual temperature is about 0.5°C; mean summer temperature is 13°C, and mean winter temperature is –14°C. Mean annual precipitation ranges from 350 to 600 mm.

As in the Taiga Plains Ecozone, the **Boreal White and Black Spruce** (BWBS) zone is the sole biogeoclimatic zone in the BC section of the Boreal Plains Ecozone. In addition to the diverse boreal forest mosaic of the BWBS, with White Spruce and Trembling Aspen typically dominant, distinctive grassland and scrub communities occur in patchwork on steep, south-facing slopes above rivers, most notably the Peace River. Common shrubs include Prickly Rose (*Rosa acicularis* Lindl.), Wood’s Rose (*Rosa woodsii* Lindl.), Saskatoon (*Amelanchier alnifolia* Nutt.) and Western Snowberry (*Symphoricarpos occidentalis* Hook.). Herbs and grasses include Pasture Sage (*Artemisia frigida* Willd.), Northern Wormwood (*Artemisia campestris* L.), Western Wheatgrass (*Pascopyrum smithii* (Rydb.) Á. Löve), Junegrass (*Koeleria macrantha* (Ledeb.) Schult.) and Needle-and-Thread Grass (*Hesperostipa comata* (Trin. & Rupr.) Barkworth).

In BC, several butterfly taxa are more or less restricted to the dry habitats of the Peace River Valley. *Papilio machaon pikei* Sperling flies on the dry grassland slopes along the Peace River near the Alberta boundary. Along the south-facing banks of the Peace River, *Satyrium liparops* (LeConte) feeds on *Amelanchier*, and *Hesperia assiniboia* (Lyman) feeds on grasses. *Phyciodes batesii* (Reakirt) is typical of Trembling Aspen woods and associated meadows, and *Oeneis alberta* Elwes flies in bunchgrass grasslands.
The main documentation of the Lepidoptera of the Boreal Plains Ecozone is by Kondla et al. (1994) and Shepard (unpublished report B), who focused on the fauna of the Peace River region.

**History and Current State of Lepidoptera Research in British Columbia**

The collection and study of BC Lepidoptera has a lengthy history. Hatch (1949) described the early years of entomological research in the Pacific Northwest. Guppy and Shepard (2001) described in detail the history of butterfly research. Short summaries of surveys and systematic studies are given in Cannings et al. (2001) and Cannings and Scudder (2001). We present a brief overview here.

The first known scientific worker on BC Lepidoptera was John Keast Lord, who collected specimens from 1858 to 1862 in his role as Naturalist on the British North American Boundary Commission. His specimens were sent to F. Walker, of the British Museum of Natural History, for description. Other travelers and explorers, including Samuel Scudder in the 1860s, George R. Crotch in the 1870s, and George M. Dawson in the 1880s, collected specimens, primarily butterflies, in the second half of the 1800s.

The first resident lepidopterist was Reverend George W. Taylor (1851–1912), who settled on Vancouver Island in 1882. He collected and published on butterflies and moths and became the leading North American authority on geometrids. In 1887, he was appointed as Honorary Provincial Entomologist by the BC Department of Agriculture. Another important early collector was J. William Cockle, who moved to Kaslo in the 1890s and collected and published extensively.

By 1900, a number of amateur collectors had settled in the province, primarily on Vancouver Island and in the Lower Mainland. These collectors were very active, and some of them formed the Entomological Society of British Columbia (ESBC) in 1902.

In 1903, E. M. Anderson was hired as assistant curator of Natural History at the Provincial Museum of Natural History and Anthropology at Victoria. In 1904, he published the first comprehensive list of BC Lepidoptera (Anderson 1904), with 1128 species. The list was updated and corrected by members of the ESBC in 1906, to include 1061 species (ESBC 1906). Other significant collectors of this time included Ernest Henry Blackmore (1882–1929) of Victoria,
Abdiel William Hanham (1857–1944) and George O. Day (1854–1942) of Duncan, Lindsay Edgar Marmont (1860–1949) of Maillardville (Coquitlam), and Theodor Albert Moillet (1883–1935) of Vavenby. Blackmore, Marmont and Moillet were all avid microlepidoptera collectors.

In 1911, the first professional entomological laboratory was established by Canada’s federal government at Agassiz, with Reginald Charles Treherne of the Dominion Entomological Service in charge. Within a few years, entomologists were also stationed at Vernon, where Edward Ronald Buckell (1889–1951) dealt with fruit crops and Ralph Hopping (1868–1941) studied forest insects. In 1919, the University of British Columbia began offering entomology courses; in 1924, George Johnson Spencer (1888–1966) joined the faculty as the university’s first dedicated entomologist.

The early period of resident collectors culminated in the publication of a checklist of butterflies and macromoths by Blackmore (1927). By about 1930, many of the first generation of resident collectors had passed away or retired. The subsequent generation was smaller, although work continued in the laboratories and at the University of British Columbia. The most notable worker was James Rushton John Llewellyn Jones (1894–1956), who lived at Mill Bay. He collected extensively on southern Vancouver Island and exchanged specimens and information with many others. In 1951, he compiled and published the next checklist of BC butterflies and macromoths: it included 1585 species and subspecies (Llewellyn Jones 1951). He was active in the ESBC and willed his estate to the society as a permanent publication fund. Richard Guppy (1910–1980) of Wellington, and later Thetis Island, energetically collected on Vancouver Island during this period. George Hardy of the Provincial Museum carefully studied the butterflies and moths of southern Vancouver Island and published many papers on the larval stages and life histories of various species (e.g., Hardy 1957). A history of the entomological activities at the Provincial Museum (called the Royal BC Museum since 1986), including those of Hardy, Anderson and Blackmore, is documented in Cannings (2010).

The second half of the 20th century was a relatively quiet period for BC lepidopterology, although work continued at the University of British Columbia and at the government laboratories at Agassiz, Vernon and Victoria. The work of a small number of dedicated amateurs also continued. In 2001, Crispin Guppy and Jon Shepard published a comprehensive work on the butterflies of BC (Guppy and Shepard 2001). In 2007, Robert Cannings and
Geoff Scudder compiled the first Lepidoptera list to include micromoths in more than a century (Cannings and Scudder 2007).

In the past decade, a small number of workers both professional and amateur have continued to collect and document the province’s Lepidoptera. Aided by modern communications, collecting equipment and advances in DNA analysis, they are ushering in the next era of BC Lepidoptera research. The E-Fauna BC website (Klinkenberg 2013) contains excellent images of hundreds of BC moth and butterfly species, and is vetted by experts. A new website on Pacific Northwest macromoths recently became available online (Crabo et al. 2015): it provides a huge amount of information, including photographs, biological information and range maps for many macromoth species occurring in the province. As well, the websites of the Moth Photographers Group (2015), and the Biodiversity Institute of Ontario (Ratnasingham and Hebert 2007) contain records, photos and information about many species that occur in BC.

The list we publish here includes 2832 species in 70 families reported in BC (Table 1). Of these, 2761 species are considered “confirmed” in the province, and 71 remain “unconfirmed”. The latter are species for which a plausible published record exists, but no vouchers can be found, or they are species represented by specimens in collections for which we have been unable to confirm identities. An additional 27 species are listed as likely to be found in BC; this is far from an exhaustive list of all the species that may yet be found, but it includes some of the likelier ones.

The number of confirmed records includes nine species that are regular migrants and 15 that are strays—none of which complete their life cycle in the province. The list also includes six species that persist in BC only indoors in human environments. Species that have been intercepted in BC in trade goods or luggage from abroad, with no evidence of a wild or breeding population, are not included in the list.

A total of 134 of the listed species are thought to be introduced from outside North America, and another 11 species are suspected introductions. These aliens represent between 4.7% and 5.1% of the known Lepidoptera fauna of the province.

The 2832 species reported here from BC represent 1.80% of the approximately 157 000 world species of Lepidoptera, 22.3% of the approximately
12,700 species known in North America north of Mexico, and 52.9% of the approximately 5,350 species known from Canada (GRP, unpublished data). This total is greater than for any other province of Canada, although 2,902 species are reported from Quebec (QC) and Labrador combined (Handfield et al. 1997; Handfield 2011), the vast majority of which certainly occur in QC. The fauna of ON may also rival that of BC, although a definitive list has not been published. Adjacent to BC, Alberta (AB) has 2,465 reported species (Pohl 2014; Pohl et al. 2010, 2011, 2012, 2013). The Northwest Territories (NT) has 600 (GRP, unpublished data), and Yukon Territory (YT) has 518 (Lafontaine and Wood 1997). A total of 710 species were reported from Alaska (AK) by Ferris et al. (2012). Species lists are not available for the adjacent USA states of Washington (WA), Idaho (ID), and Montana (MT).

Table 1. Diversity of Lepidoptera species in British Columbia by family. Worldwide numbers of species are modified from van Nieukerken et al. (2011); numbers of North American species are from Pohl (unpublished data).

<table>
<thead>
<tr>
<th>family:</th>
<th>World</th>
<th>North America</th>
<th>BC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>confirmed</td>
<td>uncon-</td>
</tr>
<tr>
<td></td>
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<td>firmed</td>
</tr>
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<td>Micropterigidae</td>
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<td>2</td>
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<td>29</td>
<td>13</td>
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<td>19</td>
<td>8</td>
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<td>Acanthopteroctetidae</td>
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<td>4</td>
<td>1</td>
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<tr>
<td>Nepticulidae</td>
<td>850</td>
<td>107</td>
<td>12</td>
</tr>
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<td>Opostegidae</td>
<td>200</td>
<td>10</td>
<td>2</td>
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<td>Prodoxidae</td>
<td>100</td>
<td>64</td>
<td>14</td>
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<td>Incurvariidae</td>
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<td>Heliozelidae</td>
<td>120</td>
<td>30</td>
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<td>300</td>
<td>18</td>
<td>6</td>
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<td>110</td>
<td>46</td>
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<td>28</td>
<td>6</td>
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<td>54</td>
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<td>34</td>
<td>14</td>
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<td>39</td>
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<td>North America</td>
<td>BC</td>
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<tr>
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</tr>
<tr>
<td></td>
<td></td>
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<td>unconfirmed</td>
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<td>3</td>
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<td>9</td>
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<tr>
<td>Gelechiidae</td>
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<td>900</td>
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</tr>
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<td>1</td>
</tr>
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<td>1</td>
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<td>2</td>
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</tr>
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<td>2</td>
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<td>1</td>
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</tr>
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<td>North America</td>
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<tr>
<td>-----------------</td>
<td>-------</td>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td>Confirmed</td>
<td>Unconfirmed</td>
<td>Total Reported</td>
</tr>
<tr>
<td>Nymphalidae</td>
<td>6150</td>
<td>225</td>
<td>74</td>
</tr>
<tr>
<td>Pyralidae</td>
<td>5900</td>
<td>679</td>
<td>127</td>
</tr>
<tr>
<td>Crambidae</td>
<td>9650</td>
<td>850</td>
<td>129</td>
</tr>
<tr>
<td>Drepanidae</td>
<td>660</td>
<td>21</td>
<td>11</td>
</tr>
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<td>Lasiocampidae</td>
<td>1950</td>
<td>35</td>
<td>4</td>
</tr>
<tr>
<td>Saturniidae</td>
<td>2350</td>
<td>74</td>
<td>7</td>
</tr>
<tr>
<td>Sphingidae</td>
<td>1450</td>
<td>130</td>
<td>23</td>
</tr>
<tr>
<td>Uraniidae</td>
<td>700</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Geometridae</td>
<td>23000</td>
<td>1425</td>
<td>358</td>
</tr>
<tr>
<td>Notodontidae</td>
<td>3800</td>
<td>139</td>
<td>24</td>
</tr>
<tr>
<td>Erebidae</td>
<td>24500</td>
<td>960</td>
<td>121</td>
</tr>
<tr>
<td>Euteliidae</td>
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<td>1</td>
</tr>
<tr>
<td>Nolidae</td>
<td>1700</td>
<td>40</td>
<td>7</td>
</tr>
<tr>
<td>Noctuidae</td>
<td>11800</td>
<td>2525</td>
<td>710</td>
</tr>
<tr>
<td>(non-BC families)</td>
<td>6029</td>
<td>86</td>
<td>0</td>
</tr>
<tr>
<td>Grand Total</td>
<td>157000</td>
<td>12721</td>
<td>2761</td>
</tr>
</tbody>
</table>

The number of Lepidoptera species known from BC has more than doubled in the past 100 years (Table 2). However, the most active period of collecting was in the early part of the 1900s, and many “new” records are recently recognised species that are represented in older museum material. The previous list (Cannings and Scudder 2007) was based primarily on a list of CNC holdings, augmented by selected taxonomic and faunistic works. The list of butterflies and macromoths by Lafontaine and Troubridge (2011), although not published formally until 2011, was completed in 1998 and thus precedes Cannings and Scudder (2007) in its content. Our list is based on a thorough survey of taxonomic literature from the past 65 years, and on extensive inventory work in the UBC, RBCM, and CFS collections in the province, as well as at the CNC. Pohl and Cannings (2013) describe in more detail the process of compiling and preparing this list. To the best of the authors’ knowledge, the records and information presented here was complete and accurate up to the end of June, 2015.

Although the current list of Lepidoptera includes 2832 species, the actual number of species that occur in BC is certainly much higher. The southern half of the province has been studied for more than 100 years, but many
species undoubtedly remain to be discovered there, particularly among the microlepidoptera. The northern regions of the province are poorly known for almost all moths. In particular, the Peace River region of northeastern BC is expected to yield many new provincial records of boreal species.

Table 2. Numbers of species in historical lists and the current list of BC Lepidoptera.

<table>
<thead>
<tr>
<th>Lepidoptera group</th>
<th>ESBC (1906)*</th>
<th>Blackmore (1927)*</th>
<th>Llewellyn Jones (1951)*</th>
<th>Cannings and Scudder (2007)</th>
<th>current list</th>
</tr>
</thead>
<tbody>
<tr>
<td>micromoths:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gelechiidae</td>
<td>15</td>
<td>–</td>
<td>–</td>
<td>81</td>
<td>162</td>
</tr>
<tr>
<td>Tortricidae</td>
<td>83</td>
<td>–</td>
<td>–</td>
<td>331</td>
<td>440</td>
</tr>
<tr>
<td>other groups</td>
<td>96</td>
<td>–</td>
<td>–</td>
<td>293</td>
<td>492</td>
</tr>
<tr>
<td>micromoths subtotal</td>
<td>194</td>
<td>–</td>
<td>–</td>
<td>705</td>
<td>1094</td>
</tr>
<tr>
<td>butterflies</td>
<td>135</td>
<td>229</td>
<td>250</td>
<td>190</td>
<td>188</td>
</tr>
<tr>
<td>macromoths:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pyralidae, Crambidae</td>
<td>86</td>
<td>–</td>
<td>–</td>
<td>191</td>
<td>263</td>
</tr>
<tr>
<td>Geometridae</td>
<td>215</td>
<td>379</td>
<td>425</td>
<td>340</td>
<td>362</td>
</tr>
<tr>
<td>Noctuidae (sensu lato)</td>
<td>465</td>
<td>745</td>
<td>825</td>
<td>806</td>
<td>852</td>
</tr>
<tr>
<td>other groups</td>
<td>53</td>
<td>81</td>
<td>85</td>
<td>67</td>
<td>73</td>
</tr>
<tr>
<td>macromoths subtotal</td>
<td>819</td>
<td>1205</td>
<td>1335</td>
<td>1404</td>
<td>1550</td>
</tr>
<tr>
<td>overall total</td>
<td>1148</td>
<td>1434</td>
<td>1585</td>
<td>2299</td>
<td>2832</td>
</tr>
</tbody>
</table>

*Note: Numbers in these columns include all names reported in the lists, including subspecies and varieties.

Format of the Checklist

Sources of Information
The list of species occurring in BC was obtained by compiling data from specimens and from published works. Specimen data were obtained from reliably identified specimens in the following public collections:

BIO – Biodiversity Institute of Ontario, University of Guelph, Guelph, ON
CNC – Canadian National Collection of Insects, Arachnids and Nematodes, Ottawa, Ontario
NFRC – Northern Forestry Centre Research Collection, Canadian Forest Service, Natural Resources Canada, Edmonton, Alberta
NSPM – Nova Scotia Provincial Museum, Halifax, NS
PFC – Natural Resources Canada, Canadian Forest Service, Pacific Forestry Centre Collection, Victoria, BC.
RBCM – Royal British Columbia Museum, Victoria, BC
UASM – University of Alberta, E. H. Strickland Entomological Museum, Edmonton, Alberta
UBC – University of British Columbia, Beaty Biodiversity Museum, Vancouver, BC.

Selected records have been extracted from other public and private collections, as noted. Identities of specimens in the CNC have been determined by CNC lepidopterists, as well as by visiting researchers. Identities of problematic specimens in other collections were confirmed primarily by GRP, although some specimens were sent to other experts. In cases where we have not been able to confirm questionable determinations, we have flagged the records as uncertain. We hope these uncertainties will be cleared up by future workers.

The list also incorporates extensive published records of Lepidoptera in BC. We have extracted records from previous provincial lists by ESBC (1906), Blackmore (1927), Llewellyn Jones (1951), Arnott (1960), Cannings and Scudder (2007), and Lafontaine and Troubridge (2011). Unfortunately, we could not locate a copy of the first published BC Lepidoptera list (Anderson 1904); however, the list by ESBC (1906) is an updated and corrected version of the records presented therein. Our data include records from significant publications of local scope, including Blackmore (1921, 1922a, 1923, 1924), Busck (1904), deWaard et al. (2009, 2010), Duncan (2006), Dyar (1904), Guppy and Shepard (2001), Pyle (2002), Ross (1956), and Taylor (1908a, 1908b), as well as the “Forest Insects of BC” series by Ross and Evans (1954, 1956a, 1956b, 1957a, 1957b, 1957c, 1958, 1959, 1961), Sugden (1964, 1966, 1968, 1970) and Sugden and Ross (1963). We have also extracted records from works of wider geographic scope, including Belton (1988), Powell and Opler (2009) and the “Forest Lepidoptera of Canada” series by McGugan (1958) and Prentice (1962, 1963, 1965). Additionally, we have drawn upon a large dataset of Canadian distribution records extracted from published taxonomic works that deal with North American moths (GRP, unpublished data). That dataset incorporates records from more than 1000 papers, including virtually all pertinent works published after 1950 and many from earlier. Records were also extracted from the Barcode of Life database of BIO (Ratnasingham and Hebert 2007); these were thoroughly vetted to remove unverified and uncertain records.
The Pacific Northwest Moths website (Crabo et al. 2015) was scanned for BC records of species not represented in Canadian collections. Although we do not generally include sources that are not supported by voucher material, we have extracted records from The Lepidopterists' Society Annual Season Summaries, 2002–2014 (Lepidopterists' Society 2015), as well as a few photo records from E-Fauna BC (Klinkenberg 2013).

**Higher Taxonomy**

The classification presented here follows the scheme of van Nieukerken et al. (2011) at the family level and above. For subfamilies, we follow Kristensen (1999), and for tribes, Hodges et al. (1983). Exceptions where newer works supercede the aforementioned are as follows:

- Arrangement of primitive superfamilies and families follows Regier et al. (2015).
- Classification of the Tineoidea follows Regier et al. (2014).
- Removal of the Douglasiidae from Gracillarioidea follows Kawahara et al. (2011);
- Classification of the Yponomeutoidea follows Sohn et al. (2013);
- Classification of the Gelechioidea families follows Heikkilä et al. (2014); subfamilies within Gelechioidea follows Karsholt et al. (2013). Classification of the Gelechiidae below the subfamily level follows Lee et al. (2009);
- Tribal arrangement of the Sesiidae follows Eichlin and Duckworth (1988);
- Classification of the Pterophoridae follows Gielis (2003);
- Classification of the Tortricidae follows Brown (2005);
- Tribal arrangement of the Thyrididae follows Whalley and Heppner (1995);
- Nomenclature of the butterflies follows Pelham (2008);
- Classification of the Crambidae follows Munroe et al. (1995);
- The higher classification of the Geometridae follows Young (2006) and Ferguson (2008), and;

Deviations from accepted nomenclature are detailed in the notes.
Family-Level Introductory Paragraphs

In the introductory paragraph for each family, we provide a brief summary of the defining features, general appearance and general biological information for the group. The common names of the family and other higher-level taxonomic groups are primarily from Heppner (1998).

We also provide a brief overview of the global and North American diversity of the group. Our use of the term “North America” applies to the portion of the continent north of Mexico; this corresponds roughly to the Nearctic faunal region and equates to the region as treated in most taxonomic works. This information on family diversity comes from Arnett (1993), Cannings and Scudder (2007), Kristensen (1999), and Scoble (1995), as well as from family-level works cited in the individual family treatments.

Species Entries

Species are listed in the order they were presented in the most recently published taxonomic work for the group in question, deferring to the order of Hodges et al. (1983) where no such revisions exist.

Each species entry comprises: a species number, occurrence status if other than “confirmed resident”, genus, species, author, and year of description. Species introduced to North America are indicated with an “I” at the far right of the species entry. Notes on the species appear below the species entry, indented and in smaller type.

Species Number

All confirmed and unconfirmed species records are given whole numbers in the list. Species that probably occur in BC are given decimal numbers.

Occurrence Status

Species not considered confirmed residents of BC are indicated as follows:

- H (human-associated) – Occurs in BC only indoors or in close association with humans, either as a pest or in culture. No established populations of the species exist outside of human situations. Species known only from interceptions on foreign goods and at ports of entry are excluded from the list.
- M (migrant) – Regularly collected in the wild in BC, but the entire life cycle is not completed here. This category includes species that
naturally migrate regularly into BC, such as the Monarch (*Danaus plexippus* (Linnaeus)).

- **P** (probable occurrence) – Not yet reported from BC, but the species likely occurs here, based on records from adjacent areas and suitable habitat being present in BC. These species are given a decimal number in the list.
- **S** (stray) – Occasionally collected in the wild in BC, but with no evidence of established breeding populations in the wild, nor part of a regular migration.
- **U** (unconfirmed or uncertain) – Records that are plausible, but voucher specimens either cannot be located or their identity has not been confirmed.

*Scientific Name, Author and Date of Original Description*

The valid or accepted scientific name of each species is presented in italics, followed by the author and date of the published description (the taxonomic authority). Throughout this list, we have distinguished taxonomic authorities from literature references as follows:

- For a taxonomic authority, the date of description is separated from the author’s name by a comma and a space;
- For references to the literature, the year of publication is separated from the author name by a space alone, or the year is enclosed in parentheses if the author’s name forms an integral part of the sentence structure.

In taxonomic authorities, parentheses (round brackets) around the author and date indicate that the species was described in a genus other than that in which it is currently placed. Square brackets around the author and/or date indicate attributed authorship and/or publication date that is different from that stated in the work itself.

*Introduced Species*

Species thought to be introduced to North America are indicated with an “I” at the far right of the species name; native North American species that have been introduced to BC are indicated with a lowercase “i”.

*Notes*

These entries beneath species names include selected pertinent information on taxonomy, nomenclature, and status of the species in BC. If
occurrence of the species in BC is uncertain, probable, or has been reported erroneously, the note presents those details. We also list the region of origin, if known, for introduced species.

The assignment and delimitation of subspecies is often uncertain and highly contentious, particularly for butterflies. Rather than passing judgment on the merits of such names, we simply list all the valid subspecific names that, as far as we know, have been applied to BC populations in published works.

Common names are given for a few conspicuous species with an accepted frequently used common name. Common names of moths come primarily from the official Canadian list of common names (Entomological Society of Canada Common Names Committee 2007). Following Pohl et al. (2010), common names of animals and plant species are capitalised to distinguish them from common names that refer collectively to several species; e.g., to distinguish the Diamondback Moth, *Plutella xylostella* (Linnaeus), from species of moths in the family Plutellidae, which are collectively referred to as “diamondback moths”).

We have not listed the synonyms of BC Lepidoptera species. However, some commonly used or very recently used synonyms are mentioned in the notes under selected species. Most synonyms can be found in Poole (1995).

**Excluded Taxa**
The “Excluded Taxa” section lists 322 species that have been reported in a published source as occurring in BC, but are rejected herein because they are deemed by the authors to have not ever occurred naturally or to have not become established here. These species are not considered part of the BC fauna in any of the tables in the current list. Some of these records are based on errors or misidentifications, and many are due to changes in taxonomic status that resulted in valid species names that no longer apply to BC populations. Details of such reports and taxonomic changes are given in the text accompanying each species entry in the excluded species list.

**Abbreviations Used in the List**
Besides the abbreviations defined above in the section entitled “Occurrence Status”, we use the standard two-letter postal abbreviation for the provinces of Canada and the states of the United States of America (USA). We also use the collection acronyms listed above, and the initials of the authors of this work.
Part II: The Checklist

Section 1: Micromoths

Superfamily Micropterigoidea

1. *Family Micropterigidae* (*mandibulate moths*)
Mandibulate moths are very small moths with large and functional mandibles that have well-developed articulation on the head capsule. Their wings are narrow and lanceolate, held roof-like over the body when at rest; the upper surface of the wings is often covered with iridescent scale patches. Adult moths are usually diurnal and are attracted to flowers and feed on pollen, which they crush with their mandibles. Larvae feed on moss and liverworts, and can occur in soil.

Worldwide, 160 species of micropterigids exist, as well as many undescribed species. Three species are known in North America; two occur in BC. The family was recently revised, and a new BC species described, by Davis and Landry (2012).

0001 *Epimartyria auricrinella* Walsingham, 1898
This species is known in BC from a specimen in the NSPM, collected at Prince George BC by B. and G. Wright on 9 July 1984. A second specimen was collected in 2015 near 100 Mile house by DH.

0002 *Epimartyria bimaculella* Davis & Landry, 2012
This species is illustrated on the cover of this publication.

Superfamily Eriocranioidea

2. *Family Eriocraniidae* (*sparkling archaic sun moths*)
Eriocraniid moths are very small, often with iridescent wings that are covered with long, hairlike scales, and are usually held like a tent over the body when at rest. This group can be distinguished from most other moths
by its vestigial mandibles. Adults are diurnal, and most species fly early in the spring. Larvae are leaf-blotch miners.

Twenty-nine species of eriocraniids are known worldwide, 13 of which occur in North America. Only one species is known from BC. The family was revised by Davis (1978).

0003  *Eriocrania semipurpurella* (Stephens, 1834)

BC populations are subspecies *pacifica* Davis.

**Superfamily Hepialoidea**

**3. Family Hepialidae (ghost moths)**

Ghost moths are medium-sized to very large and bronze or ash-grey, with wingspans in North American species ranging from 25 to 100 mm. Adult moths are fast flying, and are diurnal, crepuscular or nocturnal. Some species form mating swarms, called leks, with oscillatory flight. Eggs are small and are produced in abundance and broadcast over the ground by flying females. Larvae bore into stems or roots, or tunnel in the ground.

Worldwide, about 630 species of ghost moths are known. Of the 19 species that occur in North America, eight are reported from BC (another species is expected here). Nielsen et al. (2000) provided a global catalogue and bibliography.

0003.1 P  *Gazoryctra hyperboreus* (Möschler, 1862)

This species was reported in error from BC by ESBC (1906); an old specimen from Duncan in the RBCM has been redetermined as *G. matthewi* (Edwards). Although no BC records are currently known, this species is known from boreal habitat in AB and likely occurs in BC’s Peace River region.

0004  *Gazoryctra confusus* (Edwards, [1885])

0005  *Gazoryctra roseicaput* (Neumögen & Dyar, 1893)

0006  *Gazoryctra mathewi* (Edwards, 1874)

0007  *Gazoryctra novigannus* (Barnes & Benjamin, [1926])

0008  *Phymatopus behrensii* (Stretch, 1872)

0009  *Phymatopus californicus* (Boisduval, 1868)

0010  *Sthenopis argenteomaculatus* (Harris, 1841)

Confirmed records from Atlin, BC, exist of this otherwise eastern species.

0011  *Sthenopis purpurascens* (Packard, 1863)

Includes *Gorgopis quadriguttatus* Grote, a recent synonym (Nielsen et al. 2000).
Superfamily Neopseustoidea

4. Family Acanthopteroctetidae

These are very small moths that resemble caddisflies, but may be brightly marked. They can be separated from most other moths by the vestigial mandibles, and from the Eriocraniidae by the absence of ocelli. Little is known of the biology of this group; one CA species is a leafminer on *Ceanothus* spp. (Rhamnaceae).

Eight species of acanthopteroctetids are known worldwide; four of these occur in North America. One species is known from BC. The family was revised by Davis (1978).

0012  *Acanthopteroctetes aurulenta* Davis, 1984

This species was discovered at Sparrow Grasslands in the Okanagan Valley recently by DH.

Superfamily Nepticuloidea

5. Family Nepticulidae (pygmy eye-cap moths)

Nepticulids are extremely small moths, with wingspans typically reaching 3 to 5 mm. The wings are slender and lanceolate, usually with predominantly dark coloration. The head has erect seta-like scales; the vertex is rough; the antennal scape is enlarged and covers the eye. Females have a short, non-piercing ovipositor. Nepticulid larvae are normally leafminers, but can occur in woody twigs, fruit or galls. Hosts are usually members of the Betulaceae, Fagaceae, Rhamnaceae, Rosaceae or Salicaceae. Most nepticulid species are highly host specific.

Worldwide, about 850 species have been described, with many more remaining to be discovered. So far, 107 species have been reported in North America; 14 of these are known in BC. The Canadian Nepticulidae were revised by Wilkinson and Scoble (1979), although some parts of their work have been superceded by newer works.

Subfamily Nepticulinae

 Tribe Nepticulini

0013  *Stigmella corylioliella* (Clemens, 1861)

0014  *Stigmella ostryaeoliella* (Clemens, 1861)

Reported from BC by Forbes (1923), but no voucher specimens are known in Canadian collections.
Stigmella macrocarpae (Freeman, 1967)
British Columbia records from Garry Oak are probably an undescribed species, but they are filed under this name (an eastern North American species that feeds on oaks) pending taxonomic clarification (E. van Nieukerken, personal communication). This taxon was listed by Cannings and Scudder (2007) under the name latifasciella (Chambers), a synonym.

Stigmella diffasciae (Braun, 1910)
Reported from Victoria by Blackmore (1924), although no BC vouchers are known in Canadian collections.

Stigmella rhoifoliella (Braun, 1912)
Collected at Vaseux Lake, reared from poison ivy in 1988 by E. van Nieukerken (personal communication).

Stigmella stigmaciella Wilkinson & Scoble, 1979

Stigmella crataegioliella (Clemens, 1861)

Stigmella pomivorella (Packard, 1870)

Stigmella populetorum (Frey & Boll, 1878)

Stigmella alba Wilkinson & Scoble, 1979

Tribe Trifurculini

Ectoedemia canutus Wilkinson & Scoble, 1979
This recent record for western North America was collected 29 April 2007 at Vancouver by J. deWaard.

Ectoedemia marmaropa (Braun, 1925)

Ectoedemia canadensis (Braun, 1914)

Ectoedemia sericopeza (Zeller, 1839)
An introduced species collected in the Vancouver area in 2010 by DH.

6. Family Opostegidae (white eye-cap moths)
Opostegids are very small, with wingspans typically reaching 6 to 12 mm. The wings are slender, lanceolate and predominantly white. The head has erect seta-like scales; the vertex is rough; the antennal scape is enlarged and covers the eye. Larvae are leafminers.

Almost 200 species of Opostegidae are known worldwide, with many undescribed species expected to be found. Ten species are known from North America, two of which are known from BC. Davis and Stonis (2007) published a monograph of the New World fauna.

Subfamily Opostegoidinae

Opostegoides scioterma (Meyrick, 1920)

Subfamily Oposteginae

Pseudopostega cretea (Meyrick, 1920)
Superfamily Adeloidea
7. Family Prodoxidae (yucca moths and allies)

Prodoxids are small moths, with wingspans between 10 and 30 mm. Their head vestiture is usually rough, with dense seta-like scales. The adults are usually diurnal and often have white or golden wings. Females have an elongate, compressed ovipositor.

Larvae are endophagous, boring into fruit, leaves or shoots. None are case bearers. They overwinter as larvae, with the last-instar larvae in some cases diapausing for many years.

Worldwide, about 100 species of Prodoxidae exist, with most occurring in the Nearctic region. Sixty-four species have been recorded from North America, 14 of which have been reported from BC. The species of *Tegeticula* (not present in BC) are the well-known yucca moths, which have a well-studied interdependent relationship with yucca plants.

Subfamily Lamproniinae
0029  *Lampronia oregonella* Walsingham, 1880
0030  *Lampronia capitella* (Clerck, 1759)
0031  *Lampronia corticella* (Linnaeus, 1758) [1]
0032  *Lampronia taylorella* (Kearfott, 1907)
0033  *Lampronia aenescens* (Walsingham, 1888)
0034  *Lampronia sublustris* Braun, 1925

Subfamily Prodoxinae
0035  *Greya punctiferella* (Walsingham, 1888)
0036  *Greya piperella* (Busck, 1904)
0037  *Greya obscuromaculata* (Braun, 1921)
0038  *Greya politella* (Walsingham, 1888)
0039  *Greya enchrysa* Davis & Pellmyr, 1992
0040  *Greya variabilis* Davis & Pellmyr, 1992
0041  *Greya variata* (Braun, 1921)
0042  *Greya subalba* Braun, 1921

8. Family Incurvariidae (leafcutter moths)

Leafcutter moths are very small, with wingspans between 6 and 10 mm. Their forewings are usually iridescent. They have a scaled proboscis, and females have a piercing ovipositor. Larvae are leafminers in the early instar stages; later, they construct cases using silk and cut pieces of leaf, from which they skeletonize leaves.
Approximately 50 species of leafcutter moths are known worldwide. Five species are known from North America, two of which occur in BC. The family has not been revised for many years, but one of the species that occurs in BC was treated by Pohl et al. (2015).

0043  *Paraclemensia acerifoliella* (Fitch, 1854)
Historical records of this species in BC by Busck (1904) and others were long thought to be erroneous, but its’ presence in BC was confirmed by Pohl et al. (2015).

0044  *Phylloporia bistrigella* (Haworth, 1828)
Known in BC from a single specimen collected at Revelstoke National Park, by BIO.

### 9. Family Heliozelidae (shield-bearer moths)
Heliozelids are extremely small moths, with wingspans usually under 8 mm. The head has a vertex that is typically smooth, with broad, laminate, iridescent scales directed downward over the smooth frons; the antennae are shorter than the wings, with the scape entirely covered by iridescent scales. The wings are held roof-like at rest. Females have an elongated, piercing ovipositor.

Adults are diurnal, and fly in sunshine near the host. All larvae except the last instar are leafminers. They construct a flat, oval case by cutting sections from the upper and lower epidermis of the mine, and join these together with silk, forming a lenticular-shaped case. The case gives these moths their common name. Hosts are usually woody trees or shrubs.

Worldwide, about 120 species are known, with 30 species reported from North America. Two species are recorded from BC.

0045  *Antispila freemani* Lafontaine, 1973
0046  *Coptodisca arbutiella* Busck, 1904

### 10. Family Adelidae (fairy moths)
Fairy moths are very small moths, with wingspans up to 14 mm. The antennae are usually much longer than the forewing, but are short in the genus *Cauchas*. Forewings are slender and often metallic with transverse white stripes. Females have a long, piercing ovipositor.

Males of many species swarm near host plants. Eggs are inserted singly into plant tissue. The first-instar larvae of adelids may mine leaves of the
host; later-instar larvae are case bearers and feed on the lower or fallen leaves of the host.

Worldwide, about 300 species of fairy moths are described. Of the 18 species recorded in North America, six occur in BC.

**Subfamily Adelinae**

0047  *Cauchas cockerelli* (Busck, 1915)
0048  *Cauchas simpliciella* (Walsingham, 1880)
0049  *Nemophora bellela* (Walker, 1863)
0050  *Adela septentrionella* Walsingham, 1880
0051  *Adela trigrapha* Zeller, 1876
0052  *Adela purpurea* Walker, 1863

**Superfamily Tischerioidea**

11. **Family Tischeriidae (trumpet leafminer moths)**

Most tischeriids are extremely small, with 5- to 9-mm wingspans. The head has a smooth frons; the vertex is somewhat rough with slender or broad scales that are directed forwards; the antennal scape has a prominent tuft of slender scales projecting over the eye. Forewings are lanceolate and generally unicoloured. Females have a short, non-piercing ovipositor. The larvae are leafminers, forming either trumpet-shaped or blotch mines in leaves of deciduous trees and shrubs.

There are about 110 known species of tischeriids worldwide; 46 species are reported from North America, three of which are recorded from BC. The North American species were revised by Braun (1972).

0053  *Astrotischeria occidentalis* (Braun, 1972)
0054  *Coptotriche malifoiliella* (Clemens, 1860)
0055  *Coptotriche splendida* (Braun, 1972)

**Superfamily Tineoidea**

12. **Family Psychidae (bagworm moths)**

Bagworm moths are very small to small moths, with wingspans from 8 to 25 mm. Males are fully winged; some females are winged, but many are brachypterous, apterous or wormlike, with all body appendages vestigial or absent. Some species exist only as parthenogenetic females, and are best recognized by the larval cases.
Larvae of psychids are leaf or lichen feeders and form portable bags or cases made of pieces of twigs, leaves or other material, which they carry around with them as they feed. Bags or cases are usually open at both ends, the top opening being used for feeding and the lower for waste discharge. Pupation takes place within the larval bags or cases. Males leave the bag on emergence, departing from the lower end, but females spend all or most of their lives within. Males, if present, fertilise the female in the bag, through one end of the case.

Worldwide, 1350 species of psychids are known, with 85% occurring in the Old World. Of the 28 species known from North America, seven have been reported from BC. Davis (1964) revised the North American species.

**Subfamily Naryciinae**

0056  *Dahlica triquetrella* (Hübner, 1812)  
0057  *Dahlica lichenella* (Linnaeus, 1761)  
This introduced species is known from the Vancouver area. Identification was confirmed by P. Hättenschwiller.

**Subfamily Taleporiinae**

0058  *Taleporia walshella* (Clemens, 1862)  
This species was reported from BC, based on material in PFC. That material could not be located by GRP in 2010, but there is no reason to doubt that this species occurs in BC: it is known from Jasper National Park in AB, very close to the BC border.

**Subfamily Psychinae**

0059  *Psyche casta* (Pallas, 1767)  
This introduced Palaearctic species was collected recently in the Vancouver area by DH and by J. deWaard.

0060  *Hyaloscotes fragmentella* Edwards, 1877

0061  *Hyaloscotes pithopoera* (Dyar, 1923)

**Subfamily Oiketicinae**

0062  *Apterona helicoidella* (Vallot, 1827)  
This European species was abundant around Osoyoos beginning in about 2002, but apparently disappeared about 2008 (GGES, unpublished data). However, it was abundant near Merritt in 2009.

**13. Family Tineidae (fungus moths and clothes moths)**

Tineid moths are very small to medium sized, most with wingspans of 8 to 14 mm. The wings are usually dull and brownish in colour, and typically are moderately broad and generally subovate in shape. The head has erect pili form scales. Adults move with a characteristic scuttling run. Most tineid larvae are fungivorous, some feed on detritus, and a few are pests of stored
food products or fabrics, feeding on wool, fur and feathers. Many tineid larvae build portable cases, from which they feed.

Worldwide, about 2300 species of tineids occur; 187 are known from North America. Twenty-seven of these have been reported from BC. Little taxonomic work has been done on the family in the past 100 years, other than the higher-level taxonomic work of Regier et al. (2014).

**Subfamily Acrolophinae**

0063 *Amydria curvistrigella* Dietz, 1905

**Subfamily Nemapogoninae**

0064 *Trioxomera parasitella* (Hübner, 1796)

This introduced European species was discovered in North America on the Lower Mainland by DH in 2011.

0065 *Nemapogon acapnopennella* (Clemens, 1863)

0066 *Nemapogon auropulvella* (Chambers, 1873)

0067 *Nemapogon cloacella* (Haworth, 1828)

Recently discovered in North America by Landry et al. (2013).

0068 *Nemapogon granella* (Linnaeus, 1758)

The European Grain Moth, introduced from the Palaearctic (Lafontaine and Troubridge 2011).

0069 *Nemapogon tylodes* (Meyrick, 1919)

Recent BC record collected near Hazelton by deWaard (2010).

0070 *Nemapogon variatella* (Clemens, 1859)

Western Canadian material is probably a new species near *N. variatella*, but they are provisionally listed here.

**Subfamily Tineinae**

0071 *Tinea columbariella* Wocke, 1877

0072 *Tinea irrepta* Braun, 1926

0073 *Tinea niveocapitella* Chambers, 1875

Known in BC from a specimen in the UBC collection, collected at Saanichton on 1 June 1922 by J. G. Colville.

0074 *Tinea pellionella* (Linnaeus, 1758)

This Palaearctic species is known as the Casemaking Clothes Moth.

0075 *Niditinea fuscella* (Linnaeus, 1758)

0076 *Niditinea orleansella* (Chambers, 1873)

Recent BC record collected near Hazelton by deWaard (2010).

0077 *Trichophaga tapetzella* (Linnaeus, 1758)

The Carpet Moth, introduced from the Palaearctic (Lafontaine and Troubridge 2011).

0078 *Monopis crocicapitella* (Clemens, 1859)

0079 *Monopis laevigella* ([Denis & Schiffermüller], 1775)

0080 *Monopis weaverella* (Clemens, 1859)
Monopis dorsistrigella (Clemens, 1859)
Collected recently in BC by DH.

Monopis spilotella Tengström, 1848

Elatobia carbonella (Dietz, 1905)
British Columbia material in the CNC has been labelled with unpublished manuscript names by D. R. Davis.

Elatobia montelliella (Schantz, 1951)

Tineola bisselliella (Hummel, 1823)
This Palaearctic species is known as the Webbing Clothes Moth.

### Subfamily Scardiinae

Morophagoides burkerella (Busck, [1904])

Scardia anatomella (Grote, 1881)

Amorophaga cryptophori (Clarke, 1940)

### Subfamily unassigned

Homosetia costisignella (Clemens, 1863)
Uncertain record from deWaard et al. (2009).

### Superfamily Gracillarioidea

#### 14. Family Bucculaticridae

These are extremely small to very small moths, with wingspans of 4 to 11 mm. The head is usually elongate, with the vertex usually large and bearing an erect tuft of piliform scales. Most species have larvae in which the first two instars are leafminers, and the third instar emerges to feed externally on leaves. The fourth-instar larva constructs a flattened moulting cocoon under the leaf used by the third instar. The fifth-instar larva, before pupation, constructs a silken, longitudinally ribbed cocoon, which is typical for the family.

Worldwide, about 300 species of bucculaticrids exist, most of which occur in the Nearctic. One genus, Bucculatrix, with 103 species, is known from North America; 12 species are recorded from BC, and another is expected here. Braun (1963) revised the North American species.

Bucculatrix eurotiella Walsingham, 1907

Bucculatrix divisa Braun, 1925

Bucculatrix salutatoria Braun, 1925

Bucculatrix arnicella Braun, 1925

Bucculatrix tridenticola Braun, 1963

Bucculatrix seorsa Braun, 1963

Bucculatrix angustisquamella Braun, 1925

Bucculatrix columbiana Braun, 1963
15. Family Gracillariidae (leaf blotch miner moths)

Gracillariids are extremely small to small moths, with wingspans of 4 to 21 mm. The head is usually smooth scaled; the antennae are filiform and are about as long as the forewings. The wings are slimmer to lanceolate, with a broad fringe; the cilia are longer than the width of the hind wing; the forewings are often brightly coloured.

Larvae are leaf, bark or fruit miners, with a hypermetamorphosis. Larvae typically form blotch mines on leaves, hence the common name. Early larval instars are flattened sap feeders, while later instars feed on leaf parenchyma. Most are strongly host specific. Pupation takes place in the mines.

Worldwide, about 1850 species of gracillariids are known; 302 species are known from North America, and 58 species have been reported from BC. There are no comprehensive taxonomic works on the group, but De Prins and De Prins (2005) published a world species catalogue.

Subfamily Gracilliinae

0102 Caloptilia acerifoliella (Chambers, 1875)
0103 Caloptilia agrifoliella Opler, 1971
0104 Caloptilia alnicolella (Chambers, 1875)
0105 Caloptilia alnivorella (Chambers, 1875)
0106 Caloptilia burgessiella (Zeller, 1873)
0107 U Caloptilia coroniella (Clemens, 1864)

This species is known in BC only from some old specimens in the PFC collection that were reared from *Populus tremuloides* and determined as “Caloptilia nr. coroniella”. The host plant is correct, and there is no reason to doubt the record, as the species is known from adjacent AB. However, the determination requires confirmation.

0108 Caloptilia invariabilis (Braun, 1927)
0109 Caloptilia melanocarpae (Braun, 1925)
0110 Caloptilia murtfeldtella (Busck, 1904)
0111 Caloptilia pulchella (Chambers, 1875)
0112 Caloptilia rhoifoliella (Chambers, 1876)
Caloptilia sanguinella (Beutenmüller, 1888)
Caloptilia serotinella (Ely, 1910)
Caloptilia stigmatella (Fabricius, 1781)
Caloptilia strictella (Walker, 1864)
Caloptilia suberinella (Tengström, 1848)
Recently discovered in North America by Landry et al. (2013).

Gracillaria syringella (Fabricius, 1794)
This species, known as the Lilac Leaf Miner, was introduced from Europe. It was first found in North America in ON in 1923 and in WA in 1927.

Micrurapteryx salicioliella (Chambers, 1872)

Parectopa albicostella Braun, 1925
This taxon is probably conspecific with P. occulta Braun, but it is listed separately pending taxonomic work.

Parectopa occulta Braun, 1922

Callisto denticulella (Thunberg, 1794)

Parornix alta (Braun, 1925)

Parornix arbutioliella (Dietz, 1907)

Parornix betulae (Stainton, 1854)
Recently discovered in North America by Landry et al. (2013).

Parornix conspicuella (Dietz, 1907)

Parornix spiraeifoliella (Braun, 1918)

Acrocercops astericola (Frey & Boll, 1873)
Recent BC record collected near Hazelton and Sicamous by deWaard (2010).

Acrocercops pnosmodiella (Busck, 1902)

Marmara arbutiella Busck, [1904]

Marmara oregonensis Fitzgerald, 1975

Subfamily Lithocolletinae

Protolithocolletis lathyri Braun, 1929
Recent BC record collected near Hazelton by deWaard (2010).

Phyllonorycter alnicolella (Walsingham, 1889)
Identity of specimens in the PFC collection requires confirmation.

Phyllonorycter apinicigrella (Braun, 1908)

Phyllonorycter apparella (Herrich-Schäffer, 1855)
This species has often been misidentified as P. salicioliella (Chambers) (Davis and Deschka 2001).

Phyllonorycter arbutusella (Braun, 1908)

Phyllonorycter basistrigella (Clemens, 1859)

Phyllonorycter blancardella (Fabricius, 1781)

Phyllonorycter elmaella Doganlar & Mutuura, 1980

Phyllonorycter erugatus Davis & Deschka, 2001

Phyllonorycter fitchella (Clemens, 1860)
Phyllonorycter fragilella (Frey & Boll, 1878)
This species was reported from BC by Blackmore (1924), and is represented in the UBC collection by an old voucher specimen. However, its identity requires confirmation. This species is otherwise not known in western North America.

Phyllonorycter incanella (Walsingham, 1889)

Phyllonorycter ledella (Walsingham, 1889)

Phyllonorycter maestingella (Müller, 1764)
Recently discovered in North America by Landry et al. (2013).

Phyllonorycter martiella (Braun, 1908)

Phyllonorycter mespilella (Hübner, [1805])

Phyllonorycter nipigon (Freeman, 1970)
This species has often been misidentified as *P. salicifoliella* (Chambers) (Davis and Deschka 2001).

Phyllonorycter salicifoliella (Chambers, 1875)
Most records of this species on *Populus* are misidentified *P. apparella* (Herrich-Schäffer), *P. nipigon* (Freeman), and perhaps other species (Davis and Deschka 2001). British Columbia specimens require verification.

Phyllonorycter scudderella (Frey & Boll, 1873)

Macrosaccus robiniella (Clemens, 1859)

Cameraria agrifoliella (Braun, 1908)
Recent BC record collected near Hazelton by deWaard (2010).

Cameraria gaultheriella (Walsingham, 1889)
Collected at Vaseux Lake, reared from poison ivy in 1988 by E. van Nieukerken (unpublished data).

Cameraria hamadryadella (Clemens, 1859)

Cameraria lobatiella Opler & Davis, 1981

Cameraria nemoris (Walsingham, 1889)
Collected recently by DH on Hornby Island.

Cameraria pentekes Opler & Davis, 1981

Subfamily Phyllocnistinae

Phyllocnistis populiella Chambers, 1875

Superfamily Yponomeutoidea

16. Family Yponomeutidae (ermine moths and allies)
Yponomeutids are small moths, with rather narrow, often brightly coloured wings. Wingspans range from 5 to 30 mm. No morphological characters unequivocally define this family. Larvae have diverse feeding habits, including as leafminers and leaf tiers.

As currently delimited, the family Yponomeutidae contains about 360 named species worldwide; 34 species are known in North America. The group, as well as the superfamily Yponomeutoidea, was redefined recently,
following molecular analyses by Sohn et al. (2013). Fourteen species are recorded in BC; many of these have been introduced.

**Subfamily Yponomeutinae**

**Tribe Yponomeutini**

<table>
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<th>Species Name</th>
<th>Author, Year</th>
<th>Notes</th>
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<td>Ocnerostoma piniariella</td>
<td>Zeller, 1847</td>
<td>The European Needle Miner. This species was introduced from Europe, and was first found in North America in NY in 1882 and in BC in 1922.</td>
</tr>
<tr>
<td>Swammerdamia caesiella</td>
<td>(Hübner, 1796)</td>
<td>Origin of this species is uncertain: it may have been introduced from Eurasia.</td>
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<tr>
<td>Swammerdamia pyrella</td>
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<td>Paraswammerdamia albicapitella</td>
<td>(Scharfenberg, 1805)</td>
<td>Introduced from Europe; first found in North America in BC in 2006, but not identified until 2013 (Landry et al. 2013).</td>
</tr>
<tr>
<td>Paraswammerdamia nebulella</td>
<td>(Goeze, 1783)</td>
<td></td>
</tr>
<tr>
<td>Yponomeuta cagnagella</td>
<td>(Hübner, 1813)</td>
<td></td>
</tr>
<tr>
<td>Yponomeuta padella</td>
<td>(Linnaeus, 1758)</td>
<td>The Ermine Moth; introduced from Europe.</td>
</tr>
<tr>
<td>Yponomeuta malinellus</td>
<td>Zeller, 1838</td>
<td></td>
</tr>
<tr>
<td>Zelleria haimbachi</td>
<td>Busck, 1915</td>
<td></td>
</tr>
<tr>
<td>Zelleria pyri</td>
<td>Clarke, 1942</td>
<td>A recent collection in BC by DH and L. Humble, reared from ash (Fraxinus sp.).</td>
</tr>
<tr>
<td>Euhyponeutoides graciliarela</td>
<td>Busck, 1904</td>
<td></td>
</tr>
</tbody>
</table>

**Subfamily Saridoscelinae**

<table>
<thead>
<tr>
<th>Species Name</th>
<th>Author, Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eucalantica polita</td>
<td>(Walsingham, 1881)</td>
</tr>
</tbody>
</table>

**17. Family Ypsolophidae (sickle-winged moths)**

Ypsolophids are small moths, with no metallic markings and, in some *Ypsoloph* species, the wings are hooked at the tip. *Ypsoloph* larvae live in open webs on the leaves of plants.

The family Ypsolophidae is a small family with about 160 known species, primarily from the temperate Northern Hemisphere; 39 species live in North America. Thirteen species have been reported from BC.

**Subfamily Ypsolophinae**

<table>
<thead>
<tr>
<th>Species Name</th>
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</tr>
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<tbody>
<tr>
<td>Euceratia castella</td>
<td>Walsingham, 1881</td>
</tr>
<tr>
<td>Euceratia securella</td>
<td>Walsingham, 1881</td>
</tr>
<tr>
<td>Ypsoloph canariella</td>
<td>(Walsingham, 1881)</td>
</tr>
</tbody>
</table>
0177  Ypsolopa cervella (Walsingham, 1881)
0178  Ypsolopa dentella (Fabricius, 1775)
0179  Ypsolopa dentiferella (Walsingham, 1881)
0180  Ypsolopa dorsimaculella (Kearfott, 1907)
0181  Ypsolopa falciferella (Walsingham, 1881)
0182  Ypsolopa rubrella (Dyar, 1902)
0183  Ypsolopa senex (Walsingham, 1889)
0184  Ypsolopa schwarziella (Busck, 1903)
Reported from BC by Blackmore (1923), and represented by old specimens in the UBC collection; however, the determination requires verification. It is otherwise unknown in Canada.
0185  Ypsolopa sublucella (Walsingham, 1881)
Reported from BC by ESBC (1906), but no vouchers are known. The species is otherwise unknown in Canada.
0186  Ypsolopa walsinghamiella (Busck, 1903)

18. Family Pluttellidae (diamondback moths)
Plutellid moths have wingspans of about 10 to 50 mm (under 30 mm in our fauna); the forewings are often brightly patterned, but normally are not metallic. Larvae are solitary leaf-rollers or live in loose webs and skeletonise leaves; most pupate in a characteristic, open-mesh cocoon. Adult moths hold their antennae forward when at rest. Plutella, a cosmopolitan genus with more than 40 species, feeds largely on plants of the mustard family; the Diamondback Moth, Plutella xylostella (Linnaeus), is a worldwide pest and one of the few micro-moths that migrates long distances.

The family Plutellidae is worldwide but small, with about 150 known species. Sixteen species occur in North America, six of which are recorded in BC. The genus Plutella was split into several genera by Baraniak (2007), but that classification has not been widely adopted and we do not follow it here.

0187  Plutella armoraciae Busck, 1912
This species is known in BC from several old records in the CNC. As well, it has recently been collected and barcoded from Kelowna and Merritt by DH.
0188  Plutella vanella Walsingham, 1881
0189  Plutella xylostella (Linnaeus, 1758)
The Diamondback Moth, an important pest of canola and other crucifers. Most individuals found in Canada arrive each spring on winds from the south, but some likely overwinter, particularly in warmer regions.
0190  Plutella porrectella (Linnaeus, 1758)
0191  Rhigognostis interrupta (Walsingham, 1881)
0192  Rhigognostis poulella (Busck, 1904)
19. Family Glyphipterigidae (sedge moths)
Sedge moths have wingspans ranging from 4 to 30 mm, but most are very small, with wingspans of about 10 mm. The adults are frequently strikingly marked, usually with transverse bands or lines, and often with metallic marks. The forewing is often rather square tipped or even concave, and is broader than the hind wing. Larvae bore in stems and leaves, mainly in monocots such as grasses, rushes, sedges and arums.

The family Glyphipterigidae contains about 535 described species, and the worldwide genus *Glyphipterix* contains about two-thirds of them. In North America, 48 species are known, four of which have been recorded from BC. North American members of the family were revised by Heppner (1985).

**Subfamily Glyphipteriginae**
- 0193 *Glyphipterix bifasciata* (Walsingham, 1881)
- 0194 *Glyphipterix haworthana* (Stephens, 1834)
- 0195 *Glyphipterix sistes* Heppner, 1985
- 0196 *Diploschizia impigritella* (Clemens, 1863)

20. Family Argyresthiidae (needleminer moths)
Argyresthiid moths are extremely small to very small, with narrow, usually golden wings that span about 5 to 15 mm. The group is defined by details of the genitalia. The larvae are bud, fruit, leaf and twig miners. This family has often been placed as a subfamily within the Yponomeutidae.

The family Argyresthiidae includes about 150 species worldwide, all in the genus *Argyresthia*. There are 54 species known in North America, 19 of which have been reported from BC.

- 0197 *Argyresthia abies* Freeman, 1972
- 0198 *Argyresthia columbi*a Freeman, 1972
- 0199 *Argyresthia conjugella* Zeller, 1839
  - The Apple Fruit Moth, introduced from Europe in 1897 (Covell 1984).
- 0200 *Argyresthia cupressella* Walsingham, 1890
  - The Cypress Tip Moth. Originally from CA, this species has spread northwards to BC in recent years.
- 0201 *Argyresthia flexilis* Freeman, 1960
- 0202 *Argyresthia freyella* Walsingham, 1890
- 0203 *Argyresthia goedartella* (Linnaeus, 1758)
- 0204 *Argyresthia laricella* Kearfott, 1908
Argyresthia mesocausta Meyrick, 1913
Reported from BC by Blackmore (1924). There are old voucher specimens in the UBC collection, but their identity requires verification; this species is otherwise unknown in Canada.

Argyresthia monochromella Busck, 1921

Argyresthia oreasella Clemens, 1860

Argyresthia pallidella Braun, 1918
Represented in BC by old voucher specimens in the UBC collection, but their identity requires verification, as this species is otherwise unknown in Canada.

Argyresthia pedmontella Chambers, 1877
Reported from BC by Blackmore (1924), and represented by old voucher specimens in the UBC collection. However, their identity requires verification, as this species is otherwise unknown in Canada.

Argyresthia picea Freeman, 1972

Argyresthia pruniella (Clerck, 1759)

Argyresthia pseudotsuga Freeman, 1972

Argyresthia pygmaeella (Hübner, [1813])

Argyresthia quadristrigella Zeller, 1873
Reported from BC by Blackmore (1924), and represented by old voucher specimens in the UBC collection.

Argyresthia tsuga Freeman, 1972

21. Family Lyonetiidae
Lyonetiids are extremely small moths, usually with wingspans of 5 to 10 mm. The face is smooth scaled, and the base of the antenna forms an eye cap. The wings are very narrow, with reduced venation. The larvae are leaf, and occasionally twig, miners, almost always in dicot families.

The family Lyonetiidae is cosmopolitan and consists of about 200 described species. There are 15 named species in North America; eight of these are recorded from BC. The group requires taxonomic work.

Subfamily Lyonetiinae
Lyonetia candida Braun, 1916
Lyonetia saliciella Busck, 1904
Lyonetia prunifoliella (Hübner, 1796)
Lyonetia pulverulentella Zeller, 1839

Subfamily Cemiostominae
Paraleucoptera albella (Chambers, 1871)
Leucoptera laburnella (Stainton, 1851)
Leucoptera pachystimella Busck, 1904
Leucoptera spartifoliella (Hübner, [1813])
22. Family Praydidae
Praydids are very small moths, with approximately 10- to 15-mm wing-spans that are relatively broad and variously marked. This group was recently split from the Yponomeutidae, and are defined by details of the male and female genitalia.

The family Praydidae contains about 50 species worldwide, mostly in the Old World. Three species are known from North America, one of which has been recently collected in BC.

0224 Prays fraxinella (Bjerkander, 1784)

23. Family Heliodinidae
Heliodinids are very small moths, with metallic markings on the forewings and a wingspan of about 8 to 15 mm. The head is completely covered in smooth scales; males often have thickened antennae. Larvae of most species are leafminers or stem and fruit borers.

About 70 species of heliodinids are known worldwide. There are 31 species known from North America, one of which occurs in BC.

0225 Aetole extraneella (Walsingham, 1881)

24. Family Bedelliidae
The Bedelliidae are very small grey moths, with elongate wings spanning 10 mm or less. They are defined by several wing and larval characteristics. The larvae mine the leaves of plants in the families Poaceae, Liliaceae, Urticaceae and Convolvulaceae. Young larvae make a linear mine, and later instars create blotch mines.

The family Bedelliidae contains 16 species, all in the genus Bedellia, in all regions except the Neotropical. Only two species occur in North America; one of these occurs in BC.

0226 Bedellia somnulentella (Zeller, 1847)

Superfamily unassigned
25. Family Douglasiidae
Douglasiidae are very small moths, with wingspans of 8 to 12 mm. The forewings are bicoloured, and hind wings are narrow. These moths have
short, drooping palps, and the head is covered with a smooth layer of scales. Larvae are stem borers and flower-petiole miners of Rosaceae and other plants.

Twenty-nine species of Douglasiidae are known worldwide—all but one from the Holarctic. Nine species are known from North America, two of which are recorded from BC. Gaedike (1990) revised the Nearctic species (in German); the descriptions and genitalia illustrations therein are inadequate to make reliable determinations.

0227    *Tinagma obscurofasciella* (Chambers, 1881)  
0228    *Tinagma giganteum* Braun, 1921

**Superfamily Gelechioidea**

**26. Family Autostichidae**

Autostichids are very small to small moths, with wingspans of 10 to 20 mm and relatively broad wings. The adults superficially resemble oecophorids or gelechiids, and are not easily distinguished from other gelechioid groups. As currently defined (Heikkilä et al. 2014), the Autostichidae comprise a diverse group of several subfamilies that had previously been placed in their own families or in the Elachistidae, Oecophoridae and Blastobasidae. Larvae of species in this family are poorly known, but most Glyphidocerinae are saprophagous.

As presently defined, approximately 650 species of autostichids are known worldwide; 24 are known from North America, and three occur in BC.

**Subfamily Oegoconiinae**

0229    *Oegoconia novimundi* (Busck, 1915)  
          North American populations have often been reported under the name *O. quadrripuncta* (Haworth), a Palaearctic species (Landry et al. 2013).

**Subfamily Symmocinae**

0230    *Gerdana caritella* Busck, 1908

**Subfamily Glyphidocerinae**

0231    *Glyphidocera septentrionella* Busck, 1904  
          Described from Kaslo, BC by Dyar (1904).

**27. Family Oecophoridae**

Most Oecophorids are small to medium-sized, broad-winged moths with long, upcurved palps. Most characters are extremely variable, and many
groups have recently been moved to other families in the Gelechioidea, including the speciose group Depressariidae now treated as a separate family (Heikkilä et al. 2014).

Larvae of many oecophorid species feed on fungi and detritus in leaf litter and bark; some tie leaves or make cases from twigs or bits of leaves. Some have become pests of stored food and household goods.

The family Oecophoridae is distributed nearly worldwide, with approximately 3400 described species. The family is especially well represented in Australia and South America. Forty species are known from North America; 12 of these have been reported from BC. Most species currently placed in the family were treated in revisions by Clarke (1941) and Hodges (1974).

**Subfamily Oecophorinae**

0232  *Decantha boreasella* (Chambers, 1873)
Listed by Cannings and Scudder (2007) as *D. borkhausenii* (Zeller), a Palaearctic name.

0233  *Decantha tistra* Hodges, 1974
Known in BC from three specimens in the UASM.

0234  *Decantha stonda* Hodges, 1974

0235  *Batia lunaris* (Haworth, 1828)
Introduced from Europe to western North America (Hodges 1974).

0236  *Brymbia quadrimaculella* (Chambers, 1875)

0237  *Denisia haydenella* (Chambers, 1877)

0238  *Polix coloradella* (Walsingham, 1888)

0239  *Hofmannophila pseudospretella* (Stainton, 1849)
The Brown House Moth, introduced from Europe.

0240  *Endrosis sartitrella* (Linnaeus, 1758)
The White-shouldered House Moth, introduced from Europe.

0241  *Eido trimaculella* (Fitch, 1856)

0242  *Oecophora bractella* (Linnaeus, 1758)
Introduced from Europe, discovered recently in the BC Lower Mainland by DH.

**Subfamily Pleurotinae**

0243  *Pleurota albastrigulella* (Kearfott, 1907)

28. **Family Depressariidae (flat moths)**
Flat moths are small moths, with wingspans of about 10 to 25 mm and upturned palps. The group is united by abdominal and pupal features. The wings are broad; the hind wings are often broadly fringed, and the head
is usually smooth scaled. Some recent classifications place this group as a subfamily of the Elachistidae.

Larvae of Depressariinae are leaf tiers, stem borers and seed feeders of many plant families. Species of Ethmiinae mainly feed beneath light webbing on Boraginaceae and Hydrophyllaceae.

The Depressariidae are distributed worldwide, with about 2300 described species. There are 196 species known in North America; 47 of these have been reported from BC. The Depressariinae were revised by Hodges (1974); the Ethmiinae were revised by Powell (1973), and most Stenomatinae were revised by Duckworth (1964).

**Subfamily Depressariinae**

0244  **Agonopterix gelidella** (Busck, 1908)
0245  **Agonopterix conterminella** (Zeller, 1839)
  Recently discovered in North America by Landry et al. (2013).
0246  **Agonopterix nubiferella** (Walsingham, 1881)
0247  **Agonopterix oregonensis** Clarke, 1941
0248  **Agonopterix clarkei** (Keifer, 1936)
0249  **Agonopterix fusciterminella** Clarke, 1941
0250  **Agonopterix sabulella** (Walsingham, 1881)
0251  **Agonopterix alstroemeriana** (Clerck, 1759)
0252  **Agonopterix rosaciliella** (Busck, 1904)
0253  **Agonopterix canadensis** (Busck, 1902)
0254  **Agonopterix arnicella** (Walsingham, 1881)
0255  **Agonopterix flavicomella** (Engel, 1907)
  Clarke’s (1941) record is not mentioned by Hodges (1974), who considers *A. flavicomella* to be an eastern species ranging only as far west as MB. However, it was reported from BC by Cannings and Scudder (2007) based on a specimen from BC in the CNC.
0256  **Agonopterix thelmae** Clarke, 1941
0257  **Agonopterix argillacea** (Walsingham, 1881)
0258  **Agonopterix antennariella** Clarke, 1941
0259  **Agonopterix nervosa** (Haworth, 1811)
  Introduced from Europe to southern Vancouver Island between 1915 and 1920; it was redescribed from Victoria, under the synonyms *Agonopterix blackmori* Busck and *Depressaria dryadoxena* Meyrick.
0260  **Agonopterix posticella** (Walsingham, 1881)
0261  **Agonopterix arenella** ([Denis & Schiffermüller], 1775)
  Introduced from Europe, first collected in North America is southern ON in 2005.
0262  **Depressariodes canella** (Busck, 1904)
Depressariodes umbraticostella (Walsingham, 1881)
Depressariodes sordidella (Clarke, 1941)
Depressariodes nivalis (Braun, 1921)
Depressariodes ciniflonella (Lienig & Zeller, 1846)
Depressariodes fulva (Walsingham, 1882)
Bibarrambla allenella (Walsingham, 1882)
Semioscopis packardella (Clemens, 1863)
Semioscopis merriccella Dyar, 1902
Semioscopis inornata Walsingham, 1882
Semioscopis megamicrella Dyar, 1902
Semioscopis aurorella Dyar, 1902
Semioscopis mcdunnoughi Clarke, 1941
Until recently, this species was known globally only from the type from Bellingham, WA, and two specimens from Coquitlam, BC, all collected before 1941. However, E. Avis collected four specimens at Port Alberni, BC, in 2011.

Depressaria artemisiae Nickerl, 1864
Depressaria pastinacella (Duponchel, 1838)
This species is known as the Parsnip Webworm. It was introduced from Europe and first detected in North America in ON in 1869, and in Victoria, BC, in 1927. By 1938, it was a pest of parsnip seed in Armstrong, BC. Larvae feed on seed heads of a variety of native umbellifers, such as *Heracleum lanatum* Mischaux and species of *Angelica*.

Depressaria daucella ([Denis & Schiffermüller], 1775)
Depressaria alienella Busck, 1904
Depressaria artemisiella McDunnough, 1927
Depressaria togata Walsingham, 1889
Depressaria angustati Clarke, 1941
Nites atrocapitella (McDunnough, 1944)
Nites betulella (Busck, 1902)

**Subfamily Ethmiinae**
Pyramidobela quinquecristata (Braun, 1921)
Ethmia coquillettella Busck, 1907
In Powell (1973), the BC records are not illustrated on the map, but they are mentioned in the text (Oliver; Keremeos).
Ethmia albistrigella (Walsingham, 1880)
Ethmia monticola (Walsingham, 1880)
Ethmia marmorea (Walsingham, 1888)

**Subfamily Stenomatinae**
Antaeotricha manzanitae Keifer, 1937

**Subfamily unassigned**
Carcina quercana (Fabricius, 1775)
Introduced from Europe to Victoria, BC, in 1920 (Blackmore 1921; Hodges 1974).
29. Family Cosmopterigidae (cosmet moths)
Cosmopterigid moths are very small to small moths, with 8- to 20-mm wingspans and smooth-scaled heads. The forewing is narrow and often pointed. The larvae feed in mines in leaves or bark, bore in stems, roots and seeds, make galls, scavenge dead organic matter, or parasitise homopterans.

The family Cosmopterigidae is distributed worldwide and contains almost 1730 described species; 188 species are recorded for North America. The family is mainly southern in the Nearctic. Only nine species have been reported from BC. The family was revised by Hodges (1978).

Subfamily Chrysopeleiinae
0291  *Walshia miscecolorella* (Chambers, 1875)
0292  *Sorhagenia nimbosa* (Braun, 1915)

Subfamily Cosmopteriginae
0293  *Cosmopterix molybdina* Hodges, 1962
- Introduced? Collected recently in BC by DH.
0294  *Cosmopterix montisella* Chambers, 1875
- Known in BC from two specimens collected at Langford by the CFS Forest Insect and Disease Survey and deposited at PFC.
0295  *Cosmopterix abdita* (Hodges, 1962)
0296  *Cosmopterix fernaldella* Walsingham, 1882
0297  S  *Eteobalea intermediella* (Riedl, 1966)
- Released in BC for biocontrol; it may not be established.
0298  S  *Eteobalea serratella* (Treitschke, 1833)
- Released in BC for biocontrol; it may not be established.
0299  *Limnaecia phragmitella* Stainton, 1851

30. Family Gelechiidae
Gelechiid moths, in North America at least, are very small to small moths, with wingspans of 6 to 25 mm, and are usually brown or grey. The forewing is often narrowly rounded or pointed at the apex, and the hind wing usually has a prolonged tip and a concave margin behind.

Gelechiid larvae roll or mine leaves, bore in stems and roots, produce galls, or feed on seed heads or dried seeds in more than 80 plant families. Some are economically important pests.

The family Gelechiidae is cosmopolitan and diverse, with about 4700 described species. About 900 species are known in North America; 162
of these have been reported in BC. Significant taxonomic works have been published on the Dichomeridinae (Hodges 1986) and on the genus *Chionodes* (Hodges 1999b). The family is generally poorly known, and many species await discovery and description. A checklist of North American species was published by Lee et al. (2009). The higher-level taxonomy of the group has been the subject of several recent studies; the scheme employed here follows Karsholt et al. (2013) and Heikkilä et al. (2014).

**Subfamily Anacampsinae**

**Tribe Chelariini**

<table>
<thead>
<tr>
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<th>Species Name</th>
<th>Author and Year</th>
</tr>
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<tbody>
<tr>
<td>0300</td>
<td><em>Anarsia lineatella</em> Zeller, 1839</td>
<td>Introduced from Asia.</td>
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</table>

**Tribe Anacampsin**

<table>
<thead>
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<th>Author and Year</th>
</tr>
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<tbody>
<tr>
<td>0301</td>
<td><em>Battaristis concinnusella</em> (Chambers, 1877)</td>
<td>This species name has often been misspelled as “concinusella”.</td>
</tr>
<tr>
<td>0302</td>
<td><em>Battaristis nigratomella</em> (Clemens, 1863)</td>
<td></td>
</tr>
<tr>
<td>0303</td>
<td><em>Anacampsis conclusella</em> (Walker, 1864)</td>
<td></td>
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<tr>
<td>0304</td>
<td><em>Anacampsis fragariella</em> Busck, 1904</td>
<td></td>
</tr>
<tr>
<td>0305</td>
<td><em>Anacampsis innocuella</em> (Zeller, 1873)</td>
<td></td>
</tr>
<tr>
<td>0306</td>
<td><em>Anacampsis niveopulvella</em> (Chambers, 1875)</td>
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**Subfamily Dichomeridinae**

<table>
<thead>
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<th>No.</th>
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</tr>
</thead>
<tbody>
<tr>
<td>0307</td>
<td><em>Helcystogramma fernaldella</em> (Busck, 1903)</td>
<td></td>
</tr>
<tr>
<td>0308</td>
<td><em>Helcystogramma casca</em> (Braun, 1925)</td>
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<tr>
<td>0309</td>
<td><em>Helcystogramma badia</em> (Braun, 1921)</td>
<td></td>
</tr>
<tr>
<td>0310</td>
<td><em>Helcystogramma melanocarpa</em> (Meyrick, 1929)</td>
<td></td>
</tr>
<tr>
<td>0311</td>
<td><em>Dichomeris ligulella</em> Hübner, 1818</td>
<td></td>
</tr>
<tr>
<td>0312</td>
<td><em>Dichomeris marginella</em> (Fabricius, 1781)</td>
<td>Introduced from Palaearctic; first found in North America in NY in 1910 and in BC near Victoria in 1934.</td>
</tr>
<tr>
<td>0313</td>
<td><em>Dichomeris stipendiaria</em> (Braun, 1925)</td>
<td></td>
</tr>
<tr>
<td>0314</td>
<td><em>Dichomeris bilobella</em> (Zeller, 1873)</td>
<td></td>
</tr>
<tr>
<td>0316</td>
<td><em>Dichomeris simpliciella</em> (Busck, 1904)</td>
<td>Uncertain BC record in Hodges (1986), but there is no reason to doubt that the species occurs here: it was described from Pullman, WA.</td>
</tr>
<tr>
<td>0317</td>
<td><em>Dichomeris gnomad</em> Hodges, 1986</td>
<td></td>
</tr>
<tr>
<td>0318</td>
<td><em>Dichomeris levisella</em> (Fyles, 1904)</td>
<td></td>
</tr>
<tr>
<td>0319</td>
<td><em>Dichomeris leuconotella</em> (Busck, 1904)</td>
<td></td>
</tr>
<tr>
<td>0320</td>
<td><em>Dichomeris offula</em> Hodges, 1986</td>
<td></td>
</tr>
</tbody>
</table>
### Subfamily Apatetrinae

**Tribe Apatetrini**

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>Authors</th>
</tr>
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<tbody>
<tr>
<td>0321</td>
<td><em>Chrysoesthia drurella</em></td>
<td>(Fabricius, 1775)</td>
</tr>
<tr>
<td>0322</td>
<td><em>Chrysoesthia lingulacella</em></td>
<td>(Clemens, 1860)</td>
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</tbody>
</table>

**Tribe Pexicopiini**

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0323</td>
<td><em>Sitotroga cerealella</em></td>
<td>(Olivier, 1789)</td>
</tr>
</tbody>
</table>

### Subfamily Anomologinae

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>Authors</th>
</tr>
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<tbody>
<tr>
<td>0324</td>
<td><em>Metzneria lappella</em></td>
<td>(Linnaeus, 1758)</td>
</tr>
<tr>
<td>0325</td>
<td><em>Metzneria paucipunctella</em></td>
<td>Zeller, 1839</td>
</tr>
</tbody>
</table>

European species released for biocontrol of knapweed (*Centaurea* spp.) (Weeden et al. 2002). This species may not be established.

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0326</td>
<td><em>Isophrictis trimaculella</em></td>
<td>(Chambers, 1874)</td>
</tr>
<tr>
<td>0327</td>
<td><em>Monochroa fragariae</em></td>
<td>(Busck, 1919)</td>
</tr>
<tr>
<td>0328</td>
<td><em>Monochroa harrisonella</em></td>
<td>(Busck, 1904)</td>
</tr>
<tr>
<td>0329</td>
<td><em>Monochroa placidella</em></td>
<td>(Zeller, 1874)</td>
</tr>
<tr>
<td>0330</td>
<td><em>Enchrysa dissectella</em></td>
<td>Zeller, 1873</td>
</tr>
<tr>
<td>0331</td>
<td><em>Aristotelia devexella</em></td>
<td>Braun, 1925</td>
</tr>
<tr>
<td>0332</td>
<td><em>Aristotelia fungivorella</em></td>
<td>(Clemens, 1864)</td>
</tr>
<tr>
<td>0333</td>
<td><em>Aristotelia isopelta</em></td>
<td>Meyrick, 1929</td>
</tr>
</tbody>
</table>

Reported by Cannings and Scudder (2007) under the name *A. nigrobasiella* Clarke, now a synonym.

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0334</td>
<td><em>Aristotelia roseosuffusella</em></td>
<td>(Clemens, 1860)</td>
</tr>
<tr>
<td>0335</td>
<td><em>Aristotelia rubidella</em></td>
<td>(Clemens, 1860)</td>
</tr>
<tr>
<td>0336</td>
<td><em>Bryotropha plantariella</em></td>
<td>(Tengström, 1848)</td>
</tr>
<tr>
<td>0337</td>
<td><em>Bryotropha gemella</em></td>
<td>Rutten &amp; Karsholt, 2004</td>
</tr>
</tbody>
</table>

This widespread and common species was first collected in BC near Hazelton by deWaard (2010).

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0338</td>
<td><em>Bryotropha similis</em></td>
<td>(Stainton, 1854)</td>
</tr>
<tr>
<td>0339</td>
<td><em>Bryotropha hodgesi</em></td>
<td>Rutten &amp; Karsholt, 2004</td>
</tr>
</tbody>
</table>

### Subfamily Gelechiinae

**Tribe Litini**

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0340</td>
<td><em>Agnippe prunifoliella</em></td>
<td>(Chambers, 1873)</td>
</tr>
<tr>
<td>0341</td>
<td><em>Recurvaria nanella</em></td>
<td>([Denis &amp; Schiffermüller], 1775)</td>
</tr>
</tbody>
</table>

Introduced from Europe; first found in North America in the 1700s (Gillespie and Gillespie 1982).

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0342</td>
<td><em>Coleotechnites apicitripunctella</em></td>
<td>(Clemens, 1860)</td>
</tr>
</tbody>
</table>

Uncertain BC record by Duncan (2006).

<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0343</td>
<td><em>Coleotechnites atrupictella</em></td>
<td>(Dietz, 1900)</td>
</tr>
<tr>
<td>0344</td>
<td><em>Coleotechnites blastovora</em></td>
<td>(McLeod, 1962)</td>
</tr>
<tr>
<td>0345</td>
<td><em>Coleotechnites canusella</em></td>
<td>(Freeman, 1957)</td>
</tr>
<tr>
<td>0346</td>
<td><em>Coleotechnites coniferella</em></td>
<td>(Kearfott, 1907)</td>
</tr>
</tbody>
</table>

Uncertain record by deWaard et al. (2009).
Coleotechnites florae (Freeman, 1960)  
Recent BC record collected near Hazelton by deWaard (2010).

Coleotechnites gibsonella (Kearfott, 1907)

Coleotechnites granti (Freeman, 1965)

Coleotechnites huntella (Keifer, 1936)

Coleotechnites macleodi (Freeman, 1965)  
Uncertain record by Duncan (2006).

Coleotechnites occidentis (Freeman, 1965)

Coleotechnites piceaella (Kearfott, 1903)

Coleotechnites pinella (Busck, 1906)

Coleotechnites quercivorella (Chambers, 1872)

Coleotechnites starki (Freeman, 1957)

Coleotechnites thujaella (Kearfott, 1903)

Exoteleia dodecella (Linnaeus, 1758)  
Known as the Pine Bud Moth, this species was introduced from Europe. It was first reported in BC from the Vancouver area by Adamski et al. (2011).

Exoteleia pinifoliella (Chambers, 1880)

Telphusa longifasciella (Clemens, 1863)

Telphusa sedulitella (Busck, 1910)

Neotelphusa praefixa (Braun, 1921)

Xenolechia velatella (Busck, 1907)

Carpatolechia belangerella (Chambers, 1875)

Carpatolechia notatella (Hübner, 1813)

Tribe Gelechiini

Athrips rancidella (Herrich-Schäffer, 1854)

Prolita sexpunctella (Fabricius, 1794)

Prolita variabilis (Busck, 1903)

Prolita recens (Hodges, 1966)

Prolita princeps (Busck, 1910)

Rišeria fuscotaeniaella (Chambers, 1878)

Gelechia dromicella Busck, 1910  
Recent BC record collected near Hazelton by deWaard (2010).

Gelechia lyncella Zeller, 1873

Gelechia mandella Busck, 1904

Gelechia monella Busck, 1904

Gelechia panella Busck, 1903

Gelechia ribesella Chambers, 1875

Gelechia sabinella Zeller, 1839

Gelechia versutella Zeller, 1873

Chionodes abitus Hodges, 1999

Chionodes abella (Busck, 1903)
Chionodes sabinianae Powell, 1959
Chionodes periculella (Busck, 1910)
Chionodes salicella Sattler, 1967
Chionodes obscurusella (Chambers, 1872)
Chionodes acerella Sattler, 1967
Chionodes metoecus Hodges, 1999
Chionodes occidentella (Chambers, 1875)
Chionodes mediofuscella (Clemens, 1863)
Chionodes terminimaculella (Kearfott, 1908)
Chionodes trichostola (Meyrick, 1923)
Chionodes restio Hodges, 1999
Chionodes pinax Hodges, 1999
Chionodes pseudofoedella (Busck, 1908)
Chionodes petalumensis Clarke, 1947
Chionodes lugubrella (Fabricius, 1794)
Chionodes ceanothiella (Busck, 1904)
Chionodes chlorocephala (Meyrick, 1932)
Chionodes retiniella (Barnes & Busck, 1920)
Chionodes grandis Clarke, 1947
Chionodes dolo Hodges, 1999
Chionodes praecarella (Herrich-Schäffer, 1854)
Chionodes psiloptera (Barnes & Busck, 1920)
Chionodes agriodes (Meyrick, 1927)
Chionodes occlusa (Braun, 1925)
Chionodes boreas Hodges, 1999
Chionodes viduella (Fabricius, 1794)
Chionodes continuella (Zeller, 1839)
Chionodes sattleri Hodges, 1999
Chionodes fictor Hodges, 1999
Chionodes histon Hodges, 1999
Chionodes lictor Hodges, 1999
Chionodes praecia Hodges, 1999
Chionodes nigrobarbata (Braun, 1925)
Chionodes praetor Hodges, 1999
Chionodes braunella (Keifer, 1931)
Chionodes permacta (Braun, 1925)
Filatima abactella (Clarke, 1932)
Filatima albicostella Clarke, 1942
Filatima aulaea (Clarke, 1932)

Recent BC record collected near Hazelton by deWaard (2010).
Filatima demissae (Keifer, 1931)
Filatima epulatrix Hodges, 1969
Filatima vaccinii Clarke, 1947
Filatima xanthuris (Meyrick, 1927)
Aroga websteri Clarke, 1942

Tribe Gnorimoschemini

Gnorimoschema albangulatum Braun, 1926
Gnorimoschema assimile Povolný, 2003
Gnorimoschema bacchariselloides Povolný & Powell, 2001
Gnorimoschema brachiatum Povolný, 1998
Gnorimoschema contrarium Braun, 1921
Gnorimoschema dudiella Busck, 1903
Gnorimoschema foliatum Povolný, 2003
Gnorimoschema gallaeasterella (Kellicott, 1878)
Gnorimoschema galleasolidaginis (Riley, 1869)
Gnorimoschema lateritium Povolný, 2003
Gnorimoschema ligulatum Povolný, 1998
Gnorimoschema nanulum Povolný, 1998
Gnorimoschema octomaculella (Chambers, 1875)
Gnorimoschema pedmontella (Chambers, 1877)
Gnorimoschema septentrionella Fyles, 1911
Gnorimoschema sheperdiae Priest, 2014
Gnorimoschema signatum Povolný, 2003
Gnorimoschema subterraneum Busck, 1911
Gnorimoschema triocellella (Chambers, 1877)

Historical records of this species in western Canada are uncertain.

Phthorimaea operculella (Zeller, 1873)

This pest, known as the Potato Tuberworm, was introduced from Australia and found in CA by 1856. It was a minor problem in coastal BC in the 1950s and 1960s, but subsequently has not been reported in the province.

Scrobipalpula henshawiella (Busck, 1903)
Scrobipalpula lutescella (Clarke, 1934)
Scrobipalpula manierreorum Priest, 2014
Scrobipalpula psilella (Herrich-Schäffer, 1853)
Scrobipalpula radiatella (Busck, 1904)
Scrobipalpa atriplicella (von Röslerstamm, 1839)
Scrobipalpa macromaculata (Braun, 1925)
Caryocolum cassella (Walker, 1864)
Caryocolum marmorata (Haworth, 1828)
Caryocolum nearcticum Huemer, 1988
Caryocolum proxima (Haworth, 1828)
Caryocolum pullatella (Tengström, 1848)
Reported by deWaard (2010) from near Hazelton; determination is uncertain.

Scrobipalpopsis arnicella (Clarke, 1942)
Scrobipalpopsis interposita Povolný & Powell, 2001
Scrobipalpopsis petrella (Busck, 1915)
Scrobipalpopsis tetradymiella (Busck, 1903)

31. Family Elachistidae (grass moths)
Elachistids are extremely small to small moths, with wingspans of about 6 to 15 mm and upturned palps. The group is united by abdominal and pupal features. The wings are narrow; the hind wings are often broadly fringed, and the head is usually smooth scaled.

Larvae of Elachistinae are leafminers, mostly of monocots such as grasses, sedges and rushes. Larvae of Agonoxeninae are borers or miners on a variety of plant families.

The Elachistidae are distributed worldwide, with about 830 described species. There are 156 species known in North America; 15 of these have been reported from BC. Most North American species of the subfamily Elachistinae have been revised recently by Kaila (1995a, 1995b, 1996, 1997, 1999a, 1999b).

Subfamily Elachistinae

Perittia cygnodiella (Busck, 1921)
Annettenia eremonoma (Braun, 1948)
Elachista subbalbidella Schläger, 1847
Elachista auropunctata Braun, 1921
Elachista hololeuca Braun, 1948
Elachista lamina Braun, 1948
Elachista apina Kaila, 1997
Elachista epimicta Braun, 1948
Elachista dagnirella Kaila, 1999

This species was reported from across western North America by Powell and Opler (2009), from YT and AK to WA, SD and CA. British Columbia was not specifically mentioned, but it almost certainly occurs there.

Elachista morwenella Kaila, 1999
Elachista cana Braun, 1920
Elachista amrodella Kaila, 1999
Subfamily Agonoxeninae  
Tribe Blastodacnini

0474 Chrysoclista cambiella (Busck, 1915)  
0475 Chrysoclista villella (Busck, 1904)  
0476 Chrysoclista linneella (Clerck, 1759)

32. Family Coleophoridae (casebearer moths)

Coleophorid moths are very small to small moths that usually have narrow, strongly pointed wings that span less than 20 mm. Most species have pale yellow, golden, or metallic-green forewings.

Most coleophorid larvae are leafminers in the first instar, then build cases out of silk, excrement, pieces of leaves or other plant parts. These cases are usually cryptic and resemble bits of rolled leaf, buds, seeds, twigs, thorns or bird droppings. Many larvae feed between the upper and lower surfaces of leaves without fully exiting their cases; others feed on seeds or flowers.

The family Coleophoridae ranges worldwide and contains about 1400 species. In North America, the family has 157 described species, all in the genus Coleophora. The group is poorly known, and probably hundreds more species await description. Thirty-eight species have been reported in BC. Baldizzone et al. (2006) published a world catalogue of the family.

0477 Coleophora multipulvella Chambers, 1878  
This species has historically been referred to as C. malivorella Riley, a synonym (Baldizzone et al. 2006).

0478 Coleophora sacramenta Heinrich, 1914  
0479 Coleophora elaeagnisella Kearfott, 1908  
0480 Coleophora rosaefoliella Clemens, 1864  
0481 Coleophora vancouverensis McDunnough, 1944  
0482 Coleophora annulicola Braun, 1925  
0483 Coleophora wyethiae Walsingham, 1882  
0484 Coleophora pruniella Clemens, 1861  
0485 Coleophora cretaticostella Clemens, 1860  
0486 Coleophora rupestrella McDunnough, 1955  
Known in BC from a single specimen in the PFC collection, collected at Langford and determined by D. Wright.

0487 Coleophora accordella Walsingham, 1882  
0488 Coleophora kearfiottella Barnes & Busck, 1920  
0489 Coleophora cornella Walsingham, 1882
**Coleophora alnifolii** Barasch, 1934
Recent BC record collected near Hazelton by deWaard (2010).

**Coleophora glaucella** Walsingham, 1882
Recent BC record collected near Hazelton by deWaard (2010).

**Coleophora spinella** (Schrank, 1802)
**Coleophora serratella** (Linnaeus, 1761)
Introduced from Europe; first found in North America in ON in 1885.

**Coleophora irroratella** Walsingham, 1882

**Coleophora laricella** (Hübner, [1817])
Known as the Larch Casebearer, this species was introduced from Europe. It was first detected in North America in MA in 1886; it was recorded in BC in 1966.

**Coleophora rosaevorella** McDunnough, 1946

**Coleophora acutipennella** Walsingham, 1882

**Coleophora seminella** McDunnough, 1946

**Coleophora simulans** McDunnough, 1961

**Coleophora duplicis** Braun, 1921

**Coleophora intermediella** McDunnough, 1940

**Coleophora sparsipulvella** Chambers, 1875
Recent BC record collected near Hazelton by deWaard (2010).

**Coleophora atriplicis** Meyrick, 1928
Recently discovered in North America by Landry et al. (2013).

**Coleophora sparsiatomella** McDunnough, 1941

**Coleophora cratipennella** Clemens, 1864

**Coleophora brunneipennis** Braun, 1921

**Coleophora bidentella** McDunnough, 1941

**Coleophora glaucicolella** Wood, 1892

**Coleophora maritella** McDunnough, 1941

**Coleophora mayrella** (Hübner, [1813])
Introduced from Europe in 1897 (Covell 1984).

**Coleophora trifolii** (Curtis, 1832)

**Coleophora deauratella** Lienig & Zeller, 1846
This introduced species was collected recently in the Vancouver area by both DH and J. deWaard.

**Coleophora klimeschiella** Toll, 1952
Recent BC record from the Sicamous area by deWaard (2010).

**Coleophora granulatella** Zeller, 1849
Recently discovered in North America by Landry et al. (2013).

### 33. Family Batrachedridae
Previously placed in the Coleophoridae, batrachedrids are very small moths; in Canada, they are mostly grey–brown, with narrow wings spanning 7 to 17 mm.
Batrachedrid larvae feed on a wide variety of plant material, from fern sporangia to \textit{Juncus} seeds. Some prey on scale insects. Canadian species live on aspen catkins and as inquilines in the galls of \textit{Pontania} sawfly larvae on willow leaves.

A small but worldwide family, the Batrachedridae has about 90 named species, with 25 species known from North America. Three species are recorded in BC. The New World species were revised by Hodges (1966).

0515 \textit{Batrachedra praeangusta} (Haworth, 1828)
0516 \textit{Batrachedra striolata} Zeller, 1875
The recent BC record collected near Hazelton by deWaard (2010) is based on an uncertain DNA barcode determination.
0517 \textit{Batrachedra curvilineella} (Chambers, 1872)
This species was erroneously listed by Hodges (1983) in both \textit{Batrachedra} and the elachistid genus \textit{Blastodacna}.

34. Family Scythrididae (teardrop moths)
Scythridids are defined mainly by characters of the larva and the adult genitalia. North American species are generally very small and are tear-drop shaped, with dark, narrow wings spanning 10 to 18 mm. Larvae feed externally on buds, flowerheads and leaves, or mine inside leaves. Many scythridids, especially northern and montane species, fly in the daytime.

There are about 670 species of scythridids known around the world. In North America, the family is poorly known, with 44 described species, but the true diversity is probably much higher. Six species have been reported from BC. Landry (1991) revised the known North American fauna.

0518 \textit{Scythris eboracensis} (Zeller, 1855)
0519 \textit{Scythris inspersella} (Hübner, [1817])
0520 \textit{Scythris noricella} Zeller, 1843
0521 \textit{Scythris immaculatella} Chambers, 1875
0522 \textit{Scythris trivinctella} (Zeller, 1873)
0523 \textit{Landryia impositella} (Zeller, 1855)

35. Family Blastobasidae
Blastobasids are very small to small narrow-winged moths, with 8- to 15-mm wingspans and upturned palps. They are defined by obscure wing and larval characteristics. The wings of most species are grey with black
marks. Larvae of most species are scavengers; a few feed on living plants or are opportunistic predators.

The family Blastobasidae comprises about 430 described species and is particularly diverse in the New World. A total of 71 species are known from North America; nine species have been reported from BC. The family requires taxonomic work. The last comprehensive work was by Dietz (1910); Adamski and Hodges (1996) published a nomenclature review and a checklist for the North American species.

**Subfamily Holcocerinae**
- 0524 *Asaphocrita aphidiella* (Walsingham, 1907)
- 0525 *Asaphocrita irenica* (Walsingham, 1907)
- 0526 *Holcocera chalcofrontella* Clemens, 1863
- 0527 *Holcocera concolor* Adamski & Maier, 2003
- 0528 *Holcocera immaculella* McDunnough, 1930

**Subfamily Blastobasinae**
- 0529 *Blastobasis glandulella* (Riley, 1871)
  - British Columbia record is based on material in the PFC collection that is not identified with certainty.
- 0530 *Hypatopa simplicella* (Dietz, 1910)
- 0531 *Hypatopa titanella* McDunnough, 1961
  - This taxon may be conspecific with the European *H. binotella* Thunberg.
- 0532 *Pigritia murtfeldtella* (Chambers, 1874)

### 36. Family Momphidae
This group of very small to small moths is defined by characters of the genitalia. They are narrow-winged, with wingspans of 6 to 18 mm. Many species have black wings with transverse white marks. The larvae eat buds, seeds and flowers, or are stem borers or gall makers. Many species feed on the plant family Onagraceae.

There are 60 described species of Momphidae worldwide, mostly in the genus *Mompha*. Forty-six species are known from North America, 11 of which have been recorded from BC.

- 0533 *Mompha circumscriptella* (Zeller, 1873)
- 0534 *Mompha conturbatella* (Hübner, [1819])
  - This Old World name is provisionally applied to specimens from western Canada, pending taxonomic review.
- 0535 *Mompha deceptella* (Braun, 1921)
**Mompha eloisella** (Clemens, 1860)

**Mompha idaei** (Zeller, 1839)
This species is often referred to as *M. tricristatella* (Chambers), a synonym.

**Mompha murtfieldtella** (Chambers, 1875)
Reported from BC by Blackmore (1924) and known in BC from specimens in the UBC collection.

**Mompha raschkiella** (Zeller, 1839)
This holarctic or possibly introduced species was discovered recently in North America (Pohl et al. 2010). It is known in BC from a specimen photographed by S. Gilmore at Lantzville, on 18 June 2013 (Klinkenberg 2013). Its identity was confirmed by GRP.

**Mompha sturnipennella** (Treitschke, 1833)

**Mompha sexstrigella** (Braun, 1921)
Recent BC record near Hazelton by deWaard (2010).

**Mompha nancyae** Clarke, 1990
This species is endemic to Haida Gwaii.

**Mompha unifasciella** (Chambers, 1876)

### 37. Family Pterolionchidae

This small group of very small moths has recently been split from the Coleophoridae (Hodges 1999a). It is defined primarily by obscure structural details and wing venation.

About 30 species of Pterolionchidae are known worldwide. Four pterolionchids are known from North America, one of which has been introduced to BC.

**Subfamily Pterolionchinae**

<table>
<thead>
<tr>
<th>0544</th>
<th>Pterolone inspersa</th>
<th>Staudinger, 1859</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introduced from Europe for biocontrol of knapweed (<em>Centaurea</em> spp.).</td>
<td></td>
</tr>
</tbody>
</table>

### 38. Family Lypusidae

As a family, lypusid moths are difficult to recognise without dissection of the genitalia and other structures. The wings are rather broad and rounded, and the ocelli, when present, are far from the eyes. Unlike in some related families, the tops of the abdominal segments of adults lack spiny setae. In larvae, the hind tibia and tarsus are swollen. Larvae feed on a range of plant families, from Betulaceae to Rosaceae and Ericaceae.

The family Lypusidae is a Palaearctic group that has recently been given family status, containing about 150 species. In older literature, the Chimabachinae was usually placed within the Oecophoridae, and the Lypusinae were
associated with the Tineoidea. One species has been introduced to North America, in BC’s Lower Mainland. It was treated by Hodges (1974).

**Subfamily Chimabachinae**

0545 *Chœmophila salicella* (Hübner, 1796)

This pest is known as the Blueberry Leafroller. It was introduced from Europe to the BC Lower Mainland in 1955; in North America, it remains restricted to that region (Hodges 1974).

**Superfamily Alucitoidea**

39. *Family Alucitidae (many-plumed moths)*

Alucitids are very small moths that have characteristic, deeply divided wing membranes: the forewing has six narrow, scale-edged feather-like lobes, and the hind wings may be six- or seven-plumed. A few tropical species have wings that are only partly or hardly divided.

Alucitid larvae are concealed feeders: they bore in flowers, buds, shoots and fruits, or make galls. Host plants include Caprifoliaceae, Rubiaceae and Asteraceae. The larvae of all three North American species feed on members of the honeysuckle family (Caprifoliaceae). Adults are nocturnal or crepuscular, and often hibernate in sheds and basements.

Over 200 species of Alucitidae are known worldwide, but only three species are known in North America. Two of these have been recorded from BC. For many years, all North American *Alucita* were considered to be *A. hexadactyla* Linnaeus, but three species were recognised by Landry and Landry (2004) in their revision of North American species. Gielis (2003) published a world catalogue of Alucitoidea.

0546 *Alucita montana* Barnes & Lindsey, 1921

Referred to in older literature as *A. hexadactyla* Linnaeus or *A. huebneri* Wallengren; both are Old World species that do not occur in North America (Landry and Landry 2004).

0547 *Alucita adriendenisi* Landry & Landry, 2004

**Superfamily Pterophoroidea**

40. *Family Pterophoridae (tee moths; plume moths)*

Tee Moths are slender, usually brown or grey moths with long, narrow wings. The forewing is normally notched into two to four lobes (two in our fauna), the hind wing into three more deeply cut, feather-like plumes. Most BC species are small, with wingspans of about 12 to 30 mm. The wings
are rolled and held outstretched horizontally at rest, forming a T-shape with the body.

Pterophorid larvae are usually leaf rollers or borers in plant stems, buds and roots. Many are specific to particular plants, mostly herbaceous dicots, but some feed on woody species.

The family Pterophoridae occurs worldwide, with over 1300 described species; 157 species are recorded in North America. Fifty-four species have been reported from BC. The family was revised by Barnes and Lindsey (1921), but is in need of modern work. Gielis (2003) published a checklist of the world Pterophoroidea.

**Subfamily Pterophorinae**

**Tribe Platyptiliini**

0548  *Platyptilia tesseradactyla* (Linnaeus, 1761)
0549  *Platyptilia carduidactylus* (Riley, 1869)
0550  *Platyptilia percnodactylus* (Walsingham, 1880)
0551  *Platyptilia comstocki* Lange, 1939
0552  *Platyptilia ardua* McDunnough, 1927
0553  *Platyptilia albicans* (Fish, 1881)
0554  *Gillmeria pallidactyla* (Haworth, 1811)
0555  *Gillmeria albertae* (Barnes & Lindsey, 1921)
0556  *Anstenoptilia marmarodactyla* (Dyar, 1902)

Report of BC material by Blackmore (1924) is questionable. British Columbia vouchers in the UBC collection and the AAFC collection in Lethbridge, AB, require verification.

0557  *Stenoptilodes antirhina* (Lange, 1939)
0558  *Stenoptilia mengeli* Fernald, 1898
0559  *Stenoptilia exclamationis* (Walsingham, 1880)
0560  *Stenoptilia coloradensis* Fernald, 1898
0561  *Stenoptilia columbia* McDunnough, 1927
0562  *Paraplatyptilia edwardsii* (Fish, 1881)
0563  *Paraplatyptilia albiciliatus* (Walsingham, 1880)
0564  *Paraplatyptilia albicus* (Walsingham, 1880)
0565  *Paraplatyptilia shastae* (Walsingham, 1880)

The record by ESBC (1906) was declared erroneous by Blackmore (1921): it referred to *Oidaematophorus cineraceus* Fish. However, Blackmore (1923) and McDunnough (1927b) later reported *P. shastae* from BC.

0566  *Paraplatyptilia nana* (McDunnough, 1927)
0567  *Paraplatyptilia albidosellus* (Walsingham, 1880)
Paraplatyptilia fragilis (Walsingham, 1880)
This species was listed by ESBC (1906) and Blackmore (1923), based on material of P. shastae (Walsingham) and P. albidus (Walsingham), which Barnes and Lindsey (1921) considered to be synonyms of P. fragilis at that time. However, the species was confirmed from BC by Cannings and Scudder (2007) and Powell and Opler (2009), and is supported by vouchers in the CNC and UBC.

Paraplatyptilia maea (Barnes & Lindsey, 1921)

Amblyptilia pica (Walsingham, 1880)

Tribe Oxyptilini

Geina tenuidactylus (Fitch, 1854)

Capperia ningoris (Walsingham, 1880)
No vouchers are known to support historical records of this species from BC; they may refer to C. evansi (McDunnough).

Capperia evansi (McDunnough, 1923)

Oxyptilus delawaricus Zeller, 1873

Dejongia lobidactylus (Fitch, 1854)
The ESBC (1906) record of this species was declared erroneous by Blackmore (1921), who stated that the specimens are actually O. delawaricus Zeller. However, it was confirmed from BC by Landry (1987), and BC vouchers exist in the CNC.

Trichoptilus pygmaeus Walsingham, 1880

Tribe Oidaematophorini

Hellinsia gratiosus (Fish, 1881)

Hellinsia fieldi (Wright, 1921)

Hellinsia phoebus (Barnes & Lindsey, 1921)

Hellinsia helianthi (Walsingham, 1880)

Hellinsia homodactylus (Walker, 1864)

Hellinsia pectodactylus (Staudinger, 1859)

Hellinsia kellicottii (Fish, 1881)

Hellinsia lacteodactylus (Chambers, 1873)

Hellinsia costatus (Barnes & Lindsey, 1921)

Hellinsia corvus (Barnes & Lindsey, 1921)

Hellinsia inconditus (Walsingham, 1880)

Oidaematophorus occidentalis Walsingham, 1880

Oidaematophorus balsamorrhizae McDunnough, 1939

Oidaematophorus downesi McDunnough, 1927

Oidaematophorus mathewianus (Zeller, 1874)

Oidaematophorus eupatorii (Fernald, 1891)
The ESBC (1906) record was declared erroneous by Blackmore (1921), who stated that BC specimens are actually O. guttatus Walsingham and/or O. mathewianus (Zeller). However, there is a BC specimen of O. eupatorii in the CNC.

Oidaematophorus phaceliae McDunnough, 1938

Oidaematophorus grisescens Walsingham, 1880

Oidaematophorus cineraceus Fish, 1881
Superfamily Carposinoidea

41. Family Copromorphidae

The Copromorphidae is a small, weakly defined family whose present make-up may not stand up to future taxonomic study. Most species are small, with wingspans from 12 to 20 mm. They have more-or-less rounded wing tips and are coloured for camouflage. The larvae tunnel in fruit, leaf veins, twigs or flower inflorescences, or feed between joined leaves.

Copromorphids are represented by about 40 species, and occur in all regions except the Palaearctic. The family is mainly Asian and Australian. Five species are known in North America; two occur in BC.

42. Family Carposinidae (fruitworm moths)

Carposinids are very small to small moths with broad, lanceolate wings; wingspans in North American species range from 10 to 20 mm. Males frequently have raised scale tufts on the forewings. Larvae are modified for living inside plants. They bore in leaf and flower buds, shoots, fruits, living bark, galls and tree wounds.

The family Carposinidae contains 283 named species, mostly in Asia and the Australo–Pacific region. Eleven species are recorded in North America; one of these occurs in BC.
Superfamily Schreckensteinioidea

43. Family Schreckensteiniidae (bristle-legged moths)
Schreckensteiniids are very small, narrow-winged moths, with wingspans usually of 8 to 12 mm. They are characterised by stiff spines on the upper margin of the hind tibiae. Larvae are external feeders on various plants; pupation takes place in a mesh cocoon.

The family Schreckensteiniidae contains only eight species. Three species are known in North America, two of which are recorded from BC.

0605 Schreckensteinia felicella (Walsingham, 1880)
0606 Schreckensteinia festaliella Hübner, [1819]

Superfamily Epermenioidea

44. Family Epermeniidae (fringe-tufted moths)
Epermeniids are very small to small moths, with narrow, fringed wings spanning 6 to 20 mm. The forewings usually have one or more tufts of erect scales on the trailing margin. Known larvae begin life as concealed feeders, but feed externally in later instars.

Worldwide, 126 species occur in all regions; 12 are known from North America. Three species are recorded from BC. These moths are rarely encountered and poorly known. The North American members of the family were revised by Gaedike (1977), in German.

0607 Epermenia albapunctella Busck, 1908
0608 Epermenia cicutaella Kearfott, 1903
0609 Ochromolopis ramapoella (Kearfott, 1903)

Superfamily Urodoidea

45. Family Urodidae (false burnet moths)
Urodids are small to medium-sized moths, with wings spanning about 15 to 40 mm. The front margin of the male hind wing has a pencil of hairs; the antennae of males are lamellate. The few known larvae of the Urodidae feed on broadleaved trees.

This small family consists of 66 described species, most of which are Neotropical. Two species live in North America; one occurs in BC.

0610 Wockia asperipunctella (Bruand, 1852)
Superfamily Choreutoidea

46. Family Choreutidae (metalmark moths)
The Choreutidae are extremely small to small moths, with wingspans of 5 to 20 mm. The wings are usually broad, frequently with metallic markings or contrasting patterns. The species now placed in the Choreutidae had been placed in various other families, and often had been incorrectly associated with the Glyphipterigidae.

Choreutids fly during the day or at dusk. They often swarm over host plants or perch on flowers; many have a characteristically jerky walk. The larvae are mainly leaf webbers or skeletonisers, but a few species bore in flower inflorescences. Pupae are encased in a lace-like, often double, cocoon in folded leaves.

About 400 species of Choreutidae are known worldwide. There are 33 species in North America; 11 species are known in BC.

Subfamily Choreutinae

0611 Anthophila alpinella (Busck, 1904)
0612 Prochoreutis inflatella (Clemens, 1863)
0613 Prochoreutis pernivalis (Braun, 1921)
0614 Caloreas multimarginata (Braun, 1925)
0615 Caloreas leucobasis (Dyar, 1900)
   Older determinations likely refer to undescribed species, but are retained under this name as a 'placeholder'; CNC material was labelled with unpublished manuscript names by J. B. Heppner in the 1990s.
0616 Tebenna balsamorrhizella (Busck, 1904)
0617 Tebenna piperella (Busck, 1904)
0618 Tebenna onustana (Walker, 1864)
0619 Choreutis pariana (Clerck, 1759)
   Introduced from Eurasia. First found in North America in NY in 1917 and in BC in 1937 (Doganlar and Bierne 1981).
0620 Choreutis diana (Hübner, [1822])
0621 Choreutis betulipera (Dyar, 1902)

Superfamily Tortricoidea

47. Family Tortricidae (bell moths and leafroller moths)
Tortricids are very small to medium-sized moths. Their wingspans range from about 7 to 35 mm, rarely to 60 mm. The forewings are broad and usually square tipped, giving the adult a characteristic bell or shield shape when the wings are folded tent-like at rest. The moths are usually cryptically
coloured—tan, brown or grey, and striped, spotted or marbled—but some have shiny, metallic markings.

Tortricid larvae feed upon a vast array of plant families. Many species are leafrollers, but larvae of many species have other habits: as leaf tiers, as feeders in buds, flowers, shoots and seeds, and as borers in plant parts. Leafrolling larvae often pupate in silk-tied shelters on the food plant; many boring larvae pupate in the ground. Most adults are nocturnal, but there are several brightly coloured day-flying groups. The Tortricidae contains many agricultural and forest pests.

The family Tortricidae is a large group with about 10,400 named species. In North America, about 1,390 species are described, with 440 reported in BC (and one more species listed as “expected”), making it the second-largest family of Lepidoptera in the province. The subfamily Olethreutinae has historically been given separate family status. The Subtribe Cochylina, here placed in the Tortricinae, has also historically been considered a family (Cochylidae). Despite the importance of many tortricid species as pests, many groups within the family are not well known. Some major published works cover the Tortricini (Razowski 1966), Archipini (Freeman 1958), Sparganothini and Atteriini (Powell and Brown 2012), and most of the Olethreutinae (Heinrich 1923, 1926). Brown (2005) recently published a world catalogue. Recently, Gilligan et al. (2014) redefined the large genera *Phaneta* and *Eucosma*, and moved several species from *Eucosma* to the new genus *Eucopina*. Wright and Gilligan (2015) reviewed the North American species of *Eucosma*.

**Subfamily Tortricinae**

**Tribe Tortricini**

0622  *Acleris forsskaleana* (Linnaeus, 1758)  1
0623  *Acleris albicomana* (Clemens, 1865)
0624  *Acleris curvalana* (Kearfott, 1907)
0625  *Acleris holmiana* (Linnaeus, 1758)  1

Introduced from Eurasia; first found in North America in BC in 1977.

0626  *Acleris comariana* (Zeller, 1846)  1

The Strawberry Tortrix was introduced from Europe and first detected in North America in BC in 1972 (Gillespie and Gillespie 1982).

0627  *Acleris caliginosana* (Walker, 1863)
0628  *Acleris ptychogrammos* (Zeller, 1875)
0629  *Acleris nivisellana* (Walsingham, 1879)
Acleris rhombana ([Denis & Schiffermüller], 1775)
Acleris cervinana (Fernald, 1882)
Acleris subnivana (Walker, 1863)
Acleris braunana (McDunnough, 1934)
Acleris fuscania (Barnes & Busck, 1920)
Acleris semiannula (Robinson, 1869)
Acleris implexana (Walker, 1863)
Acleris cornana (McDunnough, 1933)
Acleris forbesana (McDunnough, 1934)
Acleris schalleriana (Linnaeus, 1761)
Acleris okanagana (McDunnough, 1940)
Acleris oxycoccana (Packard, 1869)
Acleris variegana ([Denis & Schiffermüller], 1775)
Acleris hastiana (Linnaeus, 1758)
Acleris fragariana Kearfott, 1904
Acleris celiana (Robinson, 1869)
Acleris arcticana (Guenée, 1845)
Acleris robinsoniana (Forbes, 1923)
Acleris britannia Kearfott, 1904
Acleris logiana (Clerck, 1759)
Acleris senescens (Zeller, 1874)
Acleris maculidorsana (Clemens, 1864)
Acleris minuta (Robinson, 1869)
Acleris paracinderella Powell, 1964
Acleris gloveranus (Walsingham, 1879)
Acleris variana (Fernald, 1886)
Acleris inana (Robinson, 1869)
Acleris scabra ([Denis & Schiffermüller], 1775)
Acleris bowmanana (McDunnough, 1934)
Acleris aenigmana Powell, 1964
Acleris nigrolinea (Robinson, 1869)
Acleris maximana (Barnes & Busck, 1920)
Acleris effractana (Hübner, 1822)
Listed by Cannings and Scudder (2007) as A. emargana (Fabricius), an Old World
species. North American specimens have recently been recognised as distinct
(Karsholt et al. 2005).

Acleris foliana (Walsingham, 1879)

Acleris hudsoniana (Walker, 1863)

Tribe Cnephasiini

Cnephasia longana (Haworth, 1811)
Known as the Omnivorous Leaftier, this species was introduced from Europe; it
was first found in North America in OR in 1929.

Cnephasia stephensiana (Doubleday, 1849)

Eana argentina (Clerck, 1759)

Eana georgiella (Hulst, 1887)
Identity of Canadian material identified as this species is uncertain.

Eana osseana (Scopoli, 1763)
Most material previously identified as this species in western Canada has been re-
determined as E. idahoensis Obraztsov, although true E. osseana is known from the
Rocky Mountains in AB and probably also occurs in BC (J. J. Dombroskie, personal
communication). The subspecies niveosana (Packard) has been reported from BC.

Eana idahoensis Obraztsov, 1963

Decodes fragaria (Busck, 1919)

Decodes horaria (Walsingham, 1879)

Powell (1980) claimed this species is restricted to WA–OR, and that northern Rocky
Mountain specimens are D. macdunnoughi Powell. However, the relationship and
boundaries between the two species in western Canada remain uncertain.

Decodes macdunnoughi Powell, 1980

Tribe Euliini

Subtribe Cochylina

Phtheochroa aegrana (Walsingham, 1879)

Phtheochroa aureoalbida (Walsingham, 1895)

Phtheochroa baracana (Busck, 1907)
Reported from BC by J. J. Dombroskie (personal communication).

Phtheochroa canariana (Barnes & Busck, 1920)
Reported from BC by J. J. Dombroskie (personal communication).

Phtheochroa cartwrightana (Kearfott, 1907)

Phtheochroa fulviplicana (Walsingham, 1879)
Records by Razowski (1997) include P. canariana (Barnes & Busck), treated therein
as a synonym.

Phtheochroa riscana (Kearfott, 1907)

Phtheochroa villana (Busck, 1907)

Phtheochroa vitellinana (Zeller, 1875)

Phtheochroa vulneratana (Zetterstedt, 1839)

Phtheochroa waracana (Kearfott, 1907)

Henricus contrastana (Kearfott, 1907)
Henricus fuscodorsana (Kearfott, 1904)

Henricus infernalis (Heinrich, 1920)

Listed by Cannings and Scudder (2007) under the name H. brevipalpata McDunnough, a synonym.

Platphalonia lavana (Busck, 1907)

Agapeta zoegana (Linnaeus, 1767)

European species released for biocontrol of knapweed (Centaurea spp.) (Weeden et al. 2002).

Aethes biscana (Kearfott, 1907)

Reported from BC by J. J. Dombroskie (personal communication).

Aethes deutschiana (Zetterstedt, 1840)

Aethes monera Razowski, 1986

Aethes promptana (Robinson, 1869)

Although most historical records of this species in western Canada are actually A. razowskii Sabourin & Miller, two BC specimens barcode consistently with true A. promptana.

Aethes razowskii Sabourin & Miller, 2002

Aethes rutilana (Hübner, 1818)

Aethes smethmanniana (Fabricius, 1781)

Thyraylia bunteana (Robinson, 1869)

Thyraylia nana (Haworth, 1811)

Cochylis atricapitana (Stephens, 1852)

Introduced from Europe for biocontrol of Tansy Ragwort (De Clerck-Floate & Carcamo 2011).

Cochylis dubitana (Hübner, 1799)

Cochylis hoffmanana (Kearfott, 1907)

Recently collected in BC by DH.

“Cochylis” voxcan (Kearfott, 1907)

Subtribe Euliina

Eulia ministrana (Linnaeus, 1758)

Anopina ednana (Kearfott, 1907)

Anopina arizonana (Walsingham, 1884)

Apotomops wellingtoniana (Kearfott, 1907)

Tribe Archipini

Pandemis cerasana (Hübner, 1786)

Introduced from Eurasia; first found in North America in BC in 1964.

Pandemis heparana ([Denis & Schiffermüller], 1775)

Introduced from Eurasia; first found in North America in BC in 1978.

Pandemis lamprosana (Robinson, 1869)

Pandemis limitata (Robinson, 1869)

Pandemis canadana Kearfott, 1905

Pandemis pyrusana Kearfott, 1907

Pandemis coniferana Mutuura, 1978

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Argyrotaenia velutinana (Walker, 1863)
Argyrotaenia pinatubana (Kearfott, 1905)
Argyrotaenia tabulana Freeman, 1944
Argyrotaenia gogana (Kearfott, 1907)
Argyrotaenia occultana Freeman, 1942
Argyrotaenia provana (Kearfott, 1907)
Argyrotaenia franciscana (Walsingham, 1879)
Argyrotaenia dorsalana (Dyar, 1903)
Choristoneura fractivittana (Clemens, 1865)
Choristoneura zapulata (Robinson, 1869)
Choristoneura rosaceana (Harris, 1841)
Choristoneura albaniana (Walker, 1863)
Choristoneura conflictana (Walker, 1863)
Choristoneura fumiferana (Clemens, 1865)
Choristoneura freemani Razowski, 2008
Choristoneura biennis Freeman, 1967
Choristoneura orae Freeman, 1967
Choristoneura pinus Freeman, 1953
Choristoneura lambertiana (Busck, 1915)
Archips packardiana (Fernald, 1886)
Archips striana Fernald, 1905
Archips alberta (McDunnough, 1923)
Archips dissitana (Grote, 1879)
Archips tsuganus (Powell, 1962)
Archips oporana (Linnaeus, 1758)
**Archips rosana** (Linnaeus, 1758)

The European Leafroller. Introduced from Europe.

**Archips podana** (Scopoli, 1763)

Introduced from Europe in 1897 (Covell 1984).

**Archips argyrospila** (Walker, 1863)

Subspecies *columbiana* (McDunnough), type locality Salmon Arm, occurs in BC.

**Archips mortuana** Kearfott, 1907

**Archips eleagnana** (McDunnough, 1923)

**Archips negundana** (Dyar, 1902)

**Archips grisea** (Robinson, 1869)

Recently collected in BC near Sicamous by deWaard (2010). This species is otherwise not known from western North America, and the record requires confirmation.

**Archips cerasivorana** (Fitch, 1856)

**Archips fervidana** (Clemens, 1860)

**Archips purpurana** (Clemens, 1865)

**Syndemis afflicata** (Walker, 1863)

**Lozotaenia rindgei** Obraztsov, 1962

**Aphelia alleniana** (Fernald, 1882)

**Aphelia koebelii** Obraztsov, 1959

**Dichelia histrionana** (Frölich, 1828)

**Clepsis fucana** (Walsingham, 1879)

**Clepsis spectrana** (Treitschke, 1830)

**Clepsis persicana** (Fitch, 1856)

Subspecies *torbii* Obraztsov (described from Wellington, BC) occurs in southern BC.

**Clepsis consimilana** (Hübner, 1822)

Introduced from Europe in 1897 (Covell 1984).

**Clepsis clemensiana** (Fernald, 1879)

**Clepsis moeschleriana** (Wocke, 1862)

**Clepsis melaleucana** (Walker, 1863)

No BC records are known for this species, but it almost certainly occurs in BC’s Peace River region.

**Clepsis peritana** (Clemens, 1860)

The Garden Tortrix.

**Clepsis penetrals** Razowski, 1979

A specimen was collected on 19 August 2011 from Port Alberni, BC, by L. Avis, and was identified via DNA barcoding. This species was described from UT and was recently found in the Rocky Mountains of AB (Pohl et al. 2011), so this represents a western range extension for the species.

**Clepsis virescana** (Clemens, 1865)

**Ditula angustiorana** (Haworth, 1811)

Introduced from Europe. First found in North America in BC in 1924 (Gillespie and Gillespie 1982).

**Xenotemna pallorana** (Robinson, 1869)
Tribe Sparganothini

0766  *Amorbia cuneana* (Walsingham, 1879)
0767  *Amorbia humerosana* Clemens, 1860
0768  *Sparganothis sulfureana* (Clemens, 1860)
     This otherwise eastern species may occur naturally in BC’s Peace River region. However, it has appeared recently in the Lower Mainland, where it feeds on commercial blueberry crops.
0769  *Sparganothis unifasciana* (Clemens, 1864)
     Reported from BC by J. J. Dombroskie (personal communication).
0770  *Sparganothis violaceana* (Robinson, 1869)
0771  *Sparganothis xanthoides* (Walker, 1863)
0772  *Sparganothis senecionana* (Walsingham, 1879)
0773  *Sparganothis tunicana* (Walsingham, 1879)
0774  *Sparganothis vocaridorsana* Kearfott, 1905
0775  *Sparganothis striata* (Walsingham, 1884)
0776  *Cenopis reticulatana* (Clemens, 1860)
     Reported from the Vancouver area by Powell and Brown (2012).
0777  *Platynota idaeusalis* (Walker, 1859)
0778  *H  Platynota stultana* Walsingham, 1884
     The Omnivorous Leafroller. This species is native to Mexico, but has been introduced to CA and the eastern USA. It has been reported in BC, but appears to occur here only in greenhouses.

Subfamily Olethreutinae

Tribe Olethreutini

0779  *Endothenia hebesana* (Walker, 1863)
0780  *Endothenia nubilana* (Clemens, 1865)
0781  *Taniva albolineana* (Kearfott, 1907)
0782  *Bactra lancealana* (Hübner, [1799])
0783  *Bactra furfurana* (Haworth, 1811)
0784  *Bactra verutana* Zeller, 1875
0785  *Episimus argutanus* (Clemens, 1860)
0786  *Paralobesia piceana* (Freeman, 1941)
0787  *Lobesiodes euphorbiana* (Freyer, 1842)
     Introduced to BC for biocontrol of Leafy Spurge.
0788  *Apotomis funerea* (Meyrick, 1920)
0789  *Apotomis removana* (Kearfott, 1907)
0790  *Apotomis apateticana* (McDunnough, 1922)
0791  *Apotomis tertiana* (McDunnough, 1922)
0792  *Apotomis bifida* (McDunnough, 1938)
     Collected recently in BC near Hazelton by deWaard (2010).
0793  *Apotomis capreana* (Hübnér, [1817])
0794  *Apotomis deceptana* (Kearfott, 1905)

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0795 Apotomis frigidana (Packard, 1867)
0796 Apotomis spinulana (McDunnough, 1938)
0797 Apotomis infida (Heinrich, 1926)
0798 Pseudosciaphila duplex (Walsingham, 1905)
0799 Orthotaenia undulana ([Denis & Schiffermüller], 1775)
0800 Olethreutes olivaceana (Fernald, 1882)
0801 Olethreutes punctanum (Walsingham, 1903)
0802 Olethreutes quadrifidum (Zeller, 1875)
0803 Olethreutes baccatana (McDunnough, 1942)
0804 Olethreutes permundana (Clemens, 1860)
0805 Olethreutes appendiceum (Zeller, 1875)
0806 Olethreutes fasciatana (Clemens, 1860)
0807 Olethreutes albiciliana (Fernald, 1882)
0808 Olethreutes siderana Treitschke, 1834
Subspecies chalybeana (Walsingham) has been reported from BC.
0809 Olethreutes galaxana Kearfott, 1907
The nominate subspecies and subspecies glitranana Kearfott have been reported from BC.
0810 Olethreutes astrologana (Zeller, 1875)
0811 U Olethreutes coruscan (Clemens, 1860)
Most historical records under this name in western Canada refer to O. metallicana (Hübner). True O. coruscan is known only as far west as SK, but it may also occur in AB and BC (Miller 1985).
0812 Olethreutes metallicana (Hübner, 1796)
0813 Olethreutes nordeggana (McDunnough, 1922)
0814 Olethreutes heinrichana (McDunnough, 1927)
0815 Olethreutes minaki (McDunnough, 1929)
0816 Olethreutes deprecatarius Heinrich, 1926
0817 Olethreutes carolana (McDunnough, 1922)
0818 Olethreutes polluxana (McDunnough, 1922)
0819 Olethreutes glaciana (Möscher, 1860)
0820 Olethreutes bipartitana (Clemens, 1860)
0821 Olethreutes trinitana (McDunnough, 1931)
0822 Olethreutes schulziana (Fabricius, 1777)
0823 Olethreutes turfosana (Herrich-Schäffer, 1851)
0824 Olethreutes septentrionana (Curtis, 1831)
0825 Olethreutes mengelana (Fernald, 1894)
0826 Olethreutes costimaculana (Fernald, 1882)
0827 Olethreutes buckellana (McDunnough, 1922)
The nominate subspecies occurs in BC.
0828 Celypha cespitana (Hübner, [1817])
Argyroplece dalecarliana (Guenée, 1845)
Hedyia separatana (Kearfott, 1907)
Hedyia ochroleucana (Frölich, 1828)
Hedyia nubiβerana (Haworth, 1811) Introduced from Europe; first found in North America in NS in 1913 and in BC in 1914.

Tribe Enarmoniini
Ancylis nubeculana (Clemens, 1860)
Ancylis subaequana (Zeller, 1875)
Subspecies kincaidiaiana (Fernald) has been reported from BC.
Ancylis discigerana (Walker, 1863)
Ancylis metamelana (Walker, 1863)
Ancylis tenebrica (Heinrich, 1929)
Ancylis semiovana (Zeller, 1875)
Ancylis columbiana (McDunnough, 1955)
Ancylis simuloides (McDunnough, 1955)
Ancylis laciniana (Zeller, 1875)
Ancylis burgessiana (Zeller, 1875)
Ancylis mira Heinrich, 1929
Ancylis comptana (Frölich, 1828) Introduced from Eurasia?
Ancylis apicana (Walker, 1866)
Ancylis muricana (Walsingham, 1879)
This species was reported from BC by ESBC (1906) as subspecies cornitoliana Riley, but no vouchers are known. This species is otherwise unknown in western Canada.
Ancylis diminutana (Haworth, 1811) Reported by ESBC (1906) and other early authors under the names "diminutana Kearfott", a misspelling or unjustified redescription, and "biarcuana (Stephens)", a synonym of the similar Palaearctic A. geminana (Donovan) (see Heinrich 1923).
Ancylis unguicella (Linnaeus, 1758)
Ancylis pacificana (Walsingham, 1879)
Ancylis mediofasciana (Clemens, 1864)
Ancylis tineana (Hübner, [1799])
Hystrichophora paradisiae Heinrich, 1923
Hystrichophora stygiana (Dyar, 1903)
The subspecies californiae Heinrich has been reported from BC.
Hystrichophora asphodelana (Kearfott, 1907)
Enarmonia formosana (Scopoli, 1763) Introduced from Europe. Found in North America in NY in 1913 and in BC in 1938.

Tribe Eucosmini
Rhyacionia buoliana ([Denis & Schiffermüller], 1775) Introduced from Europe. Found in North America in NY in 1913 and in BC in 1938.
Rhyacionia pasadenana (Kearfott, 1907)
Rhyacionia zozana (Kearfott, 1907)
Rhyacionia busckana Heinrich, 1923
Rhyacionia subcervinana (Walsingham, 1879)
Retinia albicapitana (Busck, 1914)
Retinia metallica (Busck, 1914)
Retinia burkeana (Kearfott, 1907)
Collected recently in BC by DH; determined by E. Lagasa.
Retinia picicolana (Dyar, 1906)
Barbara colfaxiana (Kearfott, 1907)
Subspecies coloradensis (Heinrich) and taxifoliella (Busck) have been reported from BC. Blackmore (1924) reported it as subspecies siskiyouana (Kearfott), now recognised as a valid species in the genus Eucopina.
Barbara mappana Freeman, 1941
Spilonota ocellana ([Denis & Schiffermüller], 1775) Introduced from Eurasia; first found in North America in MA in 1841.
Eucosma awemeana (Kearfott, 1907)
Eucosma indeterminana (McDunnough, 1925)
Eucosma umbrastriana (Kearfott, 1907)
Eucosma altana (McDunnough, 1927)
Eucosma corculana (Zeller, 1874)
Eucosma verna (Miller, 1971)
Eucosma formosana (Clemens, 1860)
Eucosma marmontana (Kearfott, 1907)
Eucosma oregonensis (Heinrich, 1923)
Eucosma parmatana (Clemens, 1860)
Eucosma modernana (McDunnough, 1925)
Eucosma fasciculata (McDunnough, 1938)
Eucosma latens (Heinrich, 1929)
Eucosma columbiana (Walsingham, 1879)
Eucosma apacheana (Walsingham, 1884)
Eucosma influana (Heinrich, 1923)
Eucosma lapidana (Walsingham, 1879)
Eucosma elongana (Walsingham, 1879)
Eucosma rupestrana (McDunnough, 1925)
Eucosma transversa (Walsingham, 1895)
Eucosma tarandana (Möschler, 1874)
Eucosma nepotinana (Heinrich, 1923)
Eucosma complicana (McDunnough, 1925)
This species is known only from the holotype, collected at Osoyoos on 19 May 1923 by C. B. Garrett.
Eucosma misturana (Heinrich, 1923)
Heinrich’s (1923) report of this species from “White Pass AK” is actually from BC.

Eucosma fertoriana (Heinrich, 1923)

Eucosma crassana (McDunnough, 1938)

Eucosma alatana (McDunnough, 1938)

Eucosma indagatricana (Heinrich, 1923)

Eucosma dorsiatomana (Kearfott, 1905)

Eucosma striatana (Clemens, 1860)

Eucosma occidentalis (Heinrich, 1923)
Raised from a subspecies of E. striatana (Clemens) to full species status by Wright and Gilligan (2015).

Eucosma implicata (Heinrich, 1931)

Eucosma pallidarcis (Heinrich, 1923)

Eucosma pallidicostana (Walsingham, 1879)

Eucosma perangustana (Walsingham, 1879)

Eucosma kiscana (Kearfott, 1905)

Eucosma artemisiana (Walsingham, 1879)
No BC vouchers are known for this species, reported from BC by ESBC (1906), but it occurs in WA. There is no reason to doubt that it occurs in BC.

Eucosma infimbriana (Dyar, 1904)

Eucosma octopunctana (Walsingham, 1895)

Eucosma youngi (McDunnough, 1925)

Eucosma setonana (McDunnough, 1927)

Eucosma montanana (Walsingham, 1884)

Eucosma griseocapitana (Walsingham, 1879)

Pelochrista crambitana (Walsingham, 1879)

Pelochrista canariana (Kearfott, 1907)

Pelochrista ridingsana (Robinson, 1869)

Pelochrista caniceps (Walsingham, 1884)

Pelochrista optimana (Dyar, 1893)

Pelochrista ragonoti (Walsingham, 1895)

Pelochrista serpentana (Walsingham, 1895)

Pelochrista morrisoni (Walsingham, 1884)

Pelochrista agricolana (Walsingham, 1879)

Pelochrista smithiana (Walsingham, 1895)

Pelochrista watertonana McDunnough, 1925

Pelochrista louisana (McDunnough, 1944)

Pelochrista subflavana (Walsingham, 1879)

Pelochrista lolana (Kearfott, 1907)

Pelochrista dodana (Kearfott, 1907)

Pelochrista biplagata (Walsingham, 1895)
Pelochrista nandana (Kearfott, 1907)
Pelochrista dorsisignatana (Clemens, 1860)
Pelochrista juncticiliana (Walsingham, 1879)
Pelochrista derelicta (Heinrich, 1929)
Pelochrista excusabilis (Heinrich, 1923)
Pelochrista hohana (Kearfott, 1907)
Pelochrista biquadrana (Walsingham, 1879)
Pelochrista cataclystiana (Walker, 1863)
Pelochrista conspiciendana (Heinrich, 1923)
Pelochrista argenteana (Walsingham, 1895)
Pelochrista scintillana (Clemens, 1865)
Pelochrista mediostriata (Walsingham, 1895)
Pelochrista kingi Wright, 2008
This species was reported as Eucosma occipitana (Zeller) by Cannings and Scudder (2007), prior to the description of P. kingi as a distinct species.
Pelochrista rorana (Kearfott, 1907)
Pelochrista metariana (Heinrich, 1923)
Pelochrista comatulana (Zeller, 1875)
Pelochrista medullana (Staudinger, 1879)
Introduced from biocontrol of knapweed.
Eucopina sonomana (Kearfott, 1907)
Eucopina bobana (Kearfott, 1907)
Eucopina ponderosa (Powell, 1968)
Eucopina rescissoriana (Heinrich, 1920)
Eucopina siskiyouana (Kearfott, 1907)
Epiblema hirsutana (Walsingham, 1879)
Epiblema radicana (Walsingham, 1879)
No specimens are known to support the BC record by Blackmore (1924; as E. gratitiana Heinrich, a synonym), but the species is known from WA and likely occurs in BC as well.
Epiblema periculosana Heinrich, 1923
Epiblema brightonana (Kearfott, 1907)
Epiblema resumptana (Walker, 1863)
Notocelia rosaecolana (Doubleday, 1850)
Recent collection in BC by DH.
Notocelia cynosbatella (Linnaeus, 1758)
Introduced from Europe; first found in North America in BC in 1978.
Notocelia purpurissatana (Heinrich, 1923)
Notocelia ilotana (Walsingham, 1879)
Notocelia culminana (Walsingham, 1879)
Gypsonoma fasciolana (Clemens, 1864)
Gypsonoma haimbachiana (Kearfott, 1907)

Gypsonoma substitutionis Heinrich, 1923

Gypsonoma salicicolana (Clemens, 1864)

Gypsonoma adjuncta Heinrich, 1924

Gypsonoma aceriana (Duponchel, 1842)

This introduced species was collected in BC recently by DH; determined by E. Lagasa.

Proteoteras aesculana Riley, 1881

Proteoteras willingana (Kearfott, 1904)

Proteoteras arizonae Kearfott, 1907

Proteoteras obnigrana Heinrich, 1923

Zeiraphera pacifica Freeman, 1966

Zeiraphera canadensis Mutuura & Freeman, [1967]

The Spruce Bud Moth. Prior to its description in 1967, this species was referred to under the Palearctic name Z. ratzeburgiana (Saxesen).

Zeiraphera improbana (Walker, 1863)

Zeiraphera fortunana (Kearfott, 1907)

Zeiraphera unfortunana Ferris & Kruse, 2008

The authority for the name unfortunana is often cited as “Powell (1983)”, but Powell (in Hodges et al. 1983) proposed the name without a description, making it a nomen nudum. The species Z. unfortunana was formally described by Ferris and Kruse (2008).

Zeiraphera hesperiana Mutuura & Freeman, [1967]

Zeiraphera vancouverana McDunnough, 1925

Pseudexentera oregonana (Walsingham, 1879)

Pseudexentera maracana (Kearfott, 1907)

Rhopobota naevana (Hübner, [1817])

Epinotia radicana (Heinrich, 1923)

Epinotia trigonella (Linnaeus, 1758)

Also listed by Cannings and Scudder (2007) under the name indecorana Zetterstedt, a recent synonym.

Epinotia solandriana (Linnaeus, 1758)

Epinotia pulsatillana (Dyar, 1903)

Epinotia castaneana (Walsingham, 1895)

Epinotia johnsonana (Kearfott, 1907)

Epinotia madderana (Kearfott, 1907)

Epinotia albicapitana (Kearfott, 1907)

Epinotia hopkinsana (Kearfott, 1907)

Subspecies cupressi Heinrich has been reported from BC.

Epinotia subviridis Heinrich, 1929

Epinotia subplicana (Walsingham, 1879)

Epinotia rectiplicana (Walsingham, 1879)
0991 *Epinotia solicitana* (Walker, 1863)
0992 *Epinotia nisella* (Clerck, 1759)
0993 *Epinotia cinereana* (Haworth, 1811)
This species was previously known as *E. criddleana* (Kearfott), which was recently synonymised by Mutanen et al. (2012) and shown to be Holarctic.
0994 *Epinotia albanguulana* (Walsingham, 1879)
0995 *Epinotia transmissana* (Walker, 1863)
Early reports of this species in BC refer to *E. digitana* Heinrich (Blackmore 1924).
0996 *Epinotia momonana* (Kearfott, 1907)
Recently collected in BC near Hazelton by deWaard (2010).
0997 *Epinotia terracoctana* (Walsingham, 1879)
0998 *Epinotia miscana* (Kearfott, 1907)
0999 *Epinotia silvertoniensis* Heinrich, 1923
1000 *Epinotia digitana* Heinrich, 1923
1001 *Epinotia nigrabana* (Walsingham, 1879)
1002 *Epinotia sagittana* McDunnough, 1925
1003 *Epinotia emarginana* (Walsingham, 1879)
1004 *Epinotia columbia* (Kearfott, 1904)
Listed by Cannings and Scudder (2007) and many others as *E. crenana* (Hübner), an Old World species. North American specimens have recently been recognised as distinct (Brown 2005).
1005 *Epinotia bigemina* Heinrich, 1923
1006 *Epinotia arctostaphylana* (Kearfott, 1904)
1007 *Epinotia normanana* Kearfott, 1907
1008 *Epinotia nanana* (Treitschke, 1835)
This species was introduced from Europe and first recorded in North America in MA in 1907. It was present in BC before 1965 (Gillespie and Gillespie 1982).
1009 *Epinotia tsugana* Freeman, 1967
1010 *Epinotia meritana* Heinrich, 1923
1011 *Epinotia lomonana* (Kearfott, 1907)
1012 *Epinotia medioplagata* (Walsingham, 1895)
1013 *Epinotia cruciana* (Linnaeus, 1761)
1014 *Epinotia plumbolineana* Kearfott, 1907
1015 *Epinotia vagana* Heinrich, 1923
1016 *Epinotia seorsa* Heinrich, 1924
1017 *Epinotia kasloana* McDunnough, 1925
1018 *Epinotia signiferana* Heinrich, 1923
1019 *Epinotia lindana* (Fernald, 1892)
1020 *Epinotia trossulana* (Walsingham, 1879)
1021 *Epinotia biangulana* (Walsingham, 1879)
1022 *Epinotia salicicola* Kuznetsov, 1968

*Epinotia salicicola* Kuznetsov, 1968

Introduced from Eurasia?
Catastega timidella Clemens, 1861
Probably introduced to BC from eastern North America, according to Brown (1986).

**Tribe Grapholitini**

Dichrorampha simulana (Clemens, 1860)
Dichrorampha vancouverana McDunnough, 1935
Dichrorampha radicicolana Walsingham, 1879
Dichrorampha piperana (Busck, 1900)
Dichrorampha sedatana (Busck, 1906)
Pammene felicitana Heinrich, 1923
Pammene perstructana (Walker, 1863)
Reported from BC by J. J. Dombroskie (personal communication).
Grapholita libertina Heinrich, 1926
Grapholita packardi Zeller, 1875
Grapholita prunivora (Walsh, 1868)
Reported from BC by Belton (1988), but no vouchers are known.
Grapholita caeruleana Walsingham, 1879
Grapholita vitrana Walsingham, 1879
Reported from BC by J. J. Dombroskie (personal communication).
Grapholita conversana Walsingham, 1879
Grapholita imitativa Heinrich, 1926
Grapholita lunatana Walsingham, 1879
Grapholita edwardsiana (Kearfott, 1907)
Grapholita lana (Kearfott, 1907)
Cydia coniferana (Ratzeburg, 1840)
Introduced from Europe to eastern North America; this species reached BC from WA after 2000.
Cydia bracteatana (Fernald, 1880)
Cydia laricana (Busck, 1916)
Cydia rana (Forbes, 1924)
Cydia inopiosa (Heinrich, 1926)
Cydia confusana (McDunnough, 1935)
Cydia obnisa (Heinrich, 1926)
Cydia youngana (Kearfott, 1907)
North American populations have recently been recognised as a distinct species, separate from the Palaeartic C. strobilella (Linnaeus).
Cydia populana (Busck, 1916)
Cydia flexiloqua (Heinrich, 1926)
Cydia nigricana (Fabricius, 1794) Known as the Pea Moth, this species was introduced from Europe. It was first found in North America in eastern Canada in 1893 and in BC in 1933. It was responsible for the elimination of the dried-pea and pea-seed industry in BC. This species was also listed by Cannings and Scudder (2007) under the name C. rusticella (Clerck), a recent synonym.

Cydia pseudotsugae (Evans, 1969)

Cydia prosperana (Kearfott, 1907)

Cydia lautiuscula (Heinrich, 1926)

Cydia americana (Walsingham, 1879)

Cydia toreuta (Grote, 1873)

Cydia piperana Kearfott, 1907

Cydia miscitata (Heinrich, 1926)

Cydia pomonella (Linnaeus, 1758) This species, known as the Codling Moth, was introduced from Europe very early, perhaps in the 1600s. It was first reported in BC in 1900. The larva is the proverbial “worm in the apple”: it damages apples by feeding in the core and tunneling out when fully grown. It is a serious pest in the fruit-growing regions of BC.

Cydia latiferreana (Walsingham, 1879)

Subfamily Chlidanotinae

Tribe Hilarographini

Thaumatographa youngiella (Busck, 1922) Reared in BC recently by DH, from the bark of Douglas-fir.

Superfamily Coccoidea

48. Family Cossidae (carpenterworm moths; goat moths) Most Cossidae are medium-sized to large heavy-bodied moths; their wing-spans range from about 10 to 240 mm (usually from 25 to 100 mm in North American species). The forewings usually are long and narrow, and the abdomen extends beyond the hind wing. The antennae are usually bipectinate in males and thread-like in females. There is no proboscis.

Cossid larvae are woodborers or, in a few cases, tunnel in the soil and feed externally on roots. Many are smelly, a characteristic that has given the family one of its English names: goat moths. The larvae of some species may take up to four years to mature. Many species can seriously damage trees.

The family Cossidae contains about 970 described species throughout the world. Forty-six species are recorded in North America; four occur in BC.

Subfamily Hypoptinae

Givira cornelia (Neumögen & Dyar, 1893)
Subfamily Cossinae
1063 *Acossus centerensis* (Lintner, 1877)
1064 *Acossus populi* (Walker, 1856)
   Subspecies *orc* (Strecker) has been reported from BC.
1065 *Prionoxystus robiniae* (Peck, 1818)

49. **Family Sesiidae (clearwing moths)**
Clearwing moths are mostly medium-sized moths of striking wasp-like appearance. The wingspan in North American species ranges from about 13 to 70 mm. The body is stout, elongate, and frequently marked and banded with white, yellow, orange or red. The scales often are iridescent. The wings are long and narrow, with wasp-like proportions, and have extensive areas, at least on the hind wing, that lack scales.

Clearwing moths are diurnal, swift-flying, usually brightly coloured insects that often mimic stinging Hymenoptera. Some species visit flowers and feed on nectar, but others do not eat. The pale, unpatterned larvae bore in roots, trunks and branches of trees, or in the stems and roots of herbaceous plants.

The Sesiidae consists of about 1400 named species worldwide; in North America, 133 species are recorded. Twenty-six species have been reported from BC. The family was revised by Eichlin and Duckworth (1988).

Subfamily Tinthiinae

**Tribe Tinthiini**
1066 U *Zenodoxus sidalceae* Engelhardt, 1946
   Uncertain BC record in Eichlin and Duckworth (1988), but there is no reason to doubt this species occurs in BC: it was described from Pullman, WA.

**Tribe Pennisetiiini**
1067 *Pennisetia marginatum* (Harris, 1839)

Subfamily Sesiinae

**Tribe Paranthrenini**
1068 *Paranthrene robiniae* (Edwards, 1880)
1069 U *Paranthrene tabaniformis* (Rottemburg, 1775)
   Uncertain BC record in Eichlin and Duckworth (1988). That record may be based on an AB specimen (also determination unconfirmed) in the RBCM. This is an eastern species that is not thought to reach BC, but it was recently confirmed to occur in central AB (Pohl et al. 2011). It may occur in BC’s Peace River region.
1070 *Albuna pyramidalis* (Walker, 1856)
### Tribe Sesiini

1071 *Sesia tibiale* (Harris, 1839)
1072 *Sesia spartani* Eichlin & Taft, 1988

### Tribe Synanthedonini

1073 *Synanthedon scitula* (Harris, 1839)
1074 *Synanthedon tipuliformis* (Clerck, 1759) ?

Probably introduced from Europe.

1075 *Synanthedon bolteri* (Edwards, 1883)
1076 *Synanthedon canadensis* Duckworth & Eichlin, 1973
1077 *Synanthedon culiciformis* (Linnaeus, 1758)
1078 *Synanthedon saxifragae* (Edwards, 1881)
1079 *Synanthedon albicornis* (Edwards, 1881)
1080 *Synanthedon bibionipennis* (Boisduval, 1869) ?

Introduced from Eurasia?

1081 *Synanthedon chrysidipennis* (Boisduval, 1869)
  
Reported from BC by Eichlin and Duckworth (1988), but no confirmed BC vouchers are known.

1082 *Synanthedon mellinipennis* (Boisduval, 1836)
1083 *Synanthedon polygoni* (Edwards, 1881)
1084 *Synanthedon resplendens* (Edwards, 1881)
1085 *Synanthedon exitiosa* (Say, 1823)

The Peach Tree Borer.

1086 *Synanthedon novaroensis* (Edwards, 1881)
1087 *Synanthedon sequoiae* (Edwards, 1881)
1088 *Synanthedon myopaeformis* (Borkhausen, 1789) ?

Introduced from Europe to BC; first discovered in the Cawston area in 2005.

1089 *Podosesia syringae* (Harris, 1839)
1090 *Carmenta giliae* (Edwards, 1881)

Reported from BC by Eichlin and Duckworth (1988), but no confirmed BC vouchers are known.

1091 *Penstemonia clarkei* Engelhardt, 1946

Reported from BC by Powell and Opler (2009), but no confirmed BC vouchers are known.

### Superfamily Zygaenoidea

#### 50. Family Limacodidae (slug caterpillar moths)

Limacodid adults are small to medium-sized moths. They are mostly richly coloured in browns, and marked with green, silver or other colours. The body is stout, and the wings are broadly rounded.

Most limacodids are nocturnal and have fast and erratic flight. Larvae feed on diverse trees, shrubs and grasses; some are pests. The larvae are short
and sluglike, smooth or spiny; many bear stinging hairs or spines that make contact with them painful. Abdominal prolegs are highly reduced; specialised suckers and semifluid silk help the insect cling to foliage.

The family Limacodidae contains about 1670 described species worldwide, but is most diverse in the tropics. There are 49 named species in North America, one of which occurs in BC.

**Subfamily Limacodinae**

1092 *Tortricidia testacea* Packard, 1864
Subspecies *crypta* Dyar has been reported from BC.

**Superfamily Thyridoidea**

51. **Family Thyrididae** (*window-winged moths*)

Thyridid moths are small to rather large, with wingspans of 12 to 72 mm. North American species usually are small and dark. The wings are often patterned in reticulated rows of spots, frequently with translucent patches.

The larvae burrow in twigs and stems, or feed in rolled or tied leaves of diverse host plants. Adults rest distinctively with the front of the body strongly raised and wings outstretched or swept back. Many mimic dead leaves, but some day-flying Afrotropical species have metallic warning colours.

The family Thyrididae consists of about 940 described species; most are from tropical and subtropical lowland forests. Twelve species are recorded in North America; two occur in BC.

**Subfamily Thyridinae**

1093 *Thyris maculata* Harris, 1839
1094 *Pseudothyris sepulchralis* (Guérin-Méneville, 1832)

**Section 2: Butterflies**

The butterflies are well known and have been treated in detail in other works, including Guppy and Shepard (2001) for BC species, Pyle (2002) for the Pacific Northwest, including southern BC, and by Layberry et al. (1998) for all of Canada. Pelham (2008) provides a full taxonomic catalogue of North American species. Our main goal here is to list the names of BC species; the aforementioned works should be consulted for more detailed information.
Superfamily Papilionoidea

52. Family Papilionidae (swallowtails and apollos)

Papilionids are large butterflies with hairless eyes, short antennae and three fully developed pairs of legs. British Columbia species range from about 40 to 105 mm in wingspan and include some of the province’s largest Lepidoptera. All BC species are yellow or white, with black markings. All BC members of the subfamily Papilioninae (swallowtails) have tails on the hind wings, whereas those in the subfamily Parnassiinae (apollos) do not—characteristics that do not hold for the world fauna of the family.

Larvae of papilionids eat a variety of food plants. Some species feed on poisonous plants and sequester the chemicals for protection against predators. This has resulted in brilliant warning colours and elaborate mimicry by non-poisonous butterfly species. Swallowtails are strong fliers, and males of some species often search out mates by hilltopping, a mating strategy where individuals fly uphill until they meet in concentrations at the height of land.

The family Papilionidae contains about 570 species worldwide. Most swallowtails are tropical, and are especially diverse in the Old World. Most apollos live in Eurasian temperate regions. About 40 papilionid species occur in North America; 11 of these occur in BC.

Subfamily Parnassiinae

Tribe Parnassiini

1095 *Parnassius eversmanni* Ménétriés, [1850]  
Subspecies *thor* Edwards occurs in BC.

1096 *Parnassius clodus* Ménétriés, 1855  
Subspecies *altaurus* Dyar, *claudianus* Stichel, and *pseudogallatinus* Bryk occur in BC.

1097 *Parnassius phoebus* (Fabricius, 1793)  
Subspecies *apricatus* Stichel occurs in BC.

1098 *Parnassius smintheus* Doubleday, 1847  
Subspecies *magnus* Wright, *olympiana* Burdick, *smintheus* Doubleday, and *yukonensis* Eisner occur in BC. Llewellyn Jones (1951) also reported subspecies *sayii* Edwards from BC.
Subfamily Papilioninae

Tribe Papilionini

1099  Papilio machaon Linnaeus, 1758
Subspecies aliaska Scudder, bairdii Edwards, dodi McDunnough, hudsonianus Clark, oregonia Edwards, and pikei Sperling have been reported from BC. The taxon bairdii was treated as a full species by Guppy and Shepard (2001), with oregonius, pikei, and dodi as subspecies

1100  Papilio zelicaon Lucas, 1852

1101  Papilio indra Reakirt, 1866
The nominate subspecies occurs in BC.

1102  Papilio canadensis Rothschild & Jordan, 1906
Canadian Tiger Swallowtail.

1103  Papilio rutulus Lucas, 1852
Western Tiger Swallowtail.

1104  Papilio eurymedon Lucas, 1852

1105  Papilio multicaudata Kirby, 1884
Subspecies multicaudata Kirby and pusillus Austin & Emmel occur in BC.

53. Family Hesperiidae (skippers)

Skippers get their English name from their characteristic rapid and darting flight. They are small to medium-sized butterflies, with BC specimens having wingspans of 20 to 50 mm. Most have dull brown, grey or orange colours and, with their stout muscular bodies and short wings, resemble moths. The head is broad, and the antennae are usually clubbed or hooked at the tip.

Hesperiid larvae live in silk-lined nests that they construct on the food plant by cutting and folding leaves or by binding several leaves together. Some species build a cover of leaf bits or debris and carry this around while they feed. A few bore into plant tissue. They feed on a variety of flowering plants. A few species, especially in the tropics, may be economically important: some eat the leaves of rice, sugarcane, palms and bananas.

The family Hesperiidae contains over 4100 species worldwide. There are almost 300 species in North America; 30 of these occur in BC. The BC species are placed in three subfamilies, following Pelham (2008) and Warren et al. (2008). The Pyrginae (Spread-wing Skippers) hold their wings out flat. Most BC species are mottled black, grey or brown, and some are checkered with white. The larvae feed on dicotyledonous plants. The Subfamily Hesperinae, called the Grass Skippers because many of their larvae feed on grasses, are sometimes termed “branded skippers”: the
males are marked with a dark patch of scent scales on the forewing. At rest, they hold the forewings almost vertically and the hind wings horizontally. The Heteropterinae were included in the Hesperiinae in historical works.

Subfamily Pyrginae

Tribe Eudamini

1106  *Epargyreus clarus* (Cramer, 1775)
Subspecies *californicus* MacNeil and *clarus* (Cramer) occur in BC.

1107  *Thorybes pylades* (Scudder, 1870)
The nominate subspecies occurs in BC.

Tribe Carcharodini

1108  *Pholusora catullus* (Fabricius, 1793)

Tribe Erynnini

1109  *Erynnis icelus* (Scudder & Burgess, 1870)
1110  *Erynnis propertius* (Scudder & Burgess, 1870)
1111  *Erynnis pacuvius* (Lintner, 1878)
Subspecies *callidus* (Grinnell) and *lilius* (Dyar) occur in BC.
1112  *Erynnis afranius* (Lintner, 1878)
1113  *Erynnis persius* (Scudder, 1863)
Subspecies *fredericki* Freeman occurs in BC.

Tribe Pyrgini

1114  *Pyrgus centaureae* (Rambur, [1842])
Subspecies *freija* (Warren) and *loki* Evans occur in BC.
1115  *Pyrgus ruralis* (Boisduval, 1852)
The nominate subspecies occurs in BC.
1116  *Pyrgus communis* (Grote, 1872)
The nominate subspecies occurs in BC.

Subfamily Heteropterinae

1117  *Carterocephalus palaeon* (Pallas, 1771)
Subspecies *magnus* (Mattoon & Tilden) and *skada* (Edwards) occur in BC.
1118  *Carterocephalus mandan* (Edwards, 1863)
Pohl et al. (2010) raised *C. mandan* to full species status; it was previously treated as a subspecies of the Holarctic *C. palaeon* (Pallas).

Subfamily Hesperiinae

Tribe Thymelicini

1119  *Oarisma garita* (Reakirt, 1866)
1120  *Thymelicus lineola* (Ochsenheimer, 1808)
The European Skipper. This species was introduced from Europe; it was first found in ON in 1910 and in BC in 1960. The nominate subspecies occurs in BC.

Tribe Moncini

1121  *Amblyscirtes vialis* (Edwards, 1862)
Tribe Hesperiini

1122  *Hesperia juba* (Scudder, 1874)

1123  *Hesperia manitoba* (Scudder, 1874)
Referred to in most works as *H. comma manitoba*; however, Pohl et al. (2010) raised *H. manitoba* to full species status, distinct from the European/Beringian *H. comma* (Linnaeus).

1124  *Hesperia assiniboia* (Lyman, 1892)
Treated as a subspecies of *H. comma* (Linnaeus) by Guppy and Shepard (2001)

1125  *Hesperia colorado* (Scudder, 1874)
Reported by Guppy and Shepard (2001) as subspecies *harpalus* (Edwards) and *oregonia* (Edwards) within the concept of the species *H. comma* (Linnaeus); these taxa are now considered to be subspecies of *H. colorado*. Llewellyn Jones (1951) and Pyle (2002) also report subspecies *idaho* (Edwards) from BC.

1126  *Hesperia nevada* (Scudder, 1874)
The nominate subspecies occurs in BC.

1127  *Polites peckius* (Kirby, 1837)

1128  *Polites sabuleti* (Boisduval, 1852)
The nominate subspecies occurs in BC. Pyle (2002) also reports subspecies *alkaliensis* Austin from BC.

1129  *Polites draco* (Edwards, 1871)

1130  *Polites themistocles* (Latreille, [1824])
Subspecies *themistocles* (Latreille) and *turneri* Freeman occur in BC.

1131  *Polites mystic* (Edwards, 1863)
The nominate subspecies occurs in BC.

1132  *Polites sonora* (Scudder, 1872)
Sonora Skipper. Subspecies *siris* (Edwards) and *sonora* (Scudder) occur in BC. This species is listed federally as “special concern” (COSEWIC 2011) and provincially as “S1S2” (critically imperiled–imperiled) (BC Ministry of Environment 2012).

1133  *Atalopedes campestris* (Boisduval, 1852)
The nominate subspecies occurs in BC.

1134  *Ochlodes sylvanoides* (Boisduval, 1852)
The nominate subspecies occurs in BC.

1135  *Euphyes vestris* (Boisduval, 1852)
The Dun Skipper. Subspecies *metacomet* (Harris) and *vestris* (Boisduval) occur in BC. This species is federally and provincially listed as “threatened” in BC (COSEWIC 2011; BC Ministry of Environment 2012).

54. Family Pieridae (whites, marbles, and sulphurs)
Pierids are mostly medium-sized butterflies (30- to 60-mm wingspans in BC species), and are generally white, yellow, orange or greenish, and marked in black and frequently other colours. Males and females are often strikingly different in appearance. The larvae are cylindrical, striped and covered in fine, short hair.
Most BC whites (subfamily Pierinae) and marbles (subfamily Anthocacherinae) feed on cruciferous plants (Family Brassicaceae), whereas most sulphurs (subfamily Coliadinae) feed on legumes (Family Fabaceae). A couple of species are economically important. The introduced European *Pieris rapae* (Linnaeus) (Cabbage White) now occurs all over the world where cabbage, broccoli, mustards and other crucifers are cultivated.

The family Pieridae contains about 1160 named species; 77 species are recorded in North America. British Columbia has 28 species, and is the centre of diversity in North America for the sulphur genus *Colias*, with 13 species in the province.

**Subfamily Coliadinae**

1136 *Colias philodice* Godart, 1819  
Subspecies *eriphyle* Edwards, *philodice* Godart, and *vitabunda* Hovanitz have been reported from BC.

1137 *Colias eurytheme* Boisduval, 1852

1138 *Colias occidentalis* Scudder, 1862  
Subspecies *chrysomelas* Edwards and *occidentalis* Scudder have been reported from BC.

1139 *Colias christina* Edwards, 1863  
The nominate subspecies occurs in BC.

1140 *Colias alexandra* Edwards, 1863  
Subspecies *columbiensis* Ferris and *pseudocolumbiensis* Guppy & Shepard occur in BC. Llewellyn Jones (1951) also reported subspecies *edwardsii* Edwards from BC.

1141 *Colias elis* Strecker, 1885  
Previously treated as a subspecies of *C. meadii* Edwards, but raised to full species status by Pohl et al. (2010).

1142 *Colias hecla* Lefèbvre, 1836  
The nominate subspecies occurs in BC.

1143 *Colias canadensis* Ferris, 1982

1144 *Colias nastes* Boisduval, [1834]  
Subspecies *alaska* Bang-Haas and *streckeri* Grum-Grshimailo occur in BC.

1145 *Colias gigantea* Strecker, 1900  
Subspecies *gigantea* Strecker, *harroweri* Klots, and *mayi* Chermock & Chermock have been reported from BC.

1146 *Colias pelidne* Boisduval & LeConte, [1830]  
Subspecies *skinneri* Barnes occurs in BC. Guppy and Shepard (2001) also used the name *mira* Verity as a subspecies; it is currently considered a synonym (Pelham 2008).

1147 *Colias interior* Scudder, 1862

1148 *Colias palaeno* Linnaeus, 1761  
Subspecies *chippewa* Edwards occurs in BC. That taxon was treated as a full species by Guppy and Shepard (2001).
Subfamily Anthocharinae

1149  *Anthocharis sara* Lucas, 1852
Subspecies *alaskensis* Gunder and *flora* Wright occur in BC.

1150  *Anthocharis stella* Edwards, 1879
Treated by many workers as a subspecies of *A. sara* Lucas, but recognised as distinct by Layberry et al. (1998) and Guppy and Shepard (2001). Pelham (2008) continued to treat *A. stella* as a subspecies of *A. sara* without providing justification.

1151  *Euchloe ausonides* (Lucas, 1852)
Subspecies *ausonides* (Lucas), *insulanus* Guppy & Shepard, *mayi* Chermock & Chermock, *ogilvia* Back, and *transmontana* Austin & Emmel have been reported from BC. The Vancouver Island subspecies *insulanus* is considered extinct in Canada, and is listed as such by COSEWIC (2011) and the BC Ministry of Environment (2012).

1152  *Euchloe naina* Kozhantchikov, 1923

1153  *Euchloe creusa* (Doubleday, 1847)

1154  *Euchloe lotta* (Beutenmüller, 1898)
Reported as a subspecies of *E. hyantis* (Edwards) by Llewellyn Jones (1951) and Cannings and Scudder (2007), but now treated as a distinct species.

Subfamily Pierinae

Tribe Pierini

Subtribe Aporiina

1155  *Neophasia menapia* (Felder & Felder, 1859)
Subspecies *menapia* (Felder & Felder) and *tau* (Scudder) have been reported from BC.

Subtribe Pierina

1156  *Pieris angelika* Eitschberger, 1981

1157  *Pieris marginalis* Scudder, 1861
Subspecies *guppyi* Eitschberger, *marginalis* Scudder, *pseudobryoniae* Fruhsdorfer, *reicheli* Eitschberger, *tremblayi* Eitschberger, and *venosa* Scudder have been reported from BC.

1158  *Pieris oleracea* Harris, 1829
The nominate subspecies occurs in BC. Early reports refer to this species as *P. napi* (Linnaeus), an Old World name.

1159  *Pieris rapae* (Linnaeus, 1758)
The Cabbage Butterfly. Introduced, and first found in North America in QC in 1860. The nominate subspecies occurs in BC.

1160  *Pontia beckerii* (Edwards, 1871)

1161  *Pontia protodice* (Boisduval & LeConte, [1830])

1162  *Pontia occidentalis* (Reakirt, 1866)
Subspecies *nelsoni* Edwards and *occidentalis* (Reakirt) occur in BC.

1163  *Pontia sisymbrii* (Boisduval, 1852)
Subspecies *beringiensis* Guppy & Kondla and *flavitincta* (Comstock) occur in BC.
55. **Family Riodinidae (metalmarks)**
The metalmarks are closely related to the Lycaenidae and have historically been included as a subfamily therein. They are small to medium-sized; North American species seldom have wingspans over 50 mm. Most are coloured in browns, orange and black, and sometimes are checkered in white. Some species have metallic, coloured marks on the wings; these give the family its English name.

Riodinid butterflies often rest with their wings spread flat or held angled at 45 degrees. Many species, especially neotropical ones, typically land on the undersides of leaves. Many species have mutualistic relationships with ants.

About 1500 described species of metalmarks occur worldwide, but about 90% of these live in the New World tropics. There are 29 species in North America; one species occurs in BC.

**Subfamily Riodininae**

**Tribe Emesiini**

1164  
*Apodemia mormo* (Felder & Felder, 1859)  
The Mormon Metalmark. The nominate subspecies occurs in BC. This species is restricted in BC to the South Okanagan and Similkameen valleys, and is listed federally and provincially as “endangered” (COSEWIC 2011; BC Ministry of Environment 2012).

56. **Family Lycaenidae (gossamer-wings; coppers, hairstreaks and blues)**
Lycaenid butterflies are usually small to medium-sized, with wingspans of about 20 to 50 mm. They are often brightly coloured, frequently in iridescent blues, greens, and coppery tones. Many have small, hair-like tails on the hind wings. The forelegs of male adults are reduced in length (the tarsal segments are fused) and lack claws, but the forelegs of females have a normal structure and are fully functional. The larvae are oval, flattened and grub-like; many have glands that produce sweet liquids.

Many lycaenid larvae are symbiotic with ants, which protect them from predators in exchange for the honeydew from their abdominal glands. Most species have four larval stages, one less than other butterflies. They feed on many groups of dicotyledonous plants, often eating only the buds, flowers and seeds. Some are carnivorous; e.g, the eastern North American *Feniseca tarquinius* (Fabricius) eats woolly aphids.
The family contains about 5200 named species worldwide. There are about 160 North American species; 43 of these occur in BC, and another three species are likely to be found in the province.

The subfamily Lycaeninae (coppers) contains 10 species in BC, all in the genus *Lycaena*. The larvae feed on plants in the family Polygonaceae. The subfamily Theclinae (hairstreaks) is largely tropical, but is well represented in BC with 18 species. Fifteen species of subfamily Polyommatinae (blues) occur in BC.

**Subfamily Lycaeninae**

*Tribe Lycaenini*

1165 *Lycaena phlaeas* (Linnaeus, 1761)  
Subspecies *arethusa* (Dod) occurs in BC.

1166 *Lycaena cupreus* (Edwards, 1870)  
Subspecies *snowi* (Edwards) occurs in BC. Guppy and Shepard (2001) also used the name *henryae* (Cadbury), now considered a synonym (Pelham 2008).

1167 *Lycaena dione* (Scudder, 1868)

1168 *Lycaena editha* (Mead, 1878)  
Recent collection in BC by B. C. Schmidt (Kondla 2007).

1169 *Lycaena heteronea* Boisduval, 1852  
Subspecies *gravenotata* Klots and *heteronea* Boisduval have been reported from BC.

1170 *Lycaena hyllus* (Cramer, 1775)

1171 *Lycaena dorcas* Kirby, 1837  
Subspecies *arcticus* (Ferris), *dorcas* Kirby, and *florus* (Edwards) have been reported from BC. The latter was treated as a full species distinct from *L. dorcas* by Kondla and Guppy (2002), but was retained as a subspecies by Pelham (2008).

1172 *Lycaena helloides* (Boisduval, 1852)

1173 *Lycaena nivalis* (Boisduval, 1869)  
Subspecies *browni* Dos Passos occurs in BC.

1174 *Lycaena mariposa* (Reakirt, 1866)  
Subspecies *charlottensis* (Holland), *mariposa* (Reakirt), and *penroseae* Field have been reported from BC.

**Subfamily Theclinae**

*Tribe Eumaeini*  

*Subtribe Eumaeina*

1175 *Satyrium semiluna* Klots, 1930  
Half-moon Hairstreak. Reported from BC by Llewellyn Jones (1951) and Guppy and Shepard (2001) as a subspecies of *S. fuliginosa* (Edwards); *S. semiluna* is now recognised as a full species. It is protected federally and provincially as “endangered”.

98
Satyrium behrii (Edwards, 1870)
Behr’s Hairstreak. Subspecies columbia (McDunnough) has been reported from BC. This species is restricted to the shrinking Antelope-brush steppe of the South Okanagan. It is federally protected by COSEWIC (2011) as “threatened” and is ranked provincially as “S1” (critically imperiled) by the BC Ministry of Environment (2012).

Satyrium californica (Edwards, 1862)
The nominate subspecies occurs in BC.

Satyrium sylvinus (Boisduval, 1852)
Subspecies nootka Fisher and putnami (Edwards) have been reported from BC.

Satyrium titus (Fabricius, 1793)
Subspecies immaculosus (Comstock) and titus (Fabricius) occur in BC.

Satyrium liparops (LeConte, 1833)
Subspecies aliparops Michener & Dos Passos and fletcheri Michener & Dos Passos have been reported from BC.

Satyrium saepium (Boisduval, 1852)
The nominate subspecies occurs in BC. Guppy and Shepard (2001) and Pyle (2002) referred to BC populations as subspecies okanagana (McDunnough), which is now considered a synonym (Pelham 2008).

Callophrys affinis (Edwards, 1862)
Subspecies washingtonia Clench occurs in BC.

Callophrys sheridanii (Carpenter, 1877)
This species was misidentified by Llewellyn Jones (1951) as C. dumetorum (Boisduval). Subspecies neoperplexa Barnes & Benjamin and newcomeri Clench have been reported from BC.

Callophrys gryneus (Hübner, [1819])
Subspecies nelsoni (Boisduval), plicatia (Johnson), rosneri (Johnson), and siva (Edwards) have been reported from BC. Both nelsoni and rosneri have been treated as distinct species until recently. The names acuminata Johnson and barriy Johnson have also been used as subspecies for C. gryneus recently (e.g., by Layberry et al. 1998); both names are currently considered synonyms (Pelham 2008).

Callophrys spinetorum (Hewitson, 1867)
The nominate subspecies occurs in BC.

Callophrys johnsoni (Skinner, 1904)
Johnson’s Hairstreak. This species occurs only on the south coast of BC and is considered “endangered” (COSEWIC 2011; BC Ministry of Environment 2012).

Callophrys augustinus (Westwood, 1852)
Subspecies augustinus (Westwood) and iroides (Boisduval) have been reported from BC. The latter is treated as a full species, distinct from C. augustinus, by Guppy and Shepard (2001); it is considered a subspecies by Pelham (2008).

Callophrys mossii (Edwards, 1881)
Subspecies mossii (Edwards) and schryveri (Cross) have been reported from BC.

Callophrys polios (Cook & Watson, 1907)
Subspecies obscura (Ferris & Fisher) and polios (Cook & Watson) have been reported from BC.

Callophrys niphon (Hübner, [1819])
Subspecies clarki (Freeman) has been reported from BC.
1191 *Callophrys eryphon* (Boisduval, 1852)
Subspecies *eryphon* (Boisduval) and *sheltonensis* (Chermock & Frechin) have been reported from BC.

1192 *Strymon melinus* Hübner, 1818
Subspecies *atrofasciata* McDunnough and *setonia* McDunnough occur in BC.

**Subfamily Polyommatinae**

**Tribe Polyommatini**

1193 *Cupido comyntas* (Godart, [1824])
The nominate subspecies occurs in BC.

1194 *Cupido amyntula* (Boisduval, 1852)
Subspecies *albrighti* (Clench) and *amyntula* (Boisduval) have been reported from BC.

1195 *Celastrina lucia* (Kirby, 1837)
Reported under the name *C. ladon* (Cramer) by Layberry et al. (1998) under a previous taxonomic arrangement. The nominate subspecies occurs in BC.

1196 *Celastrina echo* (Edwards, 1864)
Reported under the name *C. ladon* (Cramer) by Layberry et al. (1998); *C. echo* is now considered to be a distinct species. Subspecies *echo* (Edwards) and *nigrescens* (Fletcher) occur in BC.

1197 *Euphilotes glaucus* (Edwards, 1871)
Treated by Layberry et al. (1998) and Guppy and Shepard (2001) as a subspecies of *E. battoides* (Behr), *Euphilotes glaucus* is now considered to be a distinct species. The nominate subspecies and subspecies *oregonensis* (Barnes & McDunnough) have been reported from BC.

1197.1 P *Euphilotes columbae* (Mattoni, 1955)
This species is known from the Okanagan Valley of WA, very close to the BC border: it may also occur in BC (Guppy and Shepard 2001). It was treated by Guppy and Shepard (2001) as a subspecies of *E. ancilla* (Barnes & McDunnough).

1197.2 P *Euphilotes ancilla* (Barnes & McDunnough, 1918)
This species is known from MT, very close to the BC border: it may also occur in BC (Guppy and Shepard 2001). The nominate subspecies occurs in the area.

1198 *Glaucopsyche piasus* (Boisduval, 1852)
Subspecies *toxeuma* Brown and *sagittera* (Felder & Felder) have been reported from BC.

1199 *Glaucopsyche lygdamus* (Doubleday, 1842)
Subspecies *columbia* (Skinner), *couperi* Grote, and *oro* (Scudder) have been reported from BC.

1200 *Plebejus idas* (Linnaeus, 1761)
Subspecies *alaskensis* (Chermock), *atrapaetextus* (Field), *ferniensis* (Chermock), and *scudderi* (Edwards) have been reported from BC.

1201 *Plebejus anna* (Edwards, 1861)
Subspecies *anna* (Edwards), *ricei* (Cross), and *vancouverensis* (Guppy & Shepard) have been reported from BC. This taxon was treated as a subspecies of *P. idas* (Linnaeus) by many, including Layberry et al. (1998).

1202 *Plebejus melissa* (Edwards, 1873)
The nominate subspecies occurs in BC.
1203  *Plebejus aepiolus* (Boisduval, 1852)
Subspecies *aehaja* (Behr), *amica* (Edwards), *insulanus* Blackmore, and *rufescens* (Boisduval) have been reported from BC. The Vancouver Island subspecies *insulanus* is federally listed as “endangered” by COSEWIC (2011); it is provincially listed as “SH” (“historical”) by the BC Ministry of Environment (2012).

1204  *Plebejus icarioides* (Boisduval, 1852)
Subspecies *blackmorei* (Barnes & McDunnough), *montis* (Blackmore), and *pembina* (Edwards) occur in BC.

1204.1  *Plebejus shasta* (Edwards, 1862)
This species is known from the Crowsnest Pass area of AB, very close to the BC border: it may also occur in BC (Guppy and Shepard 2001). The subspecies *minnehaha* (Scudder) occurs in the area.

1205  *Plebejus lupini* (Boisduval, 1869)
Layberry et al. (1998) and Guppy and Shepard (2001) treated this taxon (as subspecies *lutzi* Dos Passos) as part of *P. acmon* (Westwood), now considered to be a separate species that does not occur in BC.

1206  *Plebejus optilete* (Knoch, 1781)
Subspecies *yukona* (Holland) occurs in BC.

1207  *Plebejus glandon* (de Prunner, 1798)
Subspecies *megalo* (McDunnough) and *rustica* (Edwards) have been reported from BC. This species has often been referred to as “*P. aquilo* Boisduval”, an invalid name (Pelham 2008). Many workers have treated *megalo* as a full species, with subspecies *lacustris* (Freeman) and *bryanti* (Leussler).

57. **Family Nymphalidae** (brush-footed butterflies)
Most North American brush-footed butterflies are medium-sized to large (with 40- to 70-mm wingspans), and many are orange or brown with dark markings. However, size and colour vary greatly. Both sexes have forelegs reduced in length and covered in long brush-like hairs, thus the common name of the group. These legs are useless for walking or perching, but are used as sense organs. The face is broad, the eyes are not indented adjacent to the antennae, and the antennae usually have prominent clubs. The larvae commonly have branched spines; the pupae are often strongly angled, bear thorn-like projections and lack a silk girdle.

Many nymphalids are strong fliers, and some species are migratory and number among the most cosmopolitan of insects (*Vanessa, Danaus*). Others, such as members of the subfamily Melitaeinae, fly only short distances and live in small, local colonies.

The Nymphalidae is the largest family of butterflies, with about 6150 species worldwide. North America has about 225 species; 75 species have been reported from BC, and another four species are likely to be found in the province. The family, as now defined, is composed of several
subfamilies, some of which have long been treated as separate families (e.g., Danaidae, Satyridae and Heliconiidae). The subfamily Danainae (milkweed butterflies) contains one species in BC, the famous Monarch. The subfamily Limenitidinae (admirals) has three species in the province. The subfamily Heliconiinae (fritillaries) are typically orange, with black markings on the upper surface. The subfamily Nymphalinae (anglewings and relatives) contains 26 BC species; all four Vanessa species represented are migratory and lack permanent, year-round populations in the province. The subfamily Satyrinae (satyrs) contains 23 species in the province, all of which feed on grasses and sedges.

**Subfamily Danainae**

**Tribe Danaini**

**Subtribe Danaina**

1208  M *Danaus plexippus* (Linnaeus, 1758)

The Monarch. The nominate subspecies occurs in BC. This species migrates as far north as southern BC, and flies south in late summer to winter on the CA coast. The conservation status of this species federally and provincially is “special concern” (COSEWIC 2011; BC Ministry of Environment 2012).

**Subfamily Limenitidinae**

**Tribe Limenitidini**

**Subtribe Limenitidina**

1209  *Limenitis arthemis* (Drury, 1773)

The White Admiral. Subspecies *rubrofasciata* (Barnes & McDunnough) occurs in BC.

1210  *Limenitis lorquini* Boisduval, 1852

Lorquin’s Admiral. Subspecies *burrisonii* Maynard and *ilgae* Guppy occur in BC.

Guppy and Shepard (2001) also described *itelkae* as a BC subspecies, but it is now considered a synonym (Pelham 2008).

1211  *Limenitis archippus* (Cramer, 1776)

The Viceroy. Subspecies *archippus* (Cramer) and *idaho* Austin have been reported in BC, but the species has been extirpated, apparently by pesticide spraying to control Codling Moths (*Cydia pomonella* (Linnaeus)). The last report of a Viceroy in BC was from Lillooet in 1930 (Guppy and Shepard 2001).

**Subfamily Heliconiinae**

**Tribe Argynnini**

**Subtribe Euptoietina**

1212  M *Euptoieta claudia* (Cramer, 1776)
Subtribe Boloriina

1213 **Boloria alaskensis** (Holland, 1900)
Treated by many workers, including Layberry et al. (1998) and Cannings and Scudder (2007), as a subspecies of *B. napaea* (Hoffmansegg), an Old World species. North American material is now considered to be a distinct species. The ESBC (1906) report of “*Brenthis andersonii* Dyar” and Blackmore’s (1927) listing of “*Brenthis euphrosyne andersoni* Dyar” likely refer to this species. The nominate subspecies occurs in BC.

1214 **Boloria eunomia** (Esper, 1800)
Subspecies *dawsoni* (Barnes & McDunnough), *nichollae* (Barnes & Benjamin), and *tricalis* (Hübner) have been reported from BC.

1215 **Boloria myrina** (Cramer, 1777)
This species was historically treated as a subspecies of *B. selene* ([Denis & Schiffermüller]) under a holarctic concept of that species, but was raised to full species status by Pohl et al. (2010), with *B. selene* considered to be restricted to Eurasia. Subspecies *atrocostalis* (Huard) and *tollandensis* (Barnes & Benjamin) have been reported from BC.

1216 **Boloria bellona** (Fabricius, 1775)
Subspecies *jenistae* Stallings & Turner and *todi* (Holland) occur in BC.

1217 **Boloria frigga** (Thunberg, 1791)
Subspecies *saga* (Staudinger) occurs in BC.

1218 **Boloria improba** (Butler, 1877)
The nominate subspecies occurs in BC.

1219 **Boloria epithore** (Edwards, 1864)
Subspecies *chermoki* Perkins & Perkins and *sigridae* (Shepard) occur in BC. Layberry et al. (1998) used the name *uskii* Koçak, which was not mentioned in Pelham (2008).

1220 **Boloria polaris** (Boisduval, 1828)
The nominate subspecies occurs in BC.

1221 **Boloria alberta** (Edwards, 1890)

1222 **Boloria astarte** (Doubleday, 1847)
Subspecies *astarte* (Doubleday) and *distincta* (Gibson) occur in BC. The Old World name *B. tritonia* (Boeber) has sometimes been applied to this species (e.g., by Guppy and Shepard 2001).

1223 **Boloria freija** (Thunberg, 1791)
The nominate subspecies and subspecies *tarquinis* (Curtis) have been reported from BC.

1224 **Boloria natazhati** (Gibson, 1920)
Subspecies *nabokovi* Stallings & Turner occurs in BC.

1225 **Boloria chariclea** (Schneider, 1794)
Subspecies *butleri* (Edwards), *grandis* (Barnes & McDunnough), and *rainieri* (Barnes & McDunnough) have been reported from BC.

Subtribe Argynnina

1226 **Speyeria cybele** (Fabricius, 1775)
Subspecies *pseudocarpenteri* (Chermock & Chermock) occurs in BC.
Speyeria leto (Behr, 1862)
Treated historically as a subspecies of C. cybele (Fabricius), this taxon was raised to full species status by Pohl et al. (2010), in accordance with works prior to Dos Passos and Grey (1947).

Speyeria aphrodite (Fabricius, 1787)
Subspecies columbia (Edwards), manitoba (Chermock & Chermock), and whitehousei (Gunder) occur in BC.

Speyeria edwardsii (Reakirt, 1866)
This species is known from the foothills of AB, within 50 km of the BC border: it may also occur in BC (Guppy and Shepard 2001).

Speyeria coronis (Behr, 1864)
This species was reported by Llewellyn Jones (1951) under the name S. snyderi (Skinner), now considered to be a subspecies of S. coronis. His record was based on a single specimen from Vernon, which cannot be located and is flagged therein as rare or doubtful. This species is known from central WA, very close to the BC border (Guppy and Shepard 2001), so it likely also occurs in BC. Blackmore's (1927) report of “Dryas halcyone picta McDunnough” probably refers to S. zerene (Boisduval), of which halcyone (Edwards) is a subspecies (picta is now considered a subspecies of S. coronis).

Speyeria zerene (Boisduval, 1852)
Subspecies behrensii (Edwards), bremnerii (Edwards), picta (McDunnough), and platina (Skinner) have been reported from BC. The name garretti (Gunder) was also used as a subspecies name by Guppy and Shepard (2001), but that name is now considered a synonym (Pelham 2008).

Speyeria callippe (Boisduval, 1852)
Subspecies chilcotinensis Guppy & Shepard and semivirida (McDunnough) occur in BC. Subspecies nevadensis (Edwards) was reported from BC by Llewellyn Jones (1951).

Speyeria atlantis (Edwards, 1862)
Subspecies hollandi (Chermock & Chermock) occurs in BC.

Speyeria hesperis (Edwards, 1864)
Subspecies beani (Barnes & Benjamin), brico (Kondla et al.), electa (Edwards), and helena Dos Passos have been reported from BC.

Speyeria hydaspe (Boisduval, 1869)
Subspecies rhodope (Edwards) occurs in BC. The names minor (McDunnough) and sakuntala (Skinner) have also been applied as subspecies of S. hydaspe in BC by Guppy and Shepard (2001), but those names are currently considered synonyms (Pelham 2008).

Speyeria mormonia (Boisduval, 1869)
Subspecies bischoffii (Edwards), erinna (Edwards), eurynome (Edwards), opis (Edwards), and washingtonia (Barnes & McDunnough) have been reported from BC.
Subfamily Nymphalinae

Tribe Nymphalini

1236 M Vanessa virginiensis (Drury, 1773)
1237 M Vanessa cardui (Linnaeus, 1758)
   The Painted Lady.
1238 M Vanessa annabella (Field, 1971)
   This species was historically treated as V. caryae (Hübner), an Old World name.
1239 M Vanessa atalanta (Linnaeus, 1758)
   The Red Admiral. Subspecies rubria (Fruhsdorfer) occurs in BC.
1240 M Aglais milberti (Godart, 1819)
   Subspecies milberti (Godart) and subpallida (Cockerell) occur in BC.
1241 M Nymphalis j-album (Boisduval & LeConte, 1833)
   This species has been treated by many workers, including Cannings and Scudder (2007) and Layberry et al. (1998), under the name “N. vaualbum ([Denis & Schiffermüller])”, a nomen nudum, or as N. l-album (Esper), a Palaearctic species. Nymphalis j-album was recognised as distinct from the Eurasian N. l-album by Pohl et al. (2010). Subspecies watsoni (Hall) occurs in BC.
1242 M Nymphalis californica (Boisduval, 1852)
1243 M Nymphalis antiopa (Linnaeus, 1758)
   The Mourning Cloak. The nominate subspecies occurs in BC.
1244 M Polygonia satyrus (Edwards, 1869)
   Subspecies neomarsyas Dos Passos has been reported from BC.
1245 M Polygonia progne (Cramer, 1776)
1246 M Polygonia oreas (Edwards, 1869)
   Subspecies silenus (Edwards) and threatfuli Guppy & Shepard have been reported from BC.
1247 M Polygonia gracilis (Grote & Robinson, 1867)
   Subspecies gracilis (Grote & Robinson) and zephyrus (Edwards) occur in BC. Guppy and Shepard (2001) treated zephyrus as a full species.
1248 M Polygonia faunus (Edwards, 1862)
   Subspecies hylas (Edwards) and rusticus (Edwards) have been reported from BC.

Tribe Melitaeini

Subtribe Euphydryina

1249 Euphydryas gillettii (Barnes, 1897)
1250 Euphydryas editha (Boisduval, 1852)
   Edith’s Checkerspot. Subspecies beani (Skinner), colonia (Wright), nubigena (Behr), and taylori (Edwards) have been reported from BC. The latter is listed federally and provincially as “endangered” (COSEWIC 2011; BC Ministry of Environment 2012).
1251 Euphydryas colon (Edwards, 1881)
   Inclusion of this name in the BC fauna follows Pelham (2008), who considers paradox McDunnough to be subspecies of E. colon, and perdidcas (Edwards) to be a synonym. Those taxa were considered by previous workers, including Layberry et al. (1998) and Guppy and Shepard (2001), to be subspecies of E. chalcedona (Doubleday).
Euphydryas anicia (Doubleday, [1847])
Subspecies anicia (Doubleday), helvia (Scudder), hopfingeri Gunder, and howlandi Stallings & Turner have been reported from BC. Euphydryas anicia and subspecies helvia were treated as subspecies of E. chalcedona (Doubleday) by Layberry et al. (1998).

1252.1 P Chlosyne gorgone (Hübner, 1810)
This species is known from the foothills of AB, within 50 km of the BC border: it may occur in BC also (Guppy and Shepard 2001). The subspecies carlotta (Reakirt) occurs in the area.

Chlosyne hoffmanni (Behr, 1863)
Subspecies manchada (Bauer) occurs in BC.

Chlosyne palla (Boisduval, 1852)
Subspecies calydon (Strecker) occurs in BC.

Chlosyne damoetas (Skinner, 1902)
The nominate subspecies occurs in BC. This taxon was treated as a subspecies of C. whitneyi (Behr) by Guppy and Shepard (2001).

Subtribe Phyciodina

Phyciodes pallida (Edwards, 1864)
Subspecies barnesi Skinner occurs in BC.

Phyciodes mylitta (Edwards, 1861)
The nominate subspecies occurs in BC.

Phyciodes cocyta (Cramer, [1777])
Subspecies cocyta (Cramer), pascoensis Wright, and selenis (Kirby) have been reported from BC. Guppy and Shepard (2001) included this taxon within a broader concept of P. tharos (Drury).

Phyciodes batesii (Reakirt, 1865)
Subspecies lakota Scott occurs in BC.

Phyciodes pulchella (Boisduval, 1852)
Treated by many workers, including Layberry et al. (1998), Guppy and Shepard (2001) and Cannings and Scudder (2007), under the name “P. pratensis (Behr)”, now considered a synonym (Pelham 2008). Subspecies owimba Scott has been reported from BC.

Subfamily Satyrinae

Tribe Satyrini

Subtribe Coenonymphina

Coenonympha tullia (Müller, 1764)
Contrary to Pohl et al. (2010), we revert to the holarctic concept of this species, rather than using the name C. inornata Edwards, 1861, for North American populations. Although North American populations are genetically distinct from European populations (Kodandaramaiah and Wahlberg 2009), the taxonomy is far from settled. The subspecies ampeles Edwards, benjaminsi McDunnough, columbiana McDunnough, insulanus McDunnough, kodiak Edwards, and yukonensis Holland have been reported from BC, and more than one of these may prove to be separate species. The latter was treated as a full species by Guppy and Shepard (2001). Kondla (2007) reported C. sweadneri Cheromock & Cheromock from southeastern BC and provides an argument for its treatment as a separate species; Pelham (2008) considers it to be a synonym of C. tullia.

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Subtribe Maniolina

1262 **Cercyonis pegala** (Fabricius, 1775)
Subspecies *alope* (Fabricius), *ariane* (Boisduval), *boopis* (Begr), *incana* (Edwards), *ino* Hall, and *nephele* (Kirby) have been reported from BC.

1263 **Cercyonis thenele** (Boisduval, 1852)
Subspecies *paulus* (Edwards) and *sineocellata* Austin & Emmel occur in BC. The subspecies *silvestris* (Edwards) was reported from BC in error by Layberry et al. (1998), prior to the description of *sineocellata*.

1264 **Cercyonis oetus** (Boisduval, 1869)
Subspecies *charon* (Edwards) and *phocus* (Edwards) have been reported from BC.

Subtribe Erebiina

1265 **Erebia vidleri** Elwes, 1898
1266 **Erebia rossii** (Curtis, 1835)
The nominate subspecies occurs in BC.

1267 **Erebia mancinus** Doubleday & Hewitson, 1849
1268 **Erebia magdalena** Strecker, 1880
Subspecies *hilchie* Kemal & Koçak occurs in BC. The name *hilchie* is a replacement name for *saxicola* Hilchie, a junior homonym. The latter was used by Layberry et al. (1998) and Guppy and Shepard (2001).

1269 **Erebia mackinleyensis** Gunder, 1932
1270 **Erebia epipsodea** Butler, 1868
Subspecies *epipsodea* Butler, *remingtoni* Ehrlich, and *sineocellata* Skinner have been reported from BC. Pyle (2002) used the name *hopfingeri* Ehrlich as a subspecies for some BC populations, but that name is now considered a synonym (Pelham 2008).

1271 **Erebia discoidalis** (Kirby, 1837)
The nominate subspecies occurs in BC. Layberry et al. (1998) used the name *mc-dunnoughi* Dos Passos as a subspecies for BC populations, but that name is now considered a synonym (Pelham 2008).

1272 **Erebia pawloskii** Ménêtriés, 1859
Subspecies *alaskensis* Holland and *canadensis* Warren have been reported from BC. The Palaearctic name *E. theano* (Tauscher) has also been used for BC populations, based on a previous taxonomic arrangement, e.g., by Layberry et al. (1998). True *E. theano* is restricted to the Old World.

1272.1 **P Neominois ridingsii** (Edwards, 1865)
This species is known from the foothills of AB, within 50 km of the BC border: it may occur in BC also (Guppy and Shepard 2001). The subspecies *minimus* Austin occurs in the area.

1273 **Oeneis philipi** Troubridge & Parshall, 1988
Treated by Layberry et al. (1998) and Cannings and Scudder (2007) as *O. rosovi* Kurentzov, an Old World species. North American populations are *O. philipi*.

1274 **Oeneis polixenes** (Fabricius, 1775)
Subspecies *beringianus* Kurentzov occurs in BC. Guppy and Shepard (2001) used the name *luteus* Troubridge & Parshall as a subspecies name for BC populations, but that name is currently considered a synonym (Pelham 2008).
Oeneis jutta (Hübner, [1806])
Subspecies alaskensis Holland, chermocki Wyatt, reducta McDunnough, and ridingiana Chermock & Chermock have been reported from BC. For consistency, we follow Pelham's (2008) interpretation of O. jutta as a holarctic species. However, Pohl et al. (2010) explain why use of the name O. balderi (Geyer) is a superior taxonomic concept for northern North American populations, as a species distinct from O. jutta.

Oeneis melissa (Fabricius, 1775)
Subspecies atlinensis Guppy & Shepard and beanii Elwes occur in BC. Layberry et al. (1998) also reported subspecies gibsoni Holland from BC, prior to the description of atlinensis.

Oeneis bore (Schneider, 1792)
Subspecies edwardsi Dos Passos, hanburyi Watkins, mckinleyensis Dos Passos, and tagetete Geyer have been reported from BC.

Oeneis chryxus (Doubleday & Hewitson, 1849)
Subspecies caryi Dyar and chryxus (Doubleday & Hewitson) occur in BC.

Oeneis alberta Elwes, 1893
The nominate subspecies occurs in BC.

Oeneis nevadensis (Felder & Felder, 1866)
Subspecies gigas Butler and nevadensis (Felder & Felder) occur in BC.

Oeneis macounii (Edwards, 1885)

Oeneis uhleri (Reakirt, 1866)
Subspecies varuna (Edwards) occurs in BC.

Section 3: Macromoths

Superfamily Pyraloidea

58. Family Pyralidae
Pyralids are mostly small to medium-sized moths, with wingspans ranging from about 10 to 55 mm. They are defined by the unique arrangement of their tympanal organs, which are on the ventral part of the abdomen base and include a narrow opening that faces forward towards the thorax.

The family has some of the most diverse feeding habits among Lepidoptera. Many pyralids are leaf rollers, but some bore in buds, shoots, stems, cones, fruits, galls or under bark. Several species are serious pests of stored food products. A few species live as inquilines in galls and the nests of Hymenoptera. Still others have predatory larvae that hunt down Homoptera. Some tropical species live in sloth fur and eat algae off the fur; others are specialists in sloth dung.

The family Pyralidae is a large group of cosmopolitan moths. There are about 5900 described species; 679 are found in North America and 132
are reported from BC. The subfamily Phycitinae is fairly well known, with significant revisions published by Heinrich (1956) and Neunzig (1986, 1990, 1997, 2003). The other subfamilies are generally poorly known and require taxonomic work.

Subfamily Chrysauginae
1283  *Acallis gripalis* (Hulst, 1886)
1284  *Arta statalis* Grote, 1875
1285  *Arta epicoenalis* Ragonot, 1891

Subfamily Galleriinae

**Tribe Galleriini**
1286  *Galleria mellonella* (Linnaeus, 1758)
   Greater Wax Moth. Introduced from Europe.
1287  *Achroia grisella* (Fabricius, 1794)
   Introduced from Europe in 1897 (Covell 1984).

**Tribe Tirathabini**
1288  *Paralipsa gularis* (Zeller, 1877)
1289  *Corcyra cephalonica* (Stainton, 1866)
   This species was introduced to North America from the West Indies. It was collected from a honeybee hive in Victoria in 1994, but may not be established in the province.

**Tribe Cacotherapini**
1290  *Cacotherapia leucocope* (Dyar, 1917)

Subfamily Pyralinae

**Tribe Pyralini**
1291  *Pyralis farinalis* Linnaeus, 1758
   This species, known as the Meal Moth, was introduced from the Palaearctic (Lafontaine and Troubridge 2011).
1292  *Aglossa cacamica* (Dyar, 1913)
1293  *Aglossa pinguinalis* (Linnaeus, 1758)
   This introduced species is known from a few localities in BC, including Kamloops (J. deWaard, personal communication), Quamichan (RBCM material), Port Alberni and Williams Lake (L. Avis, personal communication).
1294  *Aglossa caprealis* (Hübner, [1809])
1295  *Hypsopygia costalis* (Fabricius, 1775)
1296  *Dolichomia thymetusalis* (Walker, 1859)
1297  *Pseudasopia cohortalis* (Grote, 1878)

Subfamily Epipaschiinae
1298  *Macalla zelleri* (Grote, 1876)
1299  *Toripalpus trabalis* Grote, 1881
1300  *Pococera aplastella* (Hulst, 1888)
1301  *Pococera asperatella* (Clemens, 1860)
Pococera expandens (Walker, 1863)

Pococera provoella (Barnes & Benjamin, 1924)

Pococera thoracicella (Barnes & Benjamin, 1924)

**Subfamily Phycitinae**

**Tribe Phycitini**

Acrobasis vaccinii Riley, 1884

Acrobasis indigenella (Zeller, 1848)

Uncertain BC record reported in Neunzig (1986).

Acrobasis tricolorrella Grote, 1878

Acrobasis rubrifasciella Packard, 1873

Acrobasis betulella Hulst, 1890

Trachycera suavella (Zincken, 1818)

This species was introduced from Europe. However, the synonym *T. supposita* (Heinrich) was described from BC.

Cuniberta subtinctella (Ragonot, 1887)

Myelopsis minutularia (Hulst, 1887)

Myelopsis subtetricella (Ragonot, 1889)

Myelopsis alatella (Hulst, 1887)

Apomyelois bistriatella (Hulst, 1887)

Euzophera semifuneralis (Walker, 1863)

Euzophera habrella Neunzig, 1990

Euzophera vinnulella Neunzig, 1990

Eulogia ochrifrontella (Zeller, 1876)

Ephestiodes gilvescentella Ragonot, 1887

Ephestiodes erythrella Ragonot, 1887

Ephestiodes griseus Neunzig, 1990

Recently collected from BC’s Lower Mainland by DH; the identity was confirmed by E. LaGasa.

Vitula edmandsii (Packard, 1864)

Vitula serratileneella Ragonot, 1887

Vitula broweri (Heinrich, 1956)

Recent BC record collected near Sicamous by deWaard (2010).

Vitula setonella (McDunnough, 1927)

Plodia interpunctella (Hübner, [1813])

The Indian Meal Moth. This cosmopolitan pest of stored food products originates in temperate regions of the New World, but has been introduced to BC and elsewhere.

Ephestia elutella (Hübner, 1796)

Introduced from the Old World tropics (Lafontaine and Troubridge 2011). However, the synonym *E. amarella* Dyar was described from Kaslo, BC.

Ephestia kuehniella Zeller, 1879

The Mediterranean Flour Moth. Introduced from the southern USA, it occurs only in association with humans in BC.
Cadra cautella (Walker, 1863)
Introduced from the tropics (Lafontaine and Troubridge 2011).

Bandera binotella (Zeller, 1872)

Bandera virginella Dyar, 1908

Eurythmia angulella Ely, 1910

Eurythmia spaldingella Dyar, 1905

Pima fosterella Hulst, 1888

Pima boisduvaliella (Guenée, 1845)

Pima occidentalis Heinrich, 1956

Pima fulvirugella (Ragonot, 1887)
Listed by Cannings and Scudder (2007) under the name P. vividella (McDunnough), a recent synonym.

Pima albocostalialis (Hulst, 1886)

Interjectio columbiella (McDunnough, 1935)

Interjectio denticulella (Ragonot, 1887)

Ambesa laetella Grote, 1880

Ambesa walsinghami (Ragonot, 1887)

Catastia actualis (Hulst, 1886)

Oreana unicolorrella (Hulst, 1887)

Psorosina hammondi (Riley, 1872)
This species was reported as an occasional pest of apple in BC by Belton (1988); no BC vouchers are known, and it is otherwise thought to be restricted to eastern and central North America. It may have occurred here, or the record may refer to another apple pest, perhaps Choreutis pariana (Clerck).

Ortholepis pasadamia (Dyar, 1917)

Polopeustis arctiella (Gibson, 1920)
Known in BC from a single female specimen in the UBC collection from Chilcotin, collected 25 April 1920 by E. R. Buckell. The identification is tentative; therefore, the species is listed as unconfirmed in BC.

Meroptera pravella (Grote, 1878)

Meroptera abditiva Heinrich, 1956

Sciota basilaris (Zeller, 1872)

Sciota levigatella (Hulst, 1892)

Sciota yuconella (Dyar, 1925)
A specimen in the PFC collection from Quesnel River, BC, that had been identified as S. termitalis (Hulst) was redetermined as S. yuconella by GRP. This is the only known specimen outside of the type locality at Ft. Yukon, AK.

Sciota fraudifera (Heinrich, 1956)

Sciota fernaldi (Ragonot, 1887)

Tulsa umbripennis (Hulst, 1895)
Tulsa oregonella (Barnes & McDunnough, 1918)
A specimen of this species in the PFC, collected in flight at Errington, BC, by D. Evans on 15 May 1973, is the only known record outside the type locality of Crater Lake, OR. The identity was confirmed by GRP.

Telethusia ovalis (Packard, 1873)

Phobus brucei (Hulst, 1895)

Phobus funerellus (Dyar, 1905)

Phobus incertus Heinrich, 1956

Pyla fasciolalis (Hulst, 1886)

Pyla impostor Heinrich, 1956

Pyla aequivoca Heinrich, 1956

Pyla insinuatrix Heinrich, 1956

Pyla aenigmatica Heinrich, 1956

Pyla criddlella Dyar, 1907

Pyla fusca (Haworth, 1828)

Pyla hypochalciella (Ragonot, 1887)

Pyla hanhamella Dyar, 1904

Pyla scintillans (Grote, 1881)

Pyla serrata Neunzig, 2003

Pyla rainierella Dyar, 1904

Reported by Blackmore (1921, 1923) from Mt. Cheam and Lillooet. A voucher specimen in the UBC from Mt. Cheam was dissected and largely fits the description of *P. rainierella*. However, that specimen and the published figures of *P. rainierella* are at the edge of the range of variation in the highly variable sister species, *P. scintillans* (Grote), as illustrated in Heinrich (1956) and Neunzig (2003). These taxa may represent one variable species; further taxonomic and genetic work would shed light on the relationship between them. *Pyla rainierella* was thought by Heinrich (1956) and Neunzig (2003) to be restricted to Mt. Rainier, WA.

Pyla aeneoviridella Ragonot, 1887

Dioryctria abietivorella (Grote, 1878)

Dioryctria reniculelloides Mutuura & Munroe, 1973

The Spruce Coneworm. Prior to its description in 1973, this species was known in North America under the Old World name *D. abietella* ([Denis & Schiffermüller]).

Dioryctria pseudotsugella Munroe, 1959

Dioryctria auranticella (Grote, 1883)

Dioryctria rossi Munroe, 1959

Dioryctria ponderosae Dyar, 1914

Dioryctria okanaganella Mutuura, Munroe & Ross, 1969

Dioryctria pentictonella Mutuura, Munroe & Ross, 1969

Dioryctria vancouverella Mutuura, Munroe & Ross, 1969
Dioryctria zimmermani (Grote, 1877)

Neunzig (2003) reported this species only from eastern North America, and reports from BC by Ross and Evans (1957a), Munroe (1959), and Prentice (1965) were thought to refer to *D. cambiicola* (Dyar). However, confirmed material reared from Jack Pine is now known from as far west as AB. The species may well occur in northeastern BC.

Dioryctria cambiicola (Dyar, 1914)
Dioryctria banksiella Munroe, Munroe & Ross, 1969
Dioryctria tumicolella Munroe, Munroe & Ross, 1969
Dioryctria contortella Munroe, Munroe & Ross, 1969
Dioryctria monticolella Munroe, Munroe & Ross, 1969

Sarata nigrifasciella Ragonot, 1887
Sarata edwardsialis (Hulst, 1886)
Sarata pullatella (Ragonot, 1887)
Macrorrhinia dryadella (Hulst, 1892)
Promylea lunigerella Ragonot, 1887

Dasypyla alternosquamella Ragonot, 1887
Etiella zinckenella (Treitschke, 1832)

This species was introduced from the Palaearctic; it was present in North America by 1917.

Eumysia maidella (Dyar, 1905)
Staudingeria albipenella (Hulst, 1887)

Hulstia undulatella (Clemens, 1860)
Honora mellinella Grote, 1878
Honora subsciurella Ragonot, 1887
Honora montinatatella (Hulst, 1887)

The identity of voucher specimens in the UBC collection was confirmed via dissection by GRP.

Honora perdubiella (Dyar, 1905)

Known from a single female specimen in the UBC collection, from Mt. McLean, 7500 feet, collected 13 August 1921 by A. W. Hanham. The identity was confirmed via dissection by GRP.

Zophodia grossulariella (Hübner, [1809])

Melitara dentata (Grote, 1876)
Rhagea packardella (Ragonot, 1887)

Homoeosoma electella (Hulst, 1887)

Homoeosoma phaeoboreas Goodson & Neunzig, 1993

Reported as an uncertain record in BC by Neunzig (1997).

Homoeosoma oslarellum Dyar, 1905
Homoeosoma albescentella Ragonot, 1887
Homoeosoma impressale Hulst, 1886
Phycitodes mucidella (Ragonot, 1887)
**Tribe Anerastiini**

1413  *Ragonotia dotalis* (Hulst, 1886)
1414  *Coenochroa californiella* Ragonot, 1887

### 59. Family Crambidae (*snout moths and grass moths*)

Crambids are very small to large moths, with wingspans ranging from about 10 to 100 mm, but seldom exceeding 30 mm in BC species. They were historically placed within the Pyralidae. Like pyralids, they have tympanal chambers on the abdomen; however, they can be separated from pyralids by details of the tympanal opening.

Larvae of most crambid species are borers or concealed feeders of plants. Many species feed on primitive plants such as mosses, rushes and grasses. Several species are pests of cereal crops or turf grass. Many species in the subfamily Pyraustinae (e.g., species in the genera *Pyrausta*, *Loxostege*, and *Achyra*) are defoliating pests of pasture and field crops; others are borers in stems and fruits of various crops. Larvae of the subfamily Acentropinae are almost all aquatic as immatures: some feed on vascular plants in standing water, and others live in rapid streams under webs on rocks and feed on algae there. These larvae are either air breathers living in air-filled cases, or lack functional spiracles and take in dissolved oxygen through tracheal gills.

The family Crambidae is distributed around the world and contains about 9650 described species. About 850 species are known in North America, 131 of which are reported from BC. The arrangement of subfamilies, tribes and genera presented here follows Munroe et al. (1995). Several major subgroups of crambids have been revised by Munroe (1972a, 1972b, 1973, 1976a, 1976b), but other groups are poorly known.

**Subfamily Scopariinae**

1415  *Gesneria centuriella* ([Denis & Schiffermüller], 1775)

The subspecies *beringiella* Munroe and *caecalis* (Walker) have been reported from BC.

1416  *Cosipara tricoloralis* (Dyar, 1904)

1417  *Scoparia palloralis* Dyar, 1906

1418  *Scoparia biplagialis* Walker, 1866

Subspecies *ternaldalis* Dyar and *pacificalis* Dyar occur in BC; both were described from BC.

1419  *Scoparia basalis* Walker, 1866

Western records are unconfirmed; they may refer to *S. biplagialis* Walker.
1420  *Eudonia rectilinea* (Zeller, 1874)
1421  *Eudonia commortalis* (Dyar, 1921)
1422  *Eudonia expallidalis* (Dyar, 1906)
1423  *Eudonia torniplagalis* (Dyar, 1904)
1424  *Eudonia albertalis* (Dyar, 1929)
1425  *Eudonia vivida* Munroe, 1972
     Recent BC record collected near Hazelton by deWaard (2010).
1426  *Eudonia spaldingalis* (Barnes & McDunnough, 1912)
1427  *Eudonia spenceri* Munroe, 1972
1428  *Eudonia leucophthalma* (Dyar, 1929)
1429  *Eudonia echo* (Dyar, 1929)
1430  *Eudonia alpina* (Curtis, 1850)
     This species has historically been referred to under the name *E. lugubralis* (Walker),
     now considered a synonym.

**Subfamily Crambinae**

**Tribe Haimbachiini**
1431  *Occidentalia comptulatalis* (Hulst, 1886)

**Tribe Crambini**
1432  *Euchromius californicalis* (Packard, 1873)
1433  *Catoptria trichostomus* (Christoph, 1858)
1434  *Catoptria maculalis* (Zetterstedt, 1840)
1435  *Catoptria latiradiellus* (Walker, 1863)
1436  *Catoptria oregonica* (Grote, 1880)
1437  *Chrysoteuchia topiarius* (Zeller, 1866)
     Subspecies *vachellellus* (Kearfott) has been reported from BC.
1438  *Crambus pascuella* (Linnaeus, 1758)
     The subspecies *floridus* Zeller is applicable to BC populations.
1439  *Crambus hamella* (Thunberg, 1794)
1440  *Crambus alienellus* (Zincken, 1817)
     Subspecies *labradoriensis* Christoph and *dissectus* Grote have been reported
     from BC.
1441  *Crambus bidens* Zeller, 1872
1442  *Crambus perlella* (Scopoli, 1763)
1443  *Crambus unistriatellus* Packard, 1867
1444  *Crambus whitmerellus* Klots, 1942
     The subspecies *browni* Klots is applicable to BC populations.
1445  *Crambus tutillus* McDunnough, 1921
1446  *Crambus cockleellus* Kearfott, 1908
1447  *Crambus ainsliellus* Klots, 1942
1448  *Crambus praefectellus* (Zincken, 1821)
1449  *Crambus leachellus* (Zincken, 1818)
<table>
<thead>
<tr>
<th>No.</th>
<th>Species Name</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1450</td>
<td>Crambus cypridalis</td>
<td>Hulst, 1886</td>
</tr>
<tr>
<td>1451</td>
<td>Crambus occidentalis</td>
<td>Grote, 1880</td>
</tr>
<tr>
<td>1452</td>
<td>Raphiptera argillaceellus</td>
<td>(Packard, 1867)</td>
</tr>
<tr>
<td>1453</td>
<td>Agriphila straminella</td>
<td>([Denis &amp; Schiffermüller], 1775)</td>
</tr>
<tr>
<td>1454</td>
<td>Agriphila plumbifimbriellus</td>
<td>Dyar, 1904</td>
</tr>
<tr>
<td>1455</td>
<td>Agriphila ruricolellus</td>
<td>Zeller, 1863</td>
</tr>
<tr>
<td>1456</td>
<td>Agriphila vulgivagellus</td>
<td>(Clemens, 1860)</td>
</tr>
<tr>
<td>1457</td>
<td>Agriphila attenuatus</td>
<td>Grote, 1880</td>
</tr>
<tr>
<td>1458</td>
<td>Neodactria luteolellus</td>
<td>(Clemens, 1860)</td>
</tr>
<tr>
<td>1459</td>
<td>Neodactria caliginosellus</td>
<td>(Clemens, 1860)</td>
</tr>
<tr>
<td>1460</td>
<td>Neodactria murellus</td>
<td>(Dyar, 1904)</td>
</tr>
<tr>
<td>1461</td>
<td>Pediasia aridella</td>
<td>(Thunberg, 1788)</td>
</tr>
<tr>
<td>1462</td>
<td>Pediasia truncatellus</td>
<td>(Zetterstedt, 1840)</td>
</tr>
<tr>
<td>1463</td>
<td>Pediasia browerellus</td>
<td>(Klots, 1942)</td>
</tr>
<tr>
<td>1464</td>
<td>Pediasia trisecta</td>
<td>(Walker, 1856)</td>
</tr>
<tr>
<td>1465</td>
<td>Pediasia dorsipunctellus</td>
<td>(Kearfott, 1908)</td>
</tr>
<tr>
<td>1466</td>
<td>Tehama bonifatella</td>
<td>(Hulst, 1887)</td>
</tr>
<tr>
<td>1467</td>
<td>Thaumatopsis pexellus</td>
<td>(Zeller, 1863)</td>
</tr>
<tr>
<td>1468</td>
<td>Thaumatopsis repandus</td>
<td>(Grote, 1880)</td>
</tr>
</tbody>
</table>

**Subfamily Schoenobiinae**

<table>
<thead>
<tr>
<th>No.</th>
<th>Species Name</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1469</td>
<td>Donacula melinellus</td>
<td>(Clemens, 1860)</td>
</tr>
<tr>
<td>1469</td>
<td>Subspecies albicostellus</td>
<td>(Fernald)</td>
</tr>
</tbody>
</table>

**Subfamily Acentropinae**

**Tribe Nymphulini**

<table>
<thead>
<tr>
<th>No.</th>
<th>Species Name</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1470</td>
<td>Elophila icciusalis</td>
<td>(Walker, 1859)</td>
</tr>
<tr>
<td>1471</td>
<td>Elophila obliteralis</td>
<td>(Walker, 1859)</td>
</tr>
<tr>
<td>1472</td>
<td>Elophila occidentalis</td>
<td>(Lange, 1956)</td>
</tr>
<tr>
<td>1473</td>
<td>Parapoynx maculalis</td>
<td>(Clemens, 1860)</td>
</tr>
<tr>
<td>1474</td>
<td>Parapoynx allionealis</td>
<td>(Walker, 1859)</td>
</tr>
</tbody>
</table>

**Tribe Argyractini**

<table>
<thead>
<tr>
<th>No.</th>
<th>Species Name</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1475</td>
<td>Petrophila kearfottalis</td>
<td>(Barnes &amp; McDunnough, 1917)</td>
</tr>
<tr>
<td>1476</td>
<td>Petrophila confusalis</td>
<td>(Walker, 1866)</td>
</tr>
<tr>
<td>1477</td>
<td>Eoparargyractis floridalis</td>
<td>Lange, 1956</td>
</tr>
</tbody>
</table>

**Subfamily Odontiinae**

**Tribe Odontiini**

<table>
<thead>
<tr>
<th>No.</th>
<th>Species Name</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1478</td>
<td>Microtheoris ophionalis</td>
<td>(Walker, 1859)</td>
</tr>
<tr>
<td>1479</td>
<td>Anatralata versicolor</td>
<td>(Warren, 1892)</td>
</tr>
</tbody>
</table>

The subspecies *occidentalis* Munroe (type locality: BC) is applicable to BC populations.
Tribe Eurrhypini

1480  *Mimoschinia rufofascialis* (Stephens, 1834)
Subspecies *novalis* (Grote) and *nuchalis* (Grote) have been reported from BC.

Subfamily Evergestinae

1481  *Evergestis pallidata* (Huñagel, 1767)  I?
Introduced from Eurasia?
1482  *Evergestis simulatilis* (Grote, 1880)
1483  *Evergestis vincralsis* Barnes & McDunnough, 1914
The subspecies *muricoloralis* Munroe (type locality: BC) is applicable to BC populations.
1484  *Evergestis obscuralis* Barnes & McDunnough, 1914
Subspecies *palousalis* Munroe occurs in BC.
1485  *Evergestis funalis* (Grote, 1878)
Subspecies *columbialis* Munroe and *insulalis* Barnes & McDunnough occur in BC; both were described from BC.
1486  *Evergestis subterminalis* Barnes & McDunnough, 1914
1487  *Prorasea similis* Grote, 1878
1488  *Prorasea praemia* (Dyar, 1917)
1489  *Orenaia trivialis* Barnes & McDunnough, 1914
1490  *Orenaia pallidivittalis* Munroe, 1956

Subfamily Glaphyriinae

1491  *Stegea salutalis* (Hulst, 1886)
1492  *Dicymolomia metalliferalis* (Packard, 1873)
1493  *Chalcoela iphitalis* (Walker, 1859)

Subfamily Pyraustinae

Tribe Pyraustini

1494  *Saucrobotys fumoferalis* (Hulst, 1886)
1495  *Saucrobotys futilalis* (Lederer, 1863)
Subspecies *inconncinnalis* (Lederer) has been reported from BC.
1496  *Ostrinia penitalis* (Grote, 1876)
1497  *Ostrinia marginalis* (Walker, 1866)
Munroe (1976b) reported this species from across Canada and north to Dawson, YT, but BC was not specifically mentioned and no BC vouchers are known.
1498  *Fumibotys fumalis* (Guenée, 1854)
1499  *Perispasta caeculalis* Zeller, 1875
1500  *Eurrhypara hortulata* (Linnaeus, 1758)  I
Introduced from Eurasia; it was first found in NS in 1907 and in BC in 1977 (Gillespie and Gillespie 1982).
1501  *Anania tertialis* (Guenée, 1854)
This species has historically been referred to under the name *coronata tertialis*. It has recently been shown to be a distinct species from *A. coronata* (Huñagel), which is restricted to the Palaeartic (Yang et al. 2012).
1502  *Anania mysippusalis* (Walker, 1859)

117
Anania funebris (Ström, 1768)
Subspecies glomeralis (Walker) has been reported from BC.

Sitochroa chortalis (Grote, 1873)

Loxostege sticticalis (Linnaeus, 1761)

Loxostege anartalis (Grote, 1877)
Subspecies albertalis Barnes & McDunnough occurs in BC.

Loxostege thrallophilalis (Hulst, 1886)

Loxostege sieralis Munroe, 1976
The nominal subspecies (type locality BC) and subspecies internationalis Munroe occur in BC.

Loxostege commixtalis (Walker, 1866)

Loxostege cereraldis (Zeller, 1872)

Pyrausta nicalis (Grote, 1878)

Pyrausta signatalis (Walker, 1866)

Pyrausta californicalis (Packard, 1873)

Pyrausta orphisalis Walker, 1859

Pyrausta tuolumnalis Barnes & McDunnough, 1918

Pyrausta subsequalis (Guenée, 1854)
Subspecies plagalis Haimbach occurs in BC.

Pyrausta borealis Packard, 1867

Pyrausta perrubralis (Packard, 1873)
Subspecies saanichalis Munroe, described from Vancouver Island, is applicable to at least some BC populations.

Pyrausta semirubralis (Packard, 1873)

Pyrausta unifascialis (Packard, 1873)

Pyrausta fodalalis (Lederer, 1863)
Subspecies septentrionicola Munroe occurs in BC.

Pyrausta socialis (Grote, 1877)

Tribe Spilomelini

Diastictis ventralis (Grote & Robinson, 1867)
Subspecies seamansi Munroe occurs in BC.

Herpetogramma pertetinalis (Lederer, 1863)

Herpetogramma thestealis (Walker, 1859)

Choristostigma plumbosignalis (Fernald, 1888)

Choristostigma disputalis (Barnes & McDunnough, 1917)

Udea rubigalis (Guenée, 1854)

Udea profundalis (Packard, 1873)

Udea washingtonalis (Grote, 1882)
Subspecies hollandi Munroe was described from BC.

Udea inquinatalis (Zeller, 1846)

Udea nordeggensis (McDunnough, 1930)

Udea saxifragae (McDunnough, 1935)
British Columbia populations have been referred to as subspecies *kodiakensis* Munroe and *tillialis* (Dyar), the latter described from BC (Munroe 1966).

This species has historically been misidentified in western Canada as *D. elealis* (Walker).

Most drepanid larvae feed on the foliage of trees or shrubs. Some are gregarious when young. The larvae of many drepanids have abdomens that taper to a point; many larvae rest with the head and tail raised.

The family Drepanidae contains about 660 described species. Twenty-one species are known in North America; BC has 11 species.

**Subfamily Thyatirinae**

**Tribe Habrosynini**

1546  *Habrosyne scripta* (Gosse, 1840)

Subspecies *chatfieldii* Grote has been reported from BC.

1547  *Pseudothyatira cymatophoroides* (Guenée, 1852)

**Tribe Macrothyatirini**

1548  *Euthyatira pudens* (Guenée, 1852)
Euthyatira semicircularis (Grote, 1881)
Subspecies griseor (Barnes & McDunnough) has been reported from BC.

**Tribe Ceranemotini**
1550  Ceranemota improvisa (Edwards, 1873)
1551  Ceranemota fasciata (Barnes & McDunnough, 1910)
1552  Ceranemota albertae Clarke, 1938

**Subfamily Drepaninae**

**Tribe Drepanini**
1553  Drepana arcuata Walker, 1855
Subspecies siculifer Packard has been reported from BC.
1554  Drepana bilineata (Packard, 1864)
1555  Eudeilinia herminiata (Guenée, [1858])

**Tribe Oretini**
1556  Oreta rosea (Walker, 1855)

**Superfamily Lasiocampoidea**

61. **Family Lasiocampidae (tent caterpillars and lappet moths)**

Lasiocampids are medium-sized to very large (25 to 120 mm), stout-bodied, hairy moths. British Columbia species are at the lower end of the size range, with wingspans ranging from about 25 to 35 mm; they are also predominantly brown, yellow or grey. The mouthparts are nonfunctional, the eyes are often hairy, and the antennae are somewhat feathery, especially in males. Tent caterpillar (Malacosoma) larvae are hairy and often colourful, with stripes and spots of white, blue, orange and other colours. Lappet moth larvae (Tolype, Phyllodesma) are softly hairy and have a small lobe or lappet on either side of each segment.

Lasiocampid larvae feed mostly on deciduous trees and shrubs. The tent caterpillars live in silken colonies and often cause severe defoliation during cyclical outbreaks.

The family Lasiocampidae is practically cosmopolitan, but is best represented in the tropics; it includes about 1950 species worldwide. In North America, 35 species are known; four of these occur in BC. The family in North America was revised by Franglemont (1973).

**Subfamily Lasiocampinae**

**Tribe Gastropachini**
1557  Phyllodesma americana (Harris, 1841)
Tribe Lasiocampini
1558  *Malacosoma disstria* Hübner, 1820
The Forest Tent Caterpillar. This species is a destructive pest of *Populus* trees in the boreal forest.
1559  *Malacosoma californica* (Packard, 1864)
The Western Tent Caterpillar. Subspecies *pluvialis* (Dyar) occurs in BC.

Subfamily Macromphaliinae
1560  *Tolype dayi* Blackmore, 1921
Crabo et al. (2015) treat *T. dayi* as a synonym of *T. distincta* French, and list records in the Pacific Northwest, including BC, under the latter name.

Superfamily Bombycoidea
62. Family Saturniidae (giant silk moths)
Giant silk moths are medium-sized to very large moths, with wingspans of about 30 to 280 mm. British Columbia species have wingspans ranging from about 60 mm (small *Hemileuca* specimens) to 140 mm (large *Antheraea*). The body is heavy and covered in hair-like scales. The mouthparts are reduced and non-functional. Larvae often have tubercles or spines on the body; the pupae usually are enclosed in silken cocoons, often incorporating leaves.

Adults are usually nocturnal, although some Saturniinae and many Hemileucinae fly in the daytime. The larvae are frequently polyphagous; some species eat dozens of plant genera. Most are solitary, but Hemileucinae larvae are gregarious, feeding in tight clusters. Hemileucinae larvae also bear tubercles with poisonous spines. Although the main commercial production of silk comes from *Bombyx mori* (Linnaeus) in the family Bombycidae, some silk is commercially produced by saturniid species.

The family Saturniidae is cosmopolitan and is absent from only the most northerly and southerly regions. It is best represented in the tropics, especially in the New World. There are about 2350 species worldwide, with 74 species recorded for North America. Seven species are recorded from BC. North American saturniids were treated in detail by Ferguson (1971, 1972) and Tuskes et al. (1996).
Subfamily Hemileucinae

*Tribe Hemileucini*

1561 S *Coloradia pandora* Blake, 1863

Reported by Blackmore (1927) and Llewellyn Jones (1951) under the name *C. lindseyi* Barnes & Benjamin, now considered a subspecies of *C. pandora*. The record is based on one specimen from Victoria, BC, “probably accidentally introduced”. That is likely the case, although presumably naturally occurring strays have been collected on the west coast as far north as WA (L. G. Crabo, personal communication).

1562 *Hemileuca eglanterina* (Boisduval, 1852)

The nominal subspecies occurs in BC; however Dyar (1904) and Llewellyn Jones (1951) erroneously reported subspecies *shastaensis* (Grote) from BC.

1563 *Hemileuca nuttalli* (Strecker, 1875)

1564 *Hemileuca hera* (Harris, 1841)

The nominate subspecies occurs in BC.

Subfamily Saturniinae

*Tribe Saturniini*

1565 *Antheraea polyphemus* (Cramer, 1776)

The Polyphemus Moth.

*Tribe Attacini*

1566 *Hyalophora gloveri* (Strecker, 1872)

Glover’s Silk Moth. Tuskes et al. (1996) treated *H. gloveri* as a subspecies of *H. columbica* (Smith), but western populations were reinstated as a full species by Pohl et al. (2010).

1567 *Hyalophora euryalus* (Boisduval, 1855)

Populations in southeastern BC exhibit some *gloveri* (Strecker) traits that are indicative of past hybridisation (Tuskes et al. 1996) and have been historically referred to under the name *kasloensis* (Cockerell).

63. *Family Sphingidae* (*sphinx moths; hornworms*)

Sphinx moths are medium-sized to large (30 to 180 mm), heavy-bodied moths with long, narrow forewings and relatively small hind wings; in BC species, wingspans range from about 40 to 140 mm. Most larvae lack obvious hairs and usually have a spine or button-like process near the end of the body, thus giving them the name hornworms. Most species pupate in the soil or in leaf litter; the sheath of the developing proboscis is sometimes separate from the rest of the body, resembling the handle of a jug.

Sphinx moths fly strongly with rapidly beating wings; many can hover like hummingbirds, and feed on flower nectar by probing tubular blooms with the proboscis. Larvae of some species damage commercial crops. Larvae often rear up when disturbed and, in this position, have reminded some imaginative people of the Sphinx of Egypt.
About 1450 species of Sphingidae are known worldwide. North America has approximately 130 species; 25 species are reported from BC, and one more is expected to be found. Hodges (1971) and Tuttle (2007) covered the North American Sphingidae; Kitching and Cadiou (2000) provided a complete world catalogue.

**Subfamily Sphinginae**

**Tribe Acherontiini**
1568 S *Agrius cingulata* (Fabricius, 1775)

**Tribe Sphingini**
1569 *Manduca quinquemaculata* (Haworth, 1803)
1570 *Sphinx chersis* (Hübner, 1823)
1571 *Sphinx vashti* Strecker, 1878
1572 *Sphinx perelegans* Edwards, 1874
1573 *Sphinx poecila* Stephens, 1828
1574 *Sphinx luscitiosa* Clemens, 1859
1575 *Sphinx drupiferarum* Smith, 1797
1576 U *Lapara bombycoides* Walker, 1856

Reported from BC by Smith (1994), but no BC voucher specimens are known. The species was not reported from BC by Tuttle (2007), but it could occur in the boreal forests of northeastern BC.

**Subfamily Smerinthinae**

**Tribe Smerinthini**
1577 *Smerinthus jamaicensis* (Drury, 1773)
1578 *Smerinthus cerisyi* Kirby, 1837
1579 *Smerinthus ophthalmica* Boisduval, 1855
This name was raised from synonymy with *S. cerisyi* Kirby by Pohl et al. (2010). It occurs across southern BC and west of the Coast Ranges, north to AK.
1580 *Paonias excaecata* (Smith, 1797)
1581 *Paonias myops* (Smith, 1797)
1582 *Pachysphinx modesta* (Harris, 1839)

**Subfamily Macroglossinae**

**Tribe Dilophonotini**
1583 *Hemaris thysbe* (Fabricius, 1775)
1584 *Hemaris diffinis* (Boisduval, 1836)

Historical BC records under this name are actually *H. thetis* (Boisduval) (Schmidt 2009); however, true *H. diffinis* was recently discovered in the Peace River region of northeastern BC by J. H. Shepard.
1585 *Hemaris thetis* (Boisduval, 1855)

This species was listed by Cannings and Scudder (2007) and Tuttle (2007) as *H. senta* (Strecker), a recent synonym (Schmidt 2009).
**Tribe Macroglossini**

1585.1  
\[ P \text{ Proserpinus lucidus (Boisduval, 1852)} \]  
This species is reported as “probable” for BC by Tuttle (2007).

1586  
\[ P \text{ Proserpinus clarkiae (Boisduval, 1852)} \]

1587  
\[ P \text{ Proserpinus flavofasciata (Walker, 1856)} \]

1588  
\[ U \text{ Darapsa choerilus (Cramer, [1780])} \]  
Listed as uncertain for BC by Tuttle (2007). The only known BC record is from Ucluelet; it is likely mislabelled. However, this species probably occurs in BC’s Peace River region.

1589  
\[ S \text{ Hyles euphorbiae (Linnaeus, 1758)} \]  
This species was introduced to BC for biological control of *Euphorbia* beginning in 1966 (Harris and Alex 1971); it has not yet become established in the province, but it is expected to do so via dispersal from populations in AB.

1590  
\[ M \text{ Hyles gallii (Rottemburg, 1775)} \]

1591  
\[ M \text{ Hyles lineata (Fabricius, 1775)} \]

1592  
\[ M \text{ Deilephila elpenor (Linnaeus, 1758)} \]  
Introduced from Europe to BC; known only from the Lower Mainland (Pitt Meadows, Maple Ridge, Langley). According to F. A. H. Sperling (personal communication), this species was intentionally released by a sphingid collector near Vancouver before 1995.

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**Superfamily Geometroidea**

64. **Family Uraniidae (swallowtail moths)**

Uraniids are small to large, usually slender-bodied moths. North American species have wingspans of 15 to 20 mm. Some tropical species are brilliantly iridescent and tailed like papilionid butterflies, but most are cryptically coloured. The family is defined by characters of the abdominal tympanum and wing venation. Some species, including the BC species, have notched hind wings.

Larvae of Epipleminae, including the North American species, are social when young, making webs that they abandon as they mature. Adults hold their wings outspread or rolled, often with the forewings and hind wings widely separated.

The family Uraniidae consists of about 700 described species, mostly in the tropics. Ten species are known in North America, one of which occurs in BC.

**Subfamily Epipleminae**

1593  
\[ C \text{allizzia amorata Packard, 1876} \]
65. Family Geometridae (inchworm moths; loopers)

Geometrid moths are small to very large (with wingspans of about 10 to 50 mm in BC, but up to more than 100 mm elsewhere), and typically slender bodied, with broad, delicate wings. In our fauna, colours are usually subdued, with browns, greys, whites and rusts predominating; some are green, yellow, or black and white. Delicate transverse lines or bands may cross both pairs of wings. In some species, the females have short wings or are wingless; wing loss is more common in the Geometridae than in any other lepidopteran family. Adult geometrids are mostly nocturnal, and many are attracted to lights. When resting, they typically hold the cryptically coloured wings outspread, but some species fold their wings tightly over the abdomen. Some species are diurnal; some of these are brightly coloured.

Most larvae have lost the front three of the usual five pairs of prolegs, but some species have retained more than two pairs (with some prolegs reduced). The loss of prolegs results in the looping habit of the moving larva; the name “Geometridae” is derived from this “earth-measuring” motion.

Characteristically, many geometrid larvae are beautifully camouflaged and, when disturbed, may stand erect on the prolegs, strikingly resembling a little twig. The larvae usually are externally feeding defoliators, although some attack fruits, dead leaves and stored food products; a few are carnivorous. Many are serious pests, especially of fruit-bearing shrubs and trees and of ornamental and forest trees. Adults of some Scopula species in Southeast Asia imbibe blood from wounds in mammals, or sip sweat and tears.

The family Geometridae is huge, containing about 23 000 species globally. About 1425 species are described in North America; 362 species have been reported from BC, and a further six species are expected to be found, making the family the third-most diverse group of moths in the province. Most Canadian species of geometrids were treated by McGuffin (1967, 1972, 1977, 1981, 1987, 1988) and Bolte (1990), but many genera in the subfamily Larentiinae remain poorly known. Other significant North American works are by Ferguson (1985, 2008). A global catalogue of the Geometridae was published by Scoble (1999).

Subfamily Larentiinae

Tribe Cidariini

1594  Dysstroma citrata (Linnaeus, 1761)
Dysstroma sobria Swett, 1917

Dysstroma suspectata (Möschler, 1874)
This species is known in BC from a single specimen from Kootenay Park, verified via DNA barcode (B. C. Schmidt, personal communication).

Dysstroma ochrofuscaria Ferguson, 1983

Dysstroma infuscata (Tengström, 1869)
This species is known from YT and AB, and likely occurs in BC also.

Dysstroma truncata (Hufnagel, 1767)
Subspecies transversata (Kellicott) has been reported from BC.

Dysstroma pseudimmanata (Heydemann, 1929)
Historical reports of *D. walkerata* (Pearsall) refer to this species (Pohl et al. 2010).

Dysstroma hersiliata (Guenée, [1858])
Subspecies cervinifascia (Walker) and manitoba McDunnough have been reported from BC.

Dysstroma formosa (Hulst, 1896)
Subspecies occidentata (Taylor) has been reported from BC.

Dysstroma colvillei Blackmore, 1926

Dysstroma brunneata (Packard, 1867)
Subspecies ethela (Hulst) has been reported from BC.

Dysstroma mancipata (Guenée, [1858])
Subspecies decorata (Taylor) has been reported from BC.

Eulithis propulsata (Walker, 1862)

Eulithis testata (Linnaeus, 1761)

Eulithis destinata (Möschler, 1860)
Subspecies harveyata (Taylor) has been reported from BC.

Eulithis flavibrunneata (McDunnough, 1943)

Eulithis explanata (Walker, 1862)
The record from BC by Forbes (1948) probably refers to *E. xylina* (Hulst), as no BC vouchers are known and this species has otherwise not been reported from BC. However, it lives in adjacent northwestern AB, and almost certainly occurs in BC’s inadequately studied Peace River region.

Eulithis xylina (Hulst, 1896)
Subspecies speciosa (Hulst) has been reported from BC.

Eurhinosea flavaria Packard, 1873

Antepirrhoe semiatrata (Hulst, 1881)

Antepirrhoe fasciata (Barnes & McDunnough, 1918)

Antepirrhoe atrifasciata (Hulst, 1888)

Ecliptopera silaceata ([Denis & Schiffermüller], 1775)
Subspecies albolineata (Packard) has been reported from BC.

Colostygia circumvallaria (Taylor, 1906)
This species has been reported from BC by various authors, including Cannings and Scudder (2007), as *C. turbata* Hübner, a Palaearctic species.

Plemyria georgii Hulst, 1896
Subspecies benesignata (Barnes & McDunnough) has been reported from BC.
Thera juniperata (Linnaeus, 1758)

Thera otisi (Dyar, 1904)

Ceratodalia gueneata Packard, 1876

Lampropteryx suffumata ([Denis & Schiffermüller], 1775)
A holarctic species, newly discovered in North America by deWaard et al. (2008).

Tribe Hydriomenini

Hydriomena tuolumne Barnes & McDunnough, 1917
Known in BC from specimens in the RBCM from Wellington and Thetis Island.

Hydriomena expurgata Barnes & McDunnough, 1917
Subspecies nicolensis McDunnough occurs in BC.

Hydriomena irata Swett, 1910
Subspecies quaesitata Barnes & McDunnough has been reported from BC.

Hydriomena perfracta Swett, 1910

Hydriomena marinata Barnes & McDunnough, 1917
Subspecies exasperata Barnes & McDunnough and marinata Barnes & McDunnough have been reported from BC.

Hydriomena edenata Swett, 1909
Subspecies grandis Barnes & McDunnough has been reported from BC.

Hydriomena divisaria (Walker, 1860)

Hydriomena renunciata (Walker, 1862)
Subspecies columbiata Taylor and pernigrata Barnes & McDunnough have been reported from BC.

Hydriomena albimontanata McDunnough, 1939

Hydriomena nevadae Barnes & McDunnough, 1917

Hydriomena californiata (Packard, 1871)

Hydriomena crokeri Swett, 1910

Hydriomena ruberata (Freyer, [1831])

Hydriomena macdunnoughi Swett, 1918

Hydriomena furcata (Thunberg, 1784)
The nominate subspecies occurs in BC.

Hydriomena quinquefasciata (Packard, 1871)

Hydriomena albi\textasciitilde{\textit{fasi}}\textit{ciata} (Packard, 1874)
Subspecies reflata Grote and victoria Barnes & McDunnough occur in BC.

Hydriomena speciosata (Packard, 1874)

Hydriomena morosata Barnes & McDunnough, 1917

Hydriomena nubilo\textasciitilde{\textit{fasi}}\textit{ciata} (Packard, 1871)

Hydriomena manzanita Taylor, 1906

Triphosa haesitata (Guenée, [1858])
The nominate subspecies has been reported from BC.

Coryphista meadii (Packard, 1874)
The nominate subspecies has been reported from BC.

Rheumaptera undulata (Linnaeus, 1758)
Subspecies blu\textasciitilde{\textit{f}} (Bryk) occurs in BC.
1647 *Rheumaptera hastata* (Linnaeus, 1758)
Subspecies *gothicata* (Guenée) has been reported from BC.

1648 *Rheumaptera subhastata* (Nolcken, 1870)
Subspecies *confusa* (McDunnough) has been reported from BC.

1649 *Entephría kidluitata* (Munroe, 1951)

1650 *Entephría multivagata* (Hulst, 1881)

1651 *Entephría takuata* Taylor, 1908

1652 *Entephría lagganata* Taylor, 1908

1653 *Mesoleuca ruficillata* (Guenée, [1858])

1654 *Mesoleuca gratulata* (Walker, 1862)
Subspecies *latialbata* Barnes & McDunnough has been reported from BC.

1655 *Spargania magnoliata* Guenée, [1858]
Subspecies *pernotata* (Hulst) has been reported from BC.

1656 *Spargania luctuata* ([Denis & Schiffermüller], 1775)
Subspecies *obductata* (Möschler) has been reported from BC.

1657 *Perizoma basaliata* (Walker, 1862)

1658 *Perizoma grandis* (Hulst, 1896)

1659 *Perizoma curvilinea* (Hulst, 1896)

1660 *Perizoma costiguttata* (Hulst, 1896)

1661 *Perizoma custodiata* (Guenée, [1858])

1662 *Anticlea vasiitata* Guenée, [1858]

1663 *Anticlea multifera* (Walker, 1863)

**Tribe Stamnomdini**

1664 *Stamnodes blackmorei* Swett, 1915

1665 *Stamnodes topazata* (Strecker, 1899)
Subspecies *albida* Barnes & McDunnough has been reported from BC.

1666 *Stamnodes marmorata* (Packard, 1871)

1667 *Stamnoctenis morrisata* (Hulst, 1887)

1668 *Stamnoctenis pearsalli* (Swett, 1914)

**Tribe Xanthorhoini**

1669 *Xanthorhoe labradorensis* (Packard, 1867)
This species was referred to in early reports under the Palaearctic name *X. designata* (Hufnagel).

1670 *Xanthorhoe packardata* McDunnough, 1945

1671 *Xanthorhoe abrasaria* (Herrich-Schäffer, [1855])
Subspecies *aquilonaria* Cassino & Swett (type locality Atlin BC) and *congregata* (Walker) have been reported from BC.

1672 *Xanthorhoe iduata* (Guenée, [1858])

1673 *Xanthorhoe macdunnoughi* Swett, 1918
Xanthorhoe ramaria Swett & Cassino, 1920
Historical records of this species from BC are erroneous; populations west of the Rocky Mountains are now X. delectaria Cassino & Swett, which was until recently treated as a subspecies of X. ramaria (Pohl et al. 2010). However, X. ramaria is known from the boreal forests of AB, and likely occurs in BC’s Peace River region (B. C. Schmidt, personal communication).

Xanthorhoe delectaria Cassino & Swett, 1920
This taxon, described from Atlin, BC, was historically treated as a subspecies of X. ramaria Swett & Cassino, but was raised to species status by Pohl et al. (2010).

Xanthorhoe lagganata Swett & Cassino, 1920
This species was previously reported from BC under the name X. incursata (Hübner), a Palaearctic species. All North American material is X. lagganata Swett (Pohl et al. 2010).

Xanthorhoe baffinensis McDunnough, 1939

Xanthorhoe algidata (Möschler, 1874)
Reported by Cannings and Scudder (2007) under the name X. dodata Swett & Cassino, which was synonymized with X. algidata by Pohl et al. (2010).

Xanthorhoe pontiaria Taylor, 1906

Xanthorhoe fossaria Taylor, 1906
Subspecies atlinensis Swett and blackmorei Swett were both described from BC material.

Xanthorhoe decoloraria (Esper, [1806])
Until recently this species was known in North America by the name X. munitata (Hübner), but that taxon was recently synonymised with decoloraria (Esper) (Scoble 1999). Subspecies convalaria (Guenée) has been reported from BC.

Xanthorhoe alticolata Barnes & McDunnough, 1916

Xanthorhoe defensaria (Guenée, [1858])

Xanthorhoe ferrugata (Clerck, 1759)
The nominate subspecies has been reported from BC.

Xanthorhoe clarkeata Ferguson, 1987

Xanthorhoe borealis Hulst, 1896

Xanthorhoe lacustrata (Guenée, [1858])

Epirrhoe alternata (Müller, 1764)

Epirrhoe plebeculata (Guenée, [1858])
Subspecies vivida Barnes & McDunnough has been reported in BC.

Epirrhoe sperryi Herbulot, 1951
This species was historically reported from BC under the name E. tristata (Linnaeus), a Palaearctic species.

Euphyia intermediata (Guenée, [1858])
Reported by Llewellyn Jones (1951) as E. unangulata (Haworth), an Old World name.

Enchoria lacteata (Packard, 1876)

Zenophleps lignicolorata (Packard, 1874)
Canadian populations traditionally treated as Z. lignicolorata may be Z. alpinata Cassino (Pohl et al. 2010). British Columbia populations have been referred to as subspecies victoria Taylor.
1693  **Zenophleps alpinata** Cassino, 1927
1694  **Psychophora phocata** (Möschler, 1862)
1695  **Psychophora suttoni** Heinrich, 1942
       A recent BC record by B. C. Schmidt at Pink Mountain is provisionally listed here; this actually represents a new species near *P. suttoni* that awaits a formal description.
1696  **Costaconvexa centrostrigaria** (Wollaston, 1858)

**Tribe Asthenini**
1697  **Hydrelia albifera** (Walker, 1866)
1698  **Hydrelia brunneifasciata** (Packard, 1876)
1699  **Venusia cambrica** Curtis, 1839
1700  **Venusia duodecemlineata** (Packard, 1873)
       This species is known in BC (and Canada) from one specimen in the PFC, identified via DNA barcode (deWaard et al. 2011).
1701  **Venusia obsoleta** (Swett, 1916)
1702  **Venusia pearsalli** (Dyar, 1906)
1703  **Trichodezia albovittata** (Guenée, [1858])
       Subspecies *tenui fasciata* Barnes & McDunnough has been reported in BC.
1704  **Minoa murinata** (Scopoli, 1763)
       Introduced to control Leafy Spurge in 1994; it may not be established in the province (McClay et al. 1995).

**Tribe Operophterini**
1705  **Epirrita autumnata** (Borkhausen, 1794)
       Subspecies *henshawi* (Swett) and *omissa* (Harrison) have been reported from BC.
1706  **Epirrita undulata** (Harrison, 1942)
1707  **Epirrita pulchraria** (Taylor, 1907)
1708  **Operophtera brumata** (Linnaeus, 1758)
       Known as the Winter Moth, this alien species was first reported in North America in NS in 1949, but it may have been already present for more than 30 years by that time (Gillespie and Gillespie 1982). It was first found in BC in 1976.
1709  **Operophtera bruceata** (Hulst, 1886)
1710  **Operophtera danbyi** (Hulst, 1896)

**Tribe Eudulini**
1711  **Eubaphe mendica** (Walker, 1854)

**Tribe Eupitheciini**
1712  **Horisme intestinata** (Guenée, [1858])
1713  **Horisme incana** Swett, 1918
       Subspecies *columbia* McDunnough has been reported from BC.
1714  **Eupithecia palpata** Packard, 1873
1715  **Eupithecia ornata** (Hulst, 1896)
1716  **Eupithecia columbiata** (Dyar, 1904)
1717  **Eupithecia maestosa** (Hulst, 1896)
Eupithecia pusillata ([Denis & Schiffermüller], 1775)

This is a Palaearctic species that was first collected in BC at Port Moody in 1976 and in North Vancouver in 1986. It is likely established on ornamental juniper in BC’s Lower Mainland. Previous reports of this species in North America refer to *E. interruptofasciata* Packard, which was once considered a subspecies of *E. pusillata* (deWaard et al. 2010).

Eupithecia interruptofasciata Packard, 1873

Historically, this species was variously reported from BC as a subspecies under the Palaearctic names *E. sobrinata* (Hübner) and *E. pusillata* ([Denis & Schiffermüller]).

Eupithecia longipalpata Packard, 1876

Eupithecia placidata Taylor, 1908

Eupithecia unicolor (Hult, 1896)

Eupithecia pseudotsugata MacKay, 1951

Eupithecia misturata (Hult, 1896)

Eupithecia pygmaeata (Hübner, [1799])

Subspecies *obumbrata* Taylor occurs in BC.

Eupithecia bryanti Taylor, 1906

Eupithecia regina Taylor, 1906

Eupithecia borealis (Hult, 1898)

Eupithecia subfuscata (Haworth, 1809)

Eupithecia tripunctaria Herrich-Schäffer, 1852

Eupithecia harrisonata MacKay, 1951

Eupithecia casloata (Dyar, 1904)

Eupithecia rotundopuncta Packard, 1871

Eupithecia intricata (Zetterstedt, [1839])

Subspecies *taylorata* Swett occurs in BC.

Eupithecia satyrata (Hübner, [1813])

Subspecies *dodata* Taylor occurs in BC.

Eupithecia nimbicolor (Hult, 1896)

Eupithecia cretaceata (Packard, 1874)

Eupithecia behrensata Packard, 1876

Eupithecia sharronata Bolte, 1990

Eupithecia gelidata Möschler, 1860

Eupithecia multistrigata (Hult, 1896)

Eupithecia perfusca (Hult, 1898)

Llewellyn Jones (1951) reported this species from BC under the Palaearctic name *E. innotata* (Hufnagel).

Eupithecia annulata (Hult, 1896)

Eupithecia olivacea Taylor, 1906

Eupithecia lachrymosa (Hult, 1900)

Eupithecia lafontaineata Bolte, 1990

Eupithecia lariciata (Freyer, 1841)
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<td>1748</td>
<td><em>Eupithecia niphadophilata</em></td>
<td>(Dyar, 1904)</td>
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<tr>
<td>1749</td>
<td><em>Eupithecia subcolorata</em></td>
<td>(Hulst, 1898)</td>
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<tr>
<td>1750</td>
<td><em>Eupithecia assimilata</em></td>
<td>Doubleday, 1856</td>
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<td>1751</td>
<td><em>Eupithecia tenuata</em></td>
<td>Hulst, 1880</td>
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<td>1752</td>
<td><em>Eupithecia agnesata</em></td>
<td>Taylor, 1908</td>
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<tr>
<td>1753</td>
<td><em>Eupithecia niveifascia</em></td>
<td>(Hulst, 1898)</td>
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<td>1754</td>
<td><em>Eupithecia johnstoni</em></td>
<td>McDunnough, 1946</td>
</tr>
<tr>
<td>1755</td>
<td><em>Eupithecia albicapitata</em></td>
<td>Packard, 1876</td>
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<td>1756</td>
<td><em>Eupithecia mutata</em></td>
<td>Pearsall, 1908</td>
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<tr>
<td>1757</td>
<td><em>Eupithecia columbrata</em></td>
<td>McDunnough, 1940</td>
</tr>
<tr>
<td>1758</td>
<td><em>Eupithecia spermaphaga</em></td>
<td>(Dyar, 1917)</td>
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<td>1759</td>
<td><em>Eupithecia gilvipennata</em></td>
<td>Cassino &amp; Swett, 1922</td>
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<tr>
<td>1760</td>
<td><em>Eupithecia absinthiata</em></td>
<td>Clerck, 1759</td>
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<td>1761</td>
<td><em>Eupithecia anticaria</em></td>
<td>Walker, 1862</td>
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<td>1762</td>
<td><em>Eupithecia graeffii</em></td>
<td>Hulst, 1896</td>
</tr>
<tr>
<td>1763</td>
<td><em>Eupithecia nevadata</em></td>
<td>Packard, 1871</td>
</tr>
<tr>
<td>1764</td>
<td><em>Eupithecia ravocostaliata</em></td>
<td>Packard, 1876</td>
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<tr>
<td>1765</td>
<td><em>Prorella leucata</em></td>
<td>(Hulst, 1896)</td>
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<tr>
<td>1766</td>
<td><em>Prorella mellisa</em></td>
<td>(Grossbeck, 1908)</td>
</tr>
<tr>
<td>1767</td>
<td><em>Pasiphila rectangulata</em></td>
<td>(Linnaeus, 1758)</td>
</tr>
</tbody>
</table>

**Tribe Lobophorini**

<table>
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<tr>
<th>Page</th>
<th>Species</th>
<th>Authors</th>
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<tr>
<td>1768</td>
<td><em>Carsia sororiata</em></td>
<td>(Hübner, [1813])</td>
</tr>
<tr>
<td></td>
<td>Subspecies <em>alpina</em></td>
<td>Packard, <em>columbiata</em> McDunnough, and <em>thaxteri</em> Swett have been reported from BC.</td>
</tr>
<tr>
<td>1769</td>
<td><em>Aplocera plagiata</em></td>
<td>(Linnaeus, 1758)</td>
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<td></td>
<td>Introduced from Europe in 1967 to control St. John's Wort (Gillespie and Gillespie 1982), this species has subsequently become established in the southern Interior (deWaard 2010).</td>
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<tr>
<td>1770</td>
<td><em>Acasis viridata</em></td>
<td>(Packard, 1873)</td>
</tr>
<tr>
<td>1771</td>
<td><em>Cladara limitaria</em></td>
<td>(Walker, 1860)</td>
</tr>
<tr>
<td></td>
<td>Subspecies <em>nigroangulata</em></td>
<td>Strecker has been reported from BC.</td>
</tr>
<tr>
<td>1772</td>
<td><em>Cladara atrolitigata</em></td>
<td>(Walker, [1863])</td>
</tr>
<tr>
<td>1773</td>
<td><em>Lobophora nivigerata</em></td>
<td>Walker, 1862</td>
</tr>
<tr>
<td>1774</td>
<td><em>Lobophora montanata</em></td>
<td>Packard, 1874</td>
</tr>
<tr>
<td></td>
<td>Lafontaine and Troubridge (2011) correctly reported this species from BC. They also erroneously report in their Appendix 3 that BC records represent a misidentification, and that the species is known only from the southern Rockies.</td>
<td></td>
</tr>
<tr>
<td>1775</td>
<td><em>Lobophora simsata</em></td>
<td>Swett, 1920</td>
</tr>
<tr>
<td>1776</td>
<td><em>Lobophora magnoliatoidata</em></td>
<td>(Dyar, 1904)</td>
</tr>
</tbody>
</table>
**Subfamily Sterrhinae**

**Tribe Sterrhini**

1777 *Lobophora canavestita* (Pearsall, 1906)

**Tribe Cosymbiini**

1778 *Idaea demissaria* (Hübner, [1831])

- Subspecies *columbia* (McDunnough) has been reported from BC.

1779 *Idaea rotundopennata* (Packard, 1876)

1780 *Idaea dimidiata* (Huñnagel, 1767)

**Tribe Timandrini**

1781 *Cyclophora dataria* (Hulst, 1887)

1782 *Cyclophora pendulinaria* (Guenée, [1858])

**Tribe Scopulini**

1783.1 *Scopula limboundata* (Haworth, 1809)

- This species has not been found in BC, but it likely occurs in the boreal forest of BC’s Peace River region.

1784 *Scopula ancellata* (Hulst, 1887)

1785 *Scopula fuscata* (Hulst, 1887)

1786 *Scopula junctaria* (Walker, 1861)

- The nominate subspecies has been reported from BC.

1787 *Scopula quinquelinearia* (Packard, 1871)

- This taxon was historically treated as a subspecies of *S. junctaria* (Walker), but was raised to species status by Pohl et al. (2010).

1788 *Scopula frigidaria* (Möschler, 1860)

1789 *Scopula siccata* McDunnough, 1939

1790 *Scopula cajanderi* (Herz, 1903)

1791 *Scopula inductata* (Guenée, [1858])

- Reported from BC by Shepard (unpublished report B); it is known from several specimens in the CNC and RBCM (deWaard 2010).

1792 *Scopula luteolata* (Hulst, 1880)

1793 *Scopula sideraria* (Guenée, [1858])

1794 *Scopula sentinaria* (Geyer, 1837)

1795 *Leptostales rubromarginaria* (Packard, 1871)

1796 *Leptostales ferruminaria* (Zeller, 1872)

- Reported from BC by Shepard (unpublished report B); vouchers have not been confirmed, but this rare moth is known from the Peace River parkland of adjacent AB: it likely occurs in BC.

**Subfamily Geometrinae**

**Tribe Nemoriini**

1797 *Chlorosea nevadaria* Packard, 1873

1798 *Chlorosea banksaria* Sperry, 1944

- The nominate subspecies has been reported from BC.
Nemoria unitaria (Packard, 1873)
Nemoria darwiniata (Dyar, 1904)
The nominate subspecies occurs in BC.
Nemoria glaucomarginaria (Barnes & McDunnough, 1917)

Dichorda rectaria (Grote, 1877)
Reported from BC by deWaard (2010) based on three specimens in the Smithsonian Institution. Ferguson (1985) listed this species as "uncertain" in BC, as subspecies cockerelli Sperry.

**Tribe Synchlorini**

Synchlorella aerata (Fabricius, 1798)
Subspecies liquoraria Guenée occurs in BC.

Synchlorella bistriaria (Packard, 1876)
Lafontaine and Troubridge (2011) mistakenly reported that western Canadian records of this species are erroneous. It is known across western Canada.

**Tribe Hemitheini**

Chlorochlamys triangularis Prout, 1912
Hemithea aestivaria (Hübner, [1799])
Introduced from Eurasia; this species was first found in North America in BC in 1978 (Gillespie and Gillespie 1982).

Mesothea incertata (Walker, [1863])
The nominate subspecies and subspecies viridipennata (Hulst) have been reported in BC.

**Subfamily Archiearinae**

Archiearis infans (Möschler, 1862)
Subspecies oregonensis (Swett) occurs in BC.

Leucobrephos brephoides (Walker, 1857)

**Subfamily Ennominae**

**Tribe Alsophilini**

Alsophila pometaria (Harris, 1841)

**Tribe Cassymini**

Nematocampa resistaria (Herrick-Schäffer, [1856])
Protitame virginalis (Hulst, 1900)
Protitame subalbaria (Packard, 1873)
Listed by Cannings and Scudder (2007) under the name P. matilda (Dyar), a recent synonym.

**Tribe Macariini**

Eumacaria madopata (Guenée, [1858])
Listed by Cannings and Scudder (2007) under the name E. latiferrugata (Walker), a synonym that was overlooked prior to Ferguson (2008).

Speranza brunnnea (Thunberg, 1784)
Speranza amboflava (Ferguson, 1953)
The BC record in Ferguson (2008) is listed as uncertain, but this species certainly occurs in BC and is supported by vouchers in the CNC. It was historically reported under the name S. suphurea (Packard).
Speranza boreata Ferguson, 2008
Speranza exauspicata (Walker, 1861)
Speranza bitactata (Walker, 1862)
Speranza decorata (Hulst, 1896)
Speranza colata (Grote, 1881)
Subspecies correllatum (Hulst) occurs in BC.
Speranza occiduaria (Packard, 1874)
Listed by Cannings and Scudder (2007) under the name andersoni (Swett) (type locality: Atlin, BC), a recent synonym (Pohl et al. 2010).
Speranza simplex (Dyar, 1907)
Speranza lorquinaria (Guenée, [1858])
Speranza loricaria (Eversmann, 1837)
Speranza plumosata (Barnes & McDunnough, 1917)
Speranza quadrilinearia (Packard, 1873)
Epelis truncataria (Walker, 1862)
Macaria notata (Linnaeus, 1758)
Listed by Cannings and Scudder (2007) and others under the name M. ulsterata (Pearsall), a recent synonym. The nominate subspecies occurs in BC.
Macaria aemulataria Walker, 1861
Listed by Cannings and Scudder (2007) under the name M. perplexata (Pearsall), a recent synonym.
Macaria masquerata Ferguson, 2008
Previously considered to be conspecific with M. bicolorata (Fabricius), this species was recently described by Ferguson (2008).
Macaria adonis Barnes & McDunnough, 1918
Macaria sexmaculata Packard, 1867
Subspecies incolorata Dyar occurs in BC.
Macaria signaria (Hübner, [1809])
Includes unipunctaria (Wright), marmorata (Ferguson), and submarmorata Walker, all recent synonyms since Ferguson (2008).
Digrammia californiaria (Packard, 1871)
Digrammia sexpunctata (Bates, 1886)
This species was reported by Llewellyn Jones (1951), but no BC vouchers could be located by Ferguson (2008), who reported it only from the adjacent northwestern USA, as far north as Boise, ID. Recent collections from southern BC by J. deWaard and B. C. Schmidt have been confirmed as this species (B. C. Schmidt, personal communication).
Digrammia delectata (Hulst, 1887)
Digrammia ubiquitata Ferguson, 2008
Prior to Ferguson (2008), this species was often confused with D. denticulata (Grote) and D. sexpunctata (Bates) in collections.
Digrammia denticulata (Grote, 1883)
Digrammia nubiculata (Packard, 1876)
Digrammia curvata (Grote, 1880)
1842 *Digrammia triviata* (Barnes & McDunnough, 1917)
1843 *Digrammia setonana* (McDunnough, 1927)
   Doubtfully distinct from *D. continuata* (Walker) (Ferguson 2008); see note under that species in the Excluded Taxa list.
1844 *Digrammia muscariata* (Guénée, [1858])
   Also listed by Cannings and Scudder (2007) as *D. respersata* (Hulst), which is now considered to be a subspecies of *D. muscariata*. British Columbia material previously identified as “*D. respersata*” is a mix of two taxa: Garry Oak feeders from Vancouver Island are *D. muscariata* subspecies *teucaria* (Strecker), but material from the southern mainland have been reetermined as *D. extenuata* Ferguson, which was not described until 2008 (B. C. Schmidt, personal communication).
1845 *Digrammia extenuata* Ferguson, 2008
1846 *Digrammia rippertaria* (Duponchel, 1830)
   Reported by many workers, including Llewellyn Jones (1951) and Ross and Evans (1958), as *D. hebetata* (Hulst) under a previous taxonomic arrangement.
1847 *Digrammia decorata* (Grossbeck, 1907)
1848 *Digrammia subminiata* (Packard, 1873)
1849 *Digrammia neptaria* (Guénée, [1858])
1850 *Digrammia irrorata* (Packard, 1876)
   Subspecies *venosata* (McDunnough) occurs in BC.

**Tribe Boarmiini**
1851 *Dasyfidonia avuncularia* (Guénée, [1858])
1852 *Orthofidonia tinctaria* (Walker, 1860)
   All BC *Orthofidonia* were erroneously reported by Cannings and Scudder (2007) as *O. exornata* (Walker); see note in the Excluded Taxa list.
1853 *Hesperumia sulphuraria* Packard, 1873
1854 *Hesperumia latipennis* (Hulst, 1896)
1855 *Neoalcis californiaria* (Packard, 1871)
1856 *Glena nigricaria* (Barnes & McDunnough, 1913)
1857 *Stenoporpia pulmonaria* (Grote, 1881)
   Subspecies *albescens* (Hulst) and *satisfacta* (Barnes & McDunnough) have been reported from BC.
1858 *Stenoporpia separataria* (Grote, 1883)
1859 *Stenoporpia excelsaria* (Strecker, 1899)
1860 *Aethalura intertexta* (Walker, 1860)
   Subspecies *fumata* (Barnes & McDunnough) has been reported from BC.
1861 *Iridopsis clivinaria* (Guénée, [1858])
   Subspecies *profanata* (Barnes & McDunnough) has been reported from BC.
1862 *Iridopsis larvaria* (Guénée, [1858])
1863 *Iridopsis emasculatum* (Dyar, 1904)
   This species was described from Kaslo, BC, as a variety of *I. humaria* (Guénée); it is now recognised as a distinct species (Scoble 1999).
1864 *Anavitrinella pampinaria* (Guénée, [1858])
1865 *Anavitrinella addendaria* (Grossbeck, 1908)
<table>
<thead>
<tr>
<th>Year</th>
<th>Species Name and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1866</td>
<td>Gnophos macguffini Smiles, 1978</td>
</tr>
<tr>
<td>1867</td>
<td>Ectropis crepuscularia ([Denis &amp; Schiffermüller], 1775)</td>
</tr>
<tr>
<td>1868</td>
<td>Protoboarmia porcelaria (Guenée, [1858]) Subspecies indicataria (Walker) has been reported from BC.</td>
</tr>
</tbody>
</table>

**Tribe Melanolophiini**

<table>
<thead>
<tr>
<th>Year</th>
<th>Species Name and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1869</td>
<td>Melanolophia imitata (Walker, 1860)</td>
</tr>
<tr>
<td>1870</td>
<td>Eufidonia convergaria (Walker, 1860)</td>
</tr>
<tr>
<td>1871</td>
<td>Eufidonia discospilata (Walker, 1862)</td>
</tr>
</tbody>
</table>

**Tribe Bistonini**

<table>
<thead>
<tr>
<th>Year</th>
<th>Species Name and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1872</td>
<td>Biston betularia (Linnaeus, 1758) Subspecies cagnataria (Guenée) has been reported from BC.</td>
</tr>
<tr>
<td>1873</td>
<td>Lycia ursaria (Walker, 1860)</td>
</tr>
<tr>
<td>1874</td>
<td>Lycia rachelae (Hulst, 1896)</td>
</tr>
<tr>
<td>1875</td>
<td>Hypagyrtis unipunctata (Haworth, 1809)</td>
</tr>
<tr>
<td>1876</td>
<td>Hypagyrtis piniata (Packard, 1870)</td>
</tr>
<tr>
<td>1877</td>
<td>Phigalia plumogeraria (Hulst, 1888)</td>
</tr>
<tr>
<td>1878</td>
<td>Erannis tiliaria (Harris, 1841) Historical records of this species in BC refer to E. vancouverensis Hulst, long considered a subspecies of E. tiliaria. However, E. tiliaria was long suspected to occur in BC’s Peace River region, and was recently confirmed there, in the Fort St. John area (L. Avis, personal communication).</td>
</tr>
<tr>
<td>1879</td>
<td>Erannis vancouverensis Hulst, 1896</td>
</tr>
</tbody>
</table>

**Tribe Baptini**

<table>
<thead>
<tr>
<th>Year</th>
<th>Species Name and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>Lomographa semiclarata (Walker, 1866)</td>
</tr>
</tbody>
</table>

**Tribe Caberini**

<table>
<thead>
<tr>
<th>Year</th>
<th>Species Name and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1881</td>
<td>Sericosema juturnaria (Guenée, [1858])</td>
</tr>
<tr>
<td>1882</td>
<td>Sericosema wilsonensis Cassino &amp; Swett, 1922</td>
</tr>
<tr>
<td>1883</td>
<td>Cabera exanthemata (Scopoli, 1763) Subspecies bryantaria (Taylor) occurs in BC.</td>
</tr>
<tr>
<td>1884</td>
<td>Cabera erythemia Guenée, [1858]</td>
</tr>
<tr>
<td>1885</td>
<td>Cabera variolaria Guenée, [1858]</td>
</tr>
<tr>
<td>1886</td>
<td>Cabera borealis (Hulst, 1896)</td>
</tr>
<tr>
<td>1887</td>
<td>Eudrepanulatrix rectifascia (Hulst, 1896) The nominate subspecies has been reported from BC.</td>
</tr>
<tr>
<td>1888</td>
<td>Drepanulatrix unicalcararia (Guenée, [1858])</td>
</tr>
<tr>
<td>1889</td>
<td>Drepanulatrix quadraria (Grote, 1882)</td>
</tr>
<tr>
<td>1890</td>
<td>Drepanulatrix foeminaria (Guenée, [1858])</td>
</tr>
<tr>
<td>1891</td>
<td>Drepanulatrix carnearia (Hulst, 1888) Subspecies columbiaria McDunnough has been reported from BC.</td>
</tr>
<tr>
<td>1892</td>
<td>Drepanulatrix falcataria (Packard, 1873)</td>
</tr>
<tr>
<td>1893</td>
<td>Drepanulatrix secundaria Barnes &amp; McDunnough, 1916</td>
</tr>
</tbody>
</table>
1894 *Drepanulatrix monicaria* (Guenée, [1858])
Records of this species in BC and AK by Rindge (1949) were missed by McGuffin (1981) and many subsequent Canadian workers.

1895 *Apodrepanulatrix litaria* (Hulst, 1887)

1896 *Ixala desperaria* (Hulst, 1887)

**Tribe Angeronini**

1897 *Aspitates aberrata* (Edwards, 1884)

1897.1 P *Aspitates orciiferaria* (Walker, [1863])
Dyar’s (1904) report of a specimen from Kaslo, BC, (repeated by ESBC 1906) is assumed to be erroneous; the species is otherwise known from AK, YT and NT (McGuffin 1981). However, it could possibly be found in the northern part of the province.

1897.2 P *Aspitates taylori* (Butler, 1893)
This species is known from YT and northern AB, where it occurs in open Black Spruce bogs. It is likely to be found in BC’s Peace River region.

1898 *Euchlaena johnsonaria* (Fitch, 1869)

1899 *Euchlaena mollisaria* (Hulst, 1886)
Genetic barcode data suggests this may be merely a form of *E. johnsonaria* (Fitch), as it was historically treated, but we continue to list it pending formal synonymy.

1900 *Euchlaena madusaria* (Walker, 1860)
Subspecies *ochrearia* McDunnough has been reported in BC.

1901 *Euchlaena marginaria* (Minot, 1869)

1902 *Euchlaena tigrinaria* (Guenée, [1858])
Subspecies *sirenaria* (Strecker) occurs in BC.

1903 *Xanthotype urticaria* Swett, 1918

1904 *Xanthotype sospeta* (Drury, 1773)

**Tribe Azelinini**

1905 *Pero honestaria* (Walker, 1860)

1906 *Pero morrisonaria* (Edwards, 1881)

1907 *Pero mizon* Rindge, 1955

1908 *Pero behrensaria* (Packard, 1871)

1909 *Pero occidentalis* (Hulst, 1896)

**Tribe Nacophorini**

1910 *Phaeoura mexicanaria* (Grote, 1883)

1911 *Gabriola dyari* Taylor, 1904

**Tribe Campaeini**

1912 *Campaea perlata* (Guenée, [1858])

**Tribe Ennomini**

1913 *Ennomos magnaria* Guenée, [1858]

1914 *Ennomos alniaria* (Linnaeus, 1758)
Tribe Epirranthini

1914.1  P  Spodolepis substriataria Hulst, 1896
Known records in BC from as far north and east as Prince George all are S. danbyi (Hulst), raised from its previous status as a subspecies of S. substriataria by Pohl et al. (2010). However, S. substriataria likely does occur in the boreal forest habitat of BC’s Peace River region.

1915  Spodolepis danbyi (Hulst, 1898)
Historically treated as a subspecies of S. substriataria Hulst, but raised to species status by Pohl et al. (2010).

Tribe Lithinini

1916  Philedia punctomacularia (Hulst, 1888)
1917  Thallophaga taylorata (Hulst, 1896)
1918  Thallophaga hyperborea (Hulst, 1900)

Tribe Anagogini

1919  Selenia alciphearia Walker, 1860
1920  Selenia kentaria (Grote & Robinson, 1867)
1921  Metanema inatomaaria Guenée, [1858]
1922  Metanema determinata Walker, 1866
1923  Metarranthis duaria (Guenée, [1858])
1924  Probole alienaria Herrich-Schäffer, [1855]
1925  Probole amicaria (Herrich-Schäffer, [1855])
North American material historically assigned to this species may in fact be part of a variable species, P. alienaria Herrich-Schäffer. However, P. amicaria is retained separately herein, pending further analysis.

1926  Plagodis phlogosaria (Guenée, [1858])
Subspecies approximaria Dyar and iris Rupert have been reported from BC.

1927  Plagodis pulveraria (Linnaeus, 1758)
Subspecies occiduaria (Walker) occurs in BC and the rest of North America; it has historically been treated as a species distinct from a Palaeartic concept of P. pulveraria.

Tribe Ourapterygini

1928  Neoterpes trianguliferata (Packard, 1871)
The nominate subspecies has been reported from BC.

1929  Caripeta divisata Walker, [1863]
1930  Caripeta aequaliaria Grote, 1883
Included here is a new species near C. aequaliaria, flagged via DNA barcoding and not yet described (deWaard 2010).

1931  Caripeta angustiorata Walker, [1863]
1932  Meris suffusaria McDunnough, 1940
1933  Besma quercivoraria (Guenée, [1858])
1934  Lambdina fiscellaria (Guenée, [1858])
Known as the Hemlock Looper, this species is a serious forest pest in BC. The nominate subspecies and subspecies lugubrosa (Hulst) (Western Hemlock Looper) and somniaria (Hulst) (Western Oak Looper) occur in the province.
Subspecies **nigrovenaria** (Packard) occurs in BC.

Early reports of this species from BC are confused with *N. freemani* Munroe, which was not described until 1963. Reports of this species in BC remain unconfirmed as vouchers are not known; it is known from the boreal forest of AB and could occur in northeastern BC.

The nominate subspecies occurs in BC.

Subspecies **catenulata** Grote and **combinata** McDunnough have been reported from BC.

Reported from BC’s Peace River region by Shepard (unpublished report B) under the name *P. transversata* (Drury), a recent synonym.

Notodontid moths are mostly robust and medium-sized, with wingspans reaching about 25 to 60 mm in BC species. Their colouration is brown, grey, olive or yellow, and spotted or streaked with darker or lighter tones. Many are strongly hairy and often bear backwards-projecting tufts on the hind margins of the forewings that protrude when the wings are folded. These, along with the large tubercles and processes on the backs of many larvae, give the family its scientific name, which means “back tooth”. The common name, “prominents” also refers to these projections.

**Superfamily Noctuoidea**

**66. Family Notodontidae (prominents)**

Notodontid moths are mostly robust and medium-sized, with wingspans reaching about 25 to 60 mm in BC species. Their colouration is brown, grey, olive or yellow, and spotted or streaked with darker or lighter tones. Many are strongly hairy and often bear backwards-projecting tufts on the hind margins of the forewings that protrude when the wings are folded. These, along with the large tubercles and processes on the backs of many larvae, give the family its scientific name, which means “back tooth”. The common name, “prominents” also refers to these projections.
Most notodontids feed on the foliage of trees and shrubs. Many adults and larvae are cryptic in form, pattern and posture: twig, bark, lichen and dead-leaf mimics are found throughout the family. Some larvae produce defensive secretions when disturbed, and others flaunt warning colours of red or yellow, sometimes raising the front and rear of the body or extruding long tails. Some larvae are gregarious when young, but become solitary as they mature.

Approximately 3800 notodontid species are known from all world regions except the Pacific islands and New Zealand. The Neotropical fauna is especially diverse. There are 139 species known in North America; 25 of these have been reported in BC. Despite the prominence of this group, there are no recent taxonomic works on the North American fauna.

Subfamily Pygaerinae
1956  Clostera albosigma Fitch, 1856
1957  Clostera strigosa (Grote, 1882)
1958  Clostera brucei (Edwards, 1885)
1959  Clostera apicalis (Walker, 1855)

Subfamily Notodontinae

Tribe Notodontini
1960  Pheosia rimosa Packard, 1864
True P. rimosa occurs in BC only in the Peace River region; specimens from elsewhere in BC are a new species that has been referred to as P. portlandia Edwards (e.g., by Cannings and Scudder 2007), but is in fact a new species awaiting description (B. C. Schmidt, personal communication).

1961  Odontosia elegans (Strecker, 1885)
1962  Notodonta scitipennis Walker, 1862
1963  Notodonta pacifica Behr, 1892
1964  Notodonta torva (Hübner, 1803)
Subspecies simplaria Graef occurs in BC and the rest of North America; it was synonymised with the otherwise Palaearctic N. torva, a recently designated but often-overlooked synonym (Schintlmeister [1984]).

Tribe Dicranurini
1965  Gluphisia septentrionis Walker, 1855
Subspecies quinquelinea Dyar has been reported from BC.
1966  Gluphisia avimacula Hudson, 1891
1967  Gluphisia lintneri (Grote, 1877)
Reported from BC by ESBC (1906) and Blackmore (1927), but not in more recent lists. These earlier records are probably based on misidentifications of G. severa Edwards. However, a specimen collected at Quesnel by C. S Guppy on 15 April 1994 has been tentatively identified as this species. It is known from the boreal forest of AB adjacent to BC, and is expected in BC’s Peace River region.

1968  Gluphisia severa Edwards, 1886
1969  *Furcula cinerea* (Walker, 1865)
Subspecies *paradoxa* (Dyar) has been reported from BC.

1970  *Furcula occidentalis* (Lintner, 1878)
Subspecies *gigans* (McDunnough) has been reported from BC.

1971  *Furcula scolopendrina* (Boisduval, 1869)

1972  *Furcula modesta* (Hudson, 1891)

1973  *Cerura scitica* (Walker, 1865)

**Subfamily Phalerinae**

1974  *Datana ministra* (Drury, 1773)
Subspecies *californica* (Dyar) has been reported from BC.

1975  *Nadata gibbosa* (Smith, 1797)

**Subfamily Heterocampinae**

1976  *Schizura ipomoeae* (Doubleday, 1841)
1977  *Schizura unicornis* (Smith, 1797)
Subspecies *conspecta* (Edwards) occurs in BC. Crabo et al. (2015) treat *conspecta*
as a full species.

1978  *Schizura concinna* (Smith, 1797)

1979  *Oligocentria semirufescens* (Walker, 1865)
1980  *Oligocentria pallida* (Strecker, 1899)

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**67. Family Erebidae (tussock moths, tiger moths, underwings and relatives)**

The Noctuidae sensu lato has been split recently into several families, with the “Nolinae” and “Euteliinae” becoming full families, the “quadrifine noctuids” becoming the Erebidae, and the “trifine noctuids” remaining as the true Noctuidae (Zahiri et al. 2011). As well, the “Arctiidae” (tiger moths) and “Lymantriidae” (tussock moths) have been relegated to subfamily rank within the Erebidae. This classification scheme better reflects our understanding of the evolutionary relationships among these groups, but will no doubt cause confusion in the short term. As a result of this rearrangement, the Erebidae are a large and diverse assemblage of moths with few consistent external features. The family is defined mainly by the state of vein M2 in the forewing, which lies in the lower part of the discal cell, so that the cubital vein appears to have four branches. The erebids range in size from very small to very large; BC species cover the entire range, with wings spanning 10 to 160 mm. Most are medium-sized moths, with 20- to 50-mm wingspans. Most species have forewings coloured in dull grey-and-brown patterns, but many Arctiinae are brightly coloured to warn potential predators of the poisonous chemicals they sequester from their food plants.
Most erebid larvae feed on living plants, but a few—including most members of the Herminiinae, Hyponodinae and Boletobinae—feed on dead leaves, fungi, lichens, dried fruit, or dung. Some erebids are serious forest and agricultural pests, particularly among the tussock moths (subfamily Lymantriinae). Most erebid adults feed on nectar or sap; a few (Scoliopteryginae) have mouthparts modified for piercing fruit. Some adult tiger-moth species produce clicking sounds with their tymbal organs when they detect bats nearby, warning the bats of the moths’ distastefulness. Some species can make sounds that subvert the bats’ echolocation system and confuse the bats as to the moths’ locations.

The Erebidae are the most speciose Lepidoptera family in the world, with more than 24,500 described species. In North America, about 960 species are known; 125 have been recorded from BC, and another is listed as “expected”. The only comprehensive revision of an erebid group is by Ferguson (1978) for the Lymantriinae, but many species are covered and illustrated in field guides and other popular works. A checklist (and errata) of valid North American species and recent taxonomic changes appears in Lafontaine and Schmidt (2010, 2011, 2013); a more complete catalogue of the Arctiinae, including all synonyms, was published by Schmidt and Opler (2008). Most Erebidae as currently defined are included in the world catalogue of the Noctuidae by Poole (1989).

Subfamily Lymantriinae

**Tribe Lymantriini**

**Subtribe Lymantriina**

1981 **S** *Lymantria dispar* (Linnaeus, 1758)

This European pest species known as the Gypsy Moth was first brought to North America to MA in 1869 for experimental silk production; it escaped and has been a major pest of hardwood forests ever since. It was first found in BC in 1911. It is currently considered by the CFIA to be extirpated from the province, although it is occasionally intercepted at ports of entry. Females of the European strain cannot fly, but females of the Asian strain are capable of flight.

**Subtribe Orgyiina**

1982 **Gynaephora rossii** (Curtis, 1835)

Recent provincial record by B. C. Schmidt.

1983 **Dasychira vagans** (Barnes & McDunnough, 1913)

Subspecies *grisea* (Barnes & McDunnough) occurs in BC.

1984 **U** *Dasychira plagiata* (Walker, 1865)

According to B. C. Schmidt (personal communication), BC records are probably misidentified *D. grisefacta* (Dyar). Confirmed *D. plagiata* is known only as far west as central AB; putative BC material requires confirmation.
1985  *Dasychira grisefacta* (Dyar, 1911)
Subspecies *ella* Bryk (type locality: Duncan, BC) and *grisefacta* (Dyar) occur in BC.

1986  *Orgyia antiqua* (Linnaeus, 1758)
Subspecies *badia* Edwards (type locality: Victoria, BC) and perhaps *nova* Fitch occur in BC.

1987  *Orgyia pseudotsugata* (McDunnough, 1921)
The Douglas-fir Tussock Moth. The nominate subspecies and subspecies *morosa* Ferguson occur in BC.

**Tribe Leucomini**

**Subtribe Leucomina**

1988  *Leucoma salicis* (Linnaeus, 1758)
The Satin Moth. This species was introduced from Eurasia, and was first found in Canada at New Westminster, BC, by Blackmore (1921).

**Subfamily Arctiinae**

**Tribe Lithosiini**

**Subtribe Cisthenina**

1989  *Hypoprepia miniata* (Kirby, 1837)
1990  *Bruceia pulverina* Neumögen, 1893
1991  *Clemensia albata* Packard, 1864

**Subtribe Lithosiina**

1992  *Eilema bicolor* (Grote, 1864)
1993  *Crambidia casta* (Packard, 1869)

**Tribe Arctiini**

**Subtribe Arctiina**

1994  *Holoarctia sordida* (McDunnough, 1921)
1995  *Neoarctia beanii* (Neumögen, 1891)
1996  *Neoarctia brucei* (Edwards, 1888)
1997  *Holarctia obliteratea* (Stretch, 1885)
1998  *Grammia doris* (Boisduval, 1869)
1999  *Grammia virgo* (Linnaeus, 1758)
2000  *Grammia parthenice* (Kirby, 1837)
2001  *Grammia virguncula* (Kirby, 1837)
2002  *Grammia speciosa* (Möschler, 1864)
2003  *Grammia quenseli* (Paykull, 1793)
2004  *Grammia margo* Schmidt, 2009
Reported until recently under the name *G. celia* (Saunders), a synonym of *G. figurata* (Drury).

2005  *Grammia nevadensis* (Grote & Robinson, 1866)
The nominate subspecies, and subspecies *geneura* (Stretch) and *superba* (Stretch) have been reported from BC.

2006  *Grammia williamsii* (Dodge, 1871)
Subspecies *tooele* (Barnes & McDunnough) has been reported from BC.
2007  *Grammia elongata* (Stretch, 1885)
2008  *Grammia ornata* (Packard, 1864)
2009  *Grammia complicata* (Walker, 1865)
2010  *Parasemia plantaginis* (Linnaeus, 1758)
2011  *Pararctia yarrowii* (Stretch, 1873)
2012  *Platarctia parthenos* (Harris, 1850)
2013  *Platyprepia virginalis* (Boisduval, 1852)
2014  *Arctia caja* (Linnaeus, 1758)
       Subspecies *americana* Harris, *utahensis* (Edwards), and *waroi* Barnes & Benjamin have been reported from BC.
2015  *Arctia opulenta* (Edwards, 1881)
2016  *U* *Virbia aurantiaca* (Hübner, [1831])
       British Columbia material is probably a new species near *V. aurantiaca*; it is listed here provisionally, pending taxonomic work (B. C. Schmidt, personal communication).
2017  *Virbia ferruginosa* (Walker, 1854)

**Subtribe Spilosomina**
2018  *Spilosoma congrua* Walker, 1855
2019  *Spilosoma vagans* (Boisduval, 1852)
       Subspecies *kasloa* (Dyar) occurs in BC.
2020  *Spilosoma pteridis* Edwards, 1874
2021  *Spilosoma danbyi* (Neumögen & Dyar, 1893)
       This species is likely a synonym of *S. pteridis* Edwards, but this has not been formalised.
2022  *Spilosoma virginica* (Fabricius, 1798)
2023  *Estigmene aerea* (Drury, 1773)
2024  *Hyphantria cunea* (Drury, 1773)
2025  *Hypercompe permaculata* (Packard, 1872)
2026  *Phragmatobia fuliginosa* (Linnaeus, 1758)
       Subspecies *rubricosa* (Harris) has been reported from BC.
2027  *Phragmatobia assimilans* Walker, 1855
2028  *Pyrrharctia isabella* (Smith, 1797)
2029  *Leptarctia californiae* (Walker, 1855)

**Subtribe Callimorphina**
2030  *Dodia albertae* Dyar, 1901
2031  *Tyria jacobaeae* (Linnaeus, 1758)
       Introduced and established for biocontrol of Tansy Ragwort.

**Subtribe Pericopina**
2032  *Gnophaela vermiculata* (Grote, 1864)
       Reported by Dyar (1904) and other early workers as a subspecies of *G. latipennis* (Boisduval).
Subtribe Phaegopterina

2033  *Lophocampa roseata* (Walker, 1866)
2034  *Lophocampa argentata* (Packard, 1864)
Subspecies *subalpina* (French) has been reported from BC.
2035  *Lophocampa maculata* Harris, 1841
2036  *Cycnia tenera* Hübner, 1818
2037  *Cycnia oregonensis* (Stretch, [1874])
The nominate subspecies occurs in BC.

Subtribe Ctenuchina

2038  *Ctenucha virginica* (Esper, 1794)
2039  *Cisseps fulvicollis* (Hübner, [1818])

Subfamily Herminiinae

2040  *Idia americalis* (Guenée, 1854)
2041  *Idia aemula* Hübner, 1814
2042  *Idia concisa* auct., not Walker, 1860
This name is applied here merely as a placeholder for a new species near *I. aemula* Hübner that has been referred to in early literature as *I. concisa*.
2043  *Idia suffusalis* (Smith, 1899)
This species was reported from BC by Crabo et al. (2015), but those records have not been verified; this species is otherwise unknown from Canada, but it has been reported from northwestern USA.
2044  *Idia lubricalis* (Geyer, 1832)
2045  *Idia occidentalis* (Smith, 1884)
2046  *Zanclognatha jacchusalis* (Walker, 1859)
This species was known as *Z. lutalba* (Smith) until very recently; *lutalba* is now treated as the eastern subspecies of *Z. jacchusalis*. Subspecies *bryanti* Barnes occurs in BC (Lafontaine and Schmidt 2013) and was listed as a full species by Cannings and Scudder (2007).
2047  *Chytolita morbidalis* (Guenée, 1854)
Includes *C. petrealis* Grote, a recent synonym (Crabo et al. 2013)
2048  *Phalaenostola metonalis* (Walker, 1859)
2049  *Phalaenostola hanhami* (Smith, 1899)
This species is known in BC from a specimen in the CNC collected at Agassiz by J. Troubridge.
2050  *Tetanolita palligera* (Smith, 1884)
2051  *Bleptina caradrinalis* Guenée, 1854
2052  *Palthis angulalis* (Hübner, 1796)

Subfamily Hypeninae

2053  *Hypena bijugalis* Walker, 1859
2054  *Hypena palparia* Walker, 1861
2055  *Hypena abalienalis* Walker, 1859
2056  *Hypena atomaria* (Smith, 1903)
2057  *Hypena edictalis* Walker, 1859
Hypena humuli Harris, 1841
Hypena californica Behr, 1870
Hypena decorata Smith, 1884

Subfamily Rivulinae
Rivula propinqualis Guenée, 1854

Subfamily Scoliopteryginae
Scoliopteryx libatrix (Linnaeus, 1758)

Subfamily Scolocampinae
Phobolosia anfracta (Edwards, 1881)

Subfamily Hyphenodinae
Hyphenodes caducus (Dyar, 1907)
Hyphenodes fractilinea (Smith, 1908)
Hyphenodes sombrus Ferguson, 1954

Subfamily Boletobinae
Mycterophora inexplicata (Walker, 1863)
Mycterophora longipalpata Hulst, 1896

Subfamily Phytomeretini
Hemeroplanis histotialis (Grote, 1882)
Spargaloma sexpunctata Grote, 1873

Subfamily Toxocampinae
Lygephila victoria (Grote, 1874)

Subfamily Erebiniae

Tribe Thermesiini
Ascalapha odorata (Linnaeus, 1758)
The Black Witch. This neotropical stray is occasionally reported as far north as Canada.
Catocala allusa Hulst, 1884

The taxon *allusa* was relegated to a subspecies of *C. faustina* Strecker by Gall and Hawks (2010), but we follow Crabo et al. (2015) and continue to recognise it as a full species, based on morphological and ecological differences and no indication of intergradation with *C. faustina*.

Catocala hermia Edwards, 1880

Catocala californica Edwards, 1864

Catocala briseis Edwards, 1864

Catocala grotiana Bailey, 1879

This species is known from ID and from Waterton Lakes National Park, AB: it likely occurs in adjacent BC (B. C. Schmidt, personal communication).

Catocala semirelicta Grote, 1874

Catocala meskei Grote, 1873

Catocala junctura Walker, [1858]

Catocala ultronia (Hübner, 1823)

Tribe Melipotini

Cissusa indiscreta (Edwards, 1886)

Melipotis jucunda Hübner, 1818

Bulia deducta (Morrison, 1875)

Drasteria hastingsii (Edwards, 1878)

The nominate subspecies has been reported from BC.

Drasteria sabulosa (Edwards, 1881)

Drasteria ochracea (Behr, 1870)

Drasteria pallescens (Grote & Robinson, 1866)

Known in BC only from old material in the USNM collected at Kaslo by H. G. Dyar.

Drasteria divergens (Behr, 1870)

Reported from BC by Cannings and Scudder (2007) as *D. divergens* and also under the name *D. socia* (Behr), a synonym.

Drasteria petricola (Walker, 1858)

Subspecies athabasca (Neumögen) has been reported from BC.

Drasteria hudsonica (Grote & Robinson, 1865)

Drasteria adumbrata (Behr, 1870)

Subspecies *alleni* (Grote) has been reported from BC.

Drasteria howlandii (Grote, 1865)

Tribe Euclidiini

Caenurgina annexa (Edwards, 1890)

Caenurgina caerulea (Grote, 1873)

Caenurgina crassiuscula (Haworth, 1809)

Caenurgina erechtea (Cramer, [1780])

Euclidia cuspidea (Hübner, 1818)

Some early BC records refer to *E. ardita* Franclemont, described in 1957. Both species are now known to occur in BC.

Euclidia ardita Franclemont, 1957
Tribe Omopterini
2103 Zale lunata (Drury, 1773)
2104 Zale minerea (Guenée, 1852)
  Subspecies norda (Smith) has been reported from BC.
2105 Zale duplicata (Bethune, 1865)

68. Family Euteliidae (rolled-wing moths)
Eutelliids are medium-sized moths, with wingspans of about 30 mm. The group is defined by internal abdominal structures. They usually have brightly coloured wings.

The larvae of most North American species feed on sumacs and poison ivy (Rhus spp.). Adults have an unusual resting posture, with the wings rolled and held out from the body.

This is a small group of mainly tropical moths with 520 species worldwide, mostly in arid regions of the tropics. Eighteen species occur in North America, one of which is found in BC.

Subfamily Euteliinae
2106 Marathyssa inficita (Walker, 1865)

69. Family Nolidae (tuft moths)
Nolid moths are difficult to define simply, as most consistent characters are not easily observed. Many North American species have tufts of raised scales on the upper surfaces of the forewings, and the ocelli are usually absent. Basal abdominal tymbal organs occur in many members of the family.

Larvae of Nolidae feed on green plants or lichens; a few are pests of sorghum or cotton. Adults of some species feed on animal tears, and have been implicated in the transmission of diseases.

Approximately 1700 species of nolids are known worldwide. It is primarily a group of the Old World tropics. Forty species are known from North America, seven of which have been recorded from BC.

Subfamily Nolinae
2107 Meganola minuscula (Zeller, 1872)
2108 Nola cilicoides (Grote, 1873)
  Collected recently in BC by D. W. Knight.
2109  *Nola minna* Butler, 1881
2110  *Nola cucullatella* (Linnaeus, 1758)

This is a new North American and BC record for this introduced species, collected in 2009 by DH.

**Subfamily Chloephorinae**

**Tribe Sarrothripini**

2111  *Nycteola frigidana* (Walker, 1863)

Subspecies *britana* McDunnough has been reported from BC.

2112  *Nycteola columbiana* (Edwards, 1873)

2113  *Nycteola cinereana* Neumögen & Dyar, 1893

70. **Family Noctuidae (owlet moths)**

The Noctuidae, in the modern, more restricted sense, vary in size and coloration; however, at least in North America, most are medium-sized to large, heavy-bodied moths, with wingspans ranging from 20 to 80 mm (up to at least 150 mm in some tropical species). The forewings are usually finely mottled or figured in browns and greys, and the hind wings are pale and more unicolourous. A few species defy this pattern, however.

Most noctuid larvae are naked or clothed in fine, sparse hairs; a few, such as some *Acronicta* and *Panthea*, are more densely hairy.

Noctuid larvae feed on a huge variety of plants. Included in the family are the cutworms, which rest in the soil during the day and emerge at night to feed on the bases of young plants or to climb higher to eat shrub and tree foliage. Many are stem and root borers. Others feed openly on leaves and stems, or eat fruits, buds and flower heads. Some become gregarious and migratory at high densities (armyworms); these are among the most destructive moth pests.

Adults of this diverse group are largely nocturnal and strongly attracted to light; their eyes brightly reflect the light as they flutter or rest nearby. “*Noctua*” in Latin means “owl”—thus the family common name, “owlet moths”. The normally strong proboscis enables adults to feed extensively on plant nectar, sap and fermenting fruit. Some tropical species pierce thick-skinned fruits to feed on juices, and the Southeast Asian *Calyptra eustrigata* Hampson and some close relatives use their piercing proboscis to suck blood from mammals.
The family Noctuidae, as defined by Zahiri et al. (2011), consists of about 11,800 described species. About 2,525 species are recognised in North America; in BC, 719 have been recorded and a further nine species are expected, making it our most speciose family. A world catalogue of Noctuidae was published by Poole (1989). Other comprehensive works include Lafontaine and Poole (1991; Plusiinae), Poole (1995; Cuculliinae), Hardwick (unpublished report; Heliothinae), and (Lafontaine 1987, 1998, 2004; Noctuinae).

**Subfamily Plusiinae**

**Tribe Abrostolini**

2114  *Abrostola urentis* Guenée, 1852

**Tribe Argyrogrammatini**

2115  *Trichoplusia ni* (Hübner, [1803])

2116  *Chrysodeixis chalcites* (Esper, [1798])

This species was temporarily established in a greenhouse in Delta, BC, with specimens collected as far as 40 km away. It has since been eradicated from BC. It was originally confused with *C. eriosoma* (Doubleday), but was diagnosed via DNA barcode (B. C. Schmidt, personal communication).

**Tribe Plusiini**

**Subtribe Euchalciina**

2117  *Diachrysia aereoides* (Grote, 1864)

2118  *Euchalcia borealis* Lafontaine & Poole, 1991

2119  *Polychrysia esmeralda* (Oberthür, 1880)

2120  *Pseudeva purpurigera* (Walker, 1858)

Reported from BC’s Peace River region by Shepard (unpublished report B).

2121  *Pseudeva palligera* (Grote, 1881)

2122  *Eosphoropteryx thyatyroides* (Guenée, 1852)

**Subtribe Plusiina**

2123  *Autographa californica* (SPEYER, 1875)

2124  *Autographa mappa* (Grote & Robinson, 1868)

2125  *Autographa buraetica* (Staudinger, 1892)

2126  *Autographa pseudogamma* (Grote, 1875)

2127  *Autographa v-alba* Ottolengui, 1902

2128  *Autographa speciosa* Ottolengui, 1902

2129  *Autographa bimaculata* (Stephens, 1830)

2130  *Autographa corusca* (Strecker, 1885)

2131  *Autographa metallica* (Grote, 1875)

2132  *Autographa ampla* (Walker, [1858])

2133  *Autographa rubidus* Ottolengui, 1902

2134  *Autographa sansoni* Dod, 1910
Autographa flagellum (Walker, [1858])

Megalographa biloba (Stephens, 1830)

Syngrapha octoscripta (Grote, 1874)

Syngrapha viridisigma (Grote, 1874)

Syngrapha selecta (Walker, [1858])

Most older records of S. selecta actually refer to S. viridisigma (Grote) (Lafontaine and Poole 1991). However, deWaard (2010) confirmed the presence of this species from near Hazelton, BC.

Syngrapha epigaea (Grote, 1875)

Syngrapha interrogationis (Linnaeus, 1758)

Syngrapha surena (Grote, 1882)

Syngrapha diasema (Boisduval, 1828)

Syngrapha borea (Aurivillius, 1890)

Syngrapha orophila (Hampson, 1908)

Syngrapha ignea (Grote, 1863)

Syngrapha abstrusa Eichlin & Cunningham, 1978

Syngrapha alias (Ottolengui, 1902)

Syngrapha rectangula (Kirby, 1837)

Syngrapha angulidens (Smith, 1891)

Syngrapha celsa (Edwards, 1881)

Syngrapha microgamma (Hübner, 1823)

Syngrapha alticola (Walker, [1858])

Syngrapha parilis (Hübner, [1809])

Anagraphe falcifer (Kirby, 1837)

Plusia venusta Walker, 1865

Plusia putnami Grote, 1873

Plusia nichollae (Hampson, 1913)

Plusia magnimacula Handfield & Handfield, 2006

Known from the Rocky Mountains of central AB, and expected in adjacent BC (B. C. Schmidt, personal communication).

Subfamily Eustrotiinae

Deltote bellicula (Hübner, 1818)

Protodeltote albidula (Guenée, 1852)

Subfamily Acontiinae

Tribe Acontiini

Ponometia semialva (Guenée, 1852)

Ponometia tortricina (Zeller, 1872)

Ponometia fumata (Smith, 1905)

Ponometia elegantula (Harvey, 1876)

This species has been reported historically under the name Conocharis arizonae (Edwards), a recently designated synonym.
Tarache areli (Strecker, 1898)
Tarache augustipennis Grote, 1875
Tarache major (Smith, 1900)

Subfamily Pantheinae
Panthea gigantea (French, 1890)
Panthea furcilla (Packard, 1864)
Treated until recently, including by Cannings and Scudder (2007), as P. pallescens (McDunnough), a recently designated synonym (Anweiler 2009).
Panthea acronyctoides (Walker, 1861)
Subspecies nigra Anweiler occurs in BC.
Panthea virginianus (Grote, 1880)
Colocasia propinquilinea (Grote, 1873)
Collected recently in BC by D. W. Knight and by L. Janzen.

Subfamily Raphiinae
Raphia frater Grote, 1864
Cannings and Scudder (2007) and others also reported this species under the name R. coloradensis Putnam-Cramer, a recent synonym (Lafontaine and Schmidt 2010).

Subfamily Acronictinae
Acronicta dactylina (Grote, 1874)
Acronicta lepusculina (Guenée, 1852)
Subspecies ielina (Grote) has been reported from BC.
Acronicta cyanescens (Hampson, 1909)
Acronicta vulpina (Grote, 1883)
Listed by Llewellyn Jones (1951) and others as A. leporina (Linnaeus), an Old World name. Subspecies moesta (Dyar) has been reported from BC.
Acronicta innotata (Guenée, 1852)
Acronicta radclifrei (Harvey, 1875)
Subspecies vancouverensis Strand occurs in BC.
Acronicta grisea (Walker, 1856)
Subspecies revellata (Smith) has been reported from BC.
Acronicta mansueta (Smith, 1897)
Crabo et al. (2015) use the name A. parallela (Grote) for western Canadian populations traditionally treated as A. mansueta. That may indeed be correct, but we retain them under the latter name, pending publication of taxonomic work currently underway by B. C. Schmidt and G. G. Anweiler.
Acronicta funeralis (Grote & Robinson, 1866)
Acronicta quadrata (Grote, 1874)
Acronicta hasta (Guenée, 1852)
This species was also listed by Cannings and Scudder (2007) under the name A. furciera (Guenée), a recently designated synonym (Lafontaine and Schmidt 2010).
Acronicta striigulata (Smith, 1897)
Acronicta fragilis (Guenée, 1852)
Subspecies fragiloides (Barnes & Benjamin) and minella (Dyar) have been reported from BC.
Acronicta marmorata (Smith, 1897)
Acronicta impleta (Walker, 1856)
Subspecies illita (Smith) has been reported from BC.
Acronicta impressa (Walker, 1856)
Acronicta perdita (Grote, 1874)
Acronicta oblinita (Smith, 1797)
Acronicta lanceolaria (Grote, 1875)
Known in BC from a single record near Trail (G. G. Anweiler, personal communication).
Acronicta lupini (Grote, 1873)
Simyra insularis (Herrich-Schäffer, 1868)

Subfamily Cuculliinae
Cucullia montanae Grote, 1882
Cucullia similaris Smith, 1892
Cucullia omissa Dod, 1916
Cucullia florea Guenée, 1852
Also reported from BC by Cannings and Scudder (2007) under the name C. obscu-
rior Smith, a recently designated synonym.
Cucullia postera Guenée, 1852
Cucullia intermedia Speyer, 1870
Subspecies cinderella Smith has been reported from BC.
Cucullia speyeri Lintner, 1874
Cucullia dorsalis Smith, 1892
This species was not reported north of southern WA (Poole 1995), but it has re-
cently been collected in BC.
Cucullia antipoda Strecker, 1878
Cucullia eulepis (Grote, 1876)
Cucullia mcdunnoughi (Henne, 1940)
Cucullia strigata (Smith, 1892)
Cucullia albida Smith, 1894
This species was reported from BC by Lafontaine and Troubridge (2011), based on misidentified material of C. strigata (Smith). However, C. albida occurs in the mountains of AB: it likely occurs in BC also.
Cucullia pulla (Grote, 1881)

Subfamily Amphipyrinae
Tribe Amphipyrrini
Amphipyra pyramidooides Guenée, 1852
Amphipyra tragopoginis (Clerck, 1759)
Introduced from the Palaearctic.
Amphipyra glabella (Morrison, 1874)
**Tribe Psaphidini**

**Subtribe Psaphidina**

2211  *Brachionycha borealis* (Smith, 1899)

**Subtribe Feraliina**

2212  *Feralia jocosa* (Guenée, 1852)
2213  *Feralia deceptiva* McDunnough, 1920
2214  *Feralia comstocki* Grote, 1874

**Subtribe Triocnemidina**

2215  *Acopa perpallida* Grote, 1878

**Tribe Stiriini**

**Subtribe Annaphilina**

2216  *Annaphila danistica* Grote, 1873
2217  *Annaphila arvalis* Edwards, 1875
2218  *Annaphila decia* Grote, 1875
2219  *Annaphila diva* Grote, 1873

**Subfamily Oncocnemidinae**

2220  *Catabena lineolata* Walker, 1865
2221  *Calophasia lunula* (Hufnagel, 1766)  
   Introduced from the Palaeartic for the control of toadflax (Lafontaine and Troubridge 2011).
2222  *Behrensia conchiformis* Grote, 1875
2223  *Pleromelloida conserta* (Grote, 1881)
2224  *Pleromelloida bonuscula* (Smith, 1898)
2225  *Pleromelloida cinerea* (Smith, 1904)
2226  *Sympistis coprocolor* (Troubridge & Crabo, 1998)  
   Listed by Lafontaine and Troubridge (2011) as “*Oncocnemis* sp. nr. *terminalis* Smith”.
2227  *Sympistis albifasciata* (Hampson, 1906)
2228  *Sympistis occata* (Grote, 1875)
2229  *Sympistis umbri fascia* (Smith, 1894)
2230  *Sympistis tenui fasia* (Smith, 1888)  
   Reported by Cannings and Scudder (2007) as *S. mus* (Troubridge & Crabo), a recently designated synonym. The species was listed by Lafontaine and Troubridge (2011) as “*Oncocnemis* sp. nr. *tenui fasia* Smith”.
2231  *Sympistis parvanigra* (Blackmore, 1923)
2232  *Sympistis stabilis* (Smith, 1895)
2233  *Sympistis badistriga* (Grote, 1872)  
   The historical BC record by ESBC (1906) is erroneous. However, the species occurs in BC’s Peace River region, where it was discovered by J. H. Shepard in 1999.
2234  *Sympistis fifia* (Dyar, 1904)
2235  *Sympistis dinalda* (Smith, 1908)
Sympistis glennyi (Grote, 1873)
This species was also listed from BC by Cannings and Scudder (2007) under the name S. phairi (McDunnough), a recently designated synonym.

Sympistis levis (Grote, 1880)

Sympistis incubus Troubridge, 2008
The sole known Canadian specimen, from Fort Steele, BC, was provisionally determined as this species by Crabo et al. (2015), but it may be the closely related species S. seth Troubridge. The two species appear to intergrade in the Pacific Northwest.

Sympistis poliochroa (Hampson, 1906)

Sympistis cibalis (Grote, 1880)

Sympistis augustus (Harvey, 1875)

Sympistis sandaraca (Buckett & Bauer, 1967)

Sympistis pudorata (Smith, 1893)

Sympistis acheron Troubridge, 2008

Sympistis cocytus Troubridge, 2008

Sympistis riparia (Morrison, 1875)

Sympistis amun Troubridge, 2008

Sympistis chons Troubridge, 2008

Sympistis columbria (McDunnough, 1922)

Sympistis cherti Troubridge, 2008

Sympistis youngi (McDunnough, 1922)

Sympistis chionanthi (Smith, 1797)

Sympistis barnesii (Smith, 1899)

Sympistis chalybdis (Troubridge & Crabo, 1998)
Reported from BC by Lafontaine and Troubridge (2011) as “Onocnemis sp. nr. piffardi (Walker)”.

Sympistis funebris (Hübner, [1809])
Subspecies cocklei (Dyar) has been reported from BC.

Sympistis dentata (Grote, 1875)

Sympistis anweileri Troubridge & Lafontaine, 2008

Sympistis californiae (McDunnough, 1946)

Sympistis lacticollis (Smith, 1908)

Sympistis extremis (Smith, 1890)

Sympistis dunbari (Harvey, 1876)

Sympistis wilsoni Barnes & Benjamin, 1924

Sympistis heliophila (Paykull, 1793)

Sympistis zetterstedtii (Staudinger, 1857)
Subspecies kolthoffi (Aurivillius) occurs in BC.

Sympistis figurata (Harvey, 1875)

Sympistis pallidior (Barnes, 1928)
Sympistis greyi (Troubridge & Crabo, 1998)
Reported from BC by Lafontaine and Troubridge (2011) as “Oncocnemis sp. nr. figurata (Harvey)”.

Sympistis semicollaris (Smith, 1909)

Subfamily Agaristinae

Alypia langtoni Couper, 1865
Alypia ridingsii Grote, 1865
Androloma macullochii (Kirby, 1837)

Subfamily Condicinae

Tribe Condicini

Condica discistriga (Smith, 1894)
Condica mersa (Morrison, 1875)
Known in BC (and Canada) from a single specimen, collected near Nicola, on 21 August 1993 by L. G. Crabo and J. T. Troubridge (Crabo et al. 2015).

Subfamily Heliothinae

Eutricopis nexilis Morrison, 1875
Pyrhia exprimens (Walker, 1857)
Helicoverpa zea (Boddie, 1850)
The Corn Earworm, a serious agricultural pest.
Heliothis phloxiphaga Grote & Robinson, 1867
Heliothis ononis (Fabricius, 1787)
Heliothis oregonica (Edwards, 1875)
Heliothis borealis (Hampson, 1903)
Recently collected in the BC southern Interior by D. Nicholson.
Heliocheilus paradoxus Grote, 1865
Protoschinia nuchalis (Grote, 1878)

S Schinia biundulata Smith, 1891
Reported by Blackmore (1927) and Llewellyn Jones (1951) as probably an accidental introduction; it is likely either that or a stray, as no further records of this species have been found in BC (Lafontaine and Troubridge 2011). However, this species may occur naturally in the extreme southern Okanagan Valley in BC (L. G. Crabo, personal communication).

Schinia suetus (Grote, 1873)

Schinia meadi (Grote, 1873)
This species occurs in WA and in AB, and may occur in BC.
Schinia honesta (Grote, 1881)
Schinia villosa (Grote, 1864)
Schinia intermontana Hardwick, 1958
Schinia persimilis (Grote, 1873)
Schinia acutilinea (Grote, 1878)
Schinia walsinghami (Edwards, 1881)
Schinia cumatilis (Grote, 1865)
Subfamily Bryophilinae
2292 “Cryphia” olivacea (Smith, 1891)
2293 “Cryphia” cuerva (Barnes, 1907)

Subfamily Noctuinae

Tribe Prodeniini
2294 S Spodoptera exigua (Hübner, [1808])
2295 S Spodoptera praeifica (Grote, 1875)

Tribe Elaphriini
2296 Elaphria alapallida Pogue & Sullivan, 2003
2297 Galgula partita Guenée, 1852
2298 Chytonix palliatricula (Guenée, 1852)

Tribe Caradrinini

Subtribe Caradrinina
2299 Protoperigea anotha (Dyar, 1904)
2300 Protoperigea posticata (Harvey, 1875)
2301 Protoperigea umbricata Mustelin, 2006
Collected in BC by L. G. Crabo.
2302 Caradrina morpheus (Huñagel, 1766)
Introduced from Europe; first found in North America in BC in 1944.
2303 Caradrina meralis Morrison, 1875
2304 Caradrina camina (Smith, 1894)
2305 Caradrina montana Bremer, 1861

Subtribe Athetiina
2306 Proxenus miranda (Grote, 1873)
2307 Proxenus mindara Barnes & McDunnough, 1913
2308 Proxenus mendosa McDunnough, 1927

Tribe Actinotiini
2309 Alastria chico Lafontaine & Troubridge, 2004

Tribe Phlogophorini
2310 Euplexia benesimilis McDunnough, 1922
2311 Phlogophora periculoza Guenée, 1852

Tribe Apameini
2312 Apamea vultuosa (Grote, 1875)
Subspecies multicolor (Dyar) occurs in BC.
2313 Apamea plutonia (Grote, 1883)
2314 Apamea alia (Guenée, 1852)
2315 Apamea unanimis (Hübner, [1813])
Reported recently from BC by L. Avis; the determination was confirmed by
L. G. Crabo and via DNA barcoding.
Apamea indocilis (Walker, 1856)
This species has been referred to in some historical lists under the name A. remissa (Hübner), which is the Old World/Beringian sister species to A. indocilis that occurs in North America only in AK (Mikkola et al. 2009).

Apamea impulsa (Guenée, 1852)

Apamea cuculliformis (Grote, 1875)

Apamea sordens (Hufnagel, 1766)
Subspecies finitima Guenée occurs in BC.

Apamea inordinata (Morrison, 1875)
The nominate subspecies occurs in BC.

Apamea spaldingi (Smith, 1909)

Apamea cinefacta (Grote, 1881)

Apamea atriclava (Barnes & McDunnough, 1913)

Apamea antennata (Smith, 1891)

Apamea sora (Smith, 1903)

Apamea commoda (Walker, 1857)
Subspecies commoda and parcata (Smith) occur in BC.

Apamea centralis (Smith, 1891)

Apamea occidens (Grote, 1878)

Apamea amputatrix (Fitch, 1857)

Apamea maxima (Dyar, 1904)

Apamea acera (Smith, 1900)

Apamea longula (Grote, 1879)

Apamea scoparia Mikkola, Mustelin & Lafontaine, 2000
Reported until recently as A. lateritia (Hufnagel), an Old World name. The nominate subspecies occurs in BC.

Apamea cogitata (Smith, 1891)

Apamea inficita (Walker, 1857)
Subspecies indela (Smith) and inficita (Walker) have been reported from BC.

Apamea lutosa (Andrews, 1877)

Apamea devastator (Brace, 1819)

Apamea zeta (Treitschke, 1825)
Subspecies nichollae (Hampson) was described from Simpson River, BC. The Palaearctic name A. maillardi (Geyer) was historically applied in North America to A. zeta.

Apamea contradicta (Smith, 1895)

Apamea niveivenosa (Grote, 1879)
Subspecies niveivenosa (Grote) and obscuroides Poole occur in BC.

Lateroligia ophiogramma (Esper, 1793)

Resapamea venosa (Smith, 1903)
This species is virtually indistinguishable from R. passer (Guenée); the BC determination is uncertain.

Resapamea passer (Guenée, 1852)
Eremobina claudens (Walker, 1857)

“Oligia” tusa (Grote, 1878)

“Oligia” violacea (Grote, 1881)

Subspecies columbia (McDunnough) has been reported from BC.

“Oligia” rampartensis (Barnes & Benjamin, 1923)

“Oligia” obtusa (Smith, 1902)

“Oligia” divesta (Grote, 1874)

Neoligia subjuncta (Smith, 1898)

Neoligia tonsa (Grote, 1880)

Neoligia invenusta Troubridge & Lafontaine, 2002

Neoligia albirena Troubridge & Lafontaine, 2002

Neoligia lancea Troubridge & Lafontaine, 2002

Neoligia lilooet Troubridge & Lafontaine, 2002

Xylomoia chagnoni Barnes & McDunnough, 1917

Records reported from southeastern BC by Crabo et al. (2015) require verification; this species is otherwise known from eastern North America only as far west as SK.

Xylomoia indirecta (Grote, 1875)

Photedes inops (Grote, 1881)

Known in BC from recent collections near Cranbrook, by D. Nicholson (Crabo et al. 2015).

Photedes defecta (Grote, 1874)

Hypocoena inquinata (Guenée, 1852)

Hypocoena basistriga (McDunnough, 1933)

Hypocoena rufosrtrigata (Packard, 1867)

Benjaminiola colorada (Smith, 1900)

Capsula oblonga (Grote, 1882)

Capsula subflava (Grote, 1882)

Helotropha reniformis (Grote, 1874)

Amphipoea interoceanaica (Smith, 1899)

This species was reported from BC by Blackmore (1927) and Llewellyn Jones (1951), but Lafontaine and Troubridge (2011) excluded it from their BC list, stating that the BC material had been redetermined as A. americana (Speyer). However, a specimen in the CNC from Duncan, BC, has recently been confirmed via genitalic dissection as A. interoceanaica (B. C. Schmidt, personal communication).

Amphipoea americana (Speyer, 1875)

Hydraecia medialis (Smith, 1892)

Hydraecia obliqua (Harvey, 1876)

Hydraecia perobliqua (Hampson, 1910)

Papaipema birdi (Dyar, 1908)

Papaipema pertincta Dyar, 1920

Papaipema insulidens (Bird, 1902)
**Tribe Arzamini**

2375 *Bellura obliqua* (Walker, 1865)
Also reported by Cannings and Scudder (2007) under the name *B. gargantua* (Dyar), now considered to be a subspecies, which probably does not occur in BC. The name *gargantua* was inadvertently left out of Lafontaine and Schmidt (2010). The subspecies *pallida* Barnes & Benjamin occurs in the BC Interior.

**Tribe Xylenini**

**Subtribe Xylenina**

2376 *Xylena nupera* (Lintner, 1874)
2377 *Xylena curvimacula* (Morrison, 1874)
2378 *Xylena thoracica* (Putnam-Cramer, 1886)
2379 *Xylena cineritia* (Grote, 1875)
Subspecies *mertena* (Smith) has been reported from BC.
2380 *Xylena brucei* (Smith, 1892)
2381 *Lithomoia germana* (Morrison, 1875)
The Palaearctic name *L. solidaginis* (Hübner) has historically been misapplied to this species.
2382 *Homoglaea californica* (Smith, 1891)
2383 *Homoglaea hircina* Morrison, 1876
2384 *Homoglaea dives* Smith, 1907
2385 *Homoglaea carbonaria* (Harvey, 1876)
2386 *Litholomia napaea* (Morrison, 1874)
Subspecies *umbrilasciata* Blackmore was described from Victoria, BC.
2387 *Lithophane innominata* (Smith, 1893)
2388 *Lithophane petulca* Grote, 1874
2389 *Lithophane disposita* Morrison, 1874
This occasional pest of fruit trees was reported from BC by Belton (1988). No BC vouchers are known, but it is known from WA and MT and from across much of the rest of Canada, including AB, so it may occur in BC.
2390 *Lithophane amanda* (Smith, 1900)
2391 *Lithophane pexata* Grote, 1874
Subspecies *washingtonia* Grote has been reported from BC.
2392 *Lithophane dilatocula* (Smith, 1900)
2393 *Lithophane thaxteri* Grote, 1874
2394 *Lithophane fagina* Morrison, 1874
2395 *Lithophane baileyi* Grote, 1877
Also reported from BC by Cannings and Scudder (2007) and others under the name *L. vivida* (Dyar), now considered a synonym.
2395.1 *Lithophane tepida* Grote, 1874
Historical reports of this species in western BC as subspecies *atincta* (Smith) refer to *L. baileyi* Grote. However, this species may occur in BC’s Peace River region.
2396 *Lithophane atara* (Smith, 1909)
2397 *Lithophane ponderosa* Troubridge & Lafontaine, 2003
Lithophane itata (Smith, 1899)
Lithophane contenta Grote, 1880
Lithophane georgii Grote, 1875
Subspecies ancilla (Smith), holocinerea (Smith), oregonensis Harvey, and vertina (Smith) have been reported from BC.

Lithophane pertorrida (McDunnough, 1942)
Eupsilia tristigmata (Grote, 1877)
Eupsilia fringata (Barnes & McDunnough, 1916)
Eupsilia devia (Grote, 1875)
Eucirroedia pampina (Guenée, 1852)
Mesogona olivata (Harvey, 1874)
Mesogona subcuprea Crabo & Hammond, [1998]
Agrochola purpurea (Grote, 1874)
Agrochola pulchella (Smith, 1900)
Sunira bicolorago (Guenée, 1852)

This species has been placed on various historical BC lists, but no confirmed vouchers are known. Historical records likely refer to similar species S. decipiens (Grote) or Agrochola purpurea (Grote) (L. G. Crabo, personal communication). However, S. bicolorago may occur in BC, as it is known from nearby AB.

Sunira decipiens (Grote, 1881)
Sunira verberata (Smith, 1904)
Anathix puta (Grote & Robinson, 1868)
Subspecies dusca (Smith) has been reported from BC.
Anathix aggressa (Smith, 1907)
Xanthia tatago Lafontaine & Mikkola, 2003
Prior to the description of X. tatago, this species was historically reported in western North America under the name X. togata (Esper), which does not occur in the area.

Hillia maida (Dyar, 1904)
Hillia iris (Zetterstedt, 1839)
Parastichtis suspeta (Hübner, [1817])
Aseptis fumosa (Grote, 1879)
Aseptis binotata (Walker, 1865)
Subspecies curvata (Grote) has been reported from BC.
Aseptis adnixa (Grote, 1880)
Aseptis characta (Grote, 1880)
Epidemas cinerea Smith, 1894
This species is known from BC, based on a specimen from the Cariboo region (Doc English Gulch) collected by A. I. Fisher in 1996.
Epidemas obscurus Smith, 1903
Reported by Cannings and Scudder (2007) as E. melanographa Hampson, a dark morph of E. obscurus that was synonymised by Lafontaine and Schmidt (2010).
Brachylomia populi (Strecker, 1898)
Brachylomia algens (Grote, 1878)
Brachylomia discinigra (Walker, 1856)
Brachylomia cascadia Troubridge & Lafontaine, 2007
Brachylomia thula (Strecker, 1898)
Hyppa contrasta McDunnough, 1946
Reported as H. xylinoides (Guenée) by early workers under a previous taxonomic arrangement.
Hyppa brunneicrista Smith, 1902
Hyppa indistincta Smith, 1894

Subtribe Cosmiina
Cosmia praeacuta (Smith, 1894)
Cosmia elisae Lafontaine & Troubridge, 2003
Cosmia calami (Harvey, 1876)
Zotheca tranquilla Grote, 1874
Enargia infumata (Grote, 1874)
Enargia fausta Schmidt, 2010
Enargia decolor (Walker, 1858)
Ipimorpha nanaimo Barnes, 1905
Ipimorpha viridipallida Barnes & McDunnough, 1916
Ipimorpha pleonectusa Grote, 1873

Subtribe Antitypina
Andropolia diversilineata (Grote, 1877)
Andropolia contacta (Walker, 1856)
Subspecies pulverulenta (Smith) has been reported from BC.
Andropolia aedon (Grote, 1880)
Andropolia theodori (Grote, 1878)
Subspecies epichysis (Grote) and vancouvera McDunnough have been reported from BC. Cannings and Scudder (2007) reported this species under the name A. epichysis.
Fishia discors (Grote, 1881)
Fishia yosemitae (Grote, 1873)
Fishia illocata (Walker, 1857)
Moved from Oligia (tribe Apameini) by Lafontaine and Schmidt (2010).
Platypolia anceps (Stephens, 1850)
Platypolia contadina (Smith, 1894)
The nominal subspecies and subspecies albertae McDunnough have been reported from BC.
Platypolia loda (Strecker, 1898)
"Platypolia" mactata (Guenée, 1852)
Subspecies alecto (Guenée) has been reported from BC. This species was moved from Oligia (tribe Apameini) by Lafontaine and Schmidt (2010).
Xylotype arcadia Barnes & Benjamin, 1922
This species name has been misspelled as “acadia” in many works, including Hodges et al.’s (1983) checklist.
Dryotype opina (Grote, 1878)

Mniotype pallescens McDunnough, 1946

Mniotype ducta (Grote, 1878)

Mniotype tenera (Smith, 1900)

Sutyna privata (Walker, 1857)

Reported until recently, including by Cannings and Scudder (2007), under the name S. profundus (Smith), now considered a synonym (Pohl et al. 2010).

Subtribe Ufeina

Ufeus satyricus Grote, 1873


Ufeus hulstii Smith, 1908

Tribe Xylenini-unplaced

Properigea albimacula (Barnes & McDunnough, 1912)

Properigea niveirena (Harvey, 1876)

Pseudobryomima muscosa (Hampson, 1906)

Pseudanarta crocea (Edwards, 1875)

Pseudanarta flava (Grote, 1874)

Tribe Orthosiini

Acerra normalis Grote, 1874

Stretchia plusiaeformis Edwards, 1874

Stretchia muricina (Grote, 1876)

Orthosia pulchella (Harvey, 1876)

Subspecies achsha (Dyar) and pulchella (Harvey) have been reported from BC.

Orthosia transparens (Grote, 1882)

Orthosia praeses (Grote, 1879)

Orthosia mys (Dyar, 1903)

Subspecies caloramica (Barnes & McDunnough) has been reported from BC.

Orthosia ferrigera (Smith, 1894)

Orthosia revicta (Morrison, 1876)

Orthosia segregata (Smith, 1893)

Orthosia pacifica (Harvey, 1874)

Orthosia hibisci (Guenée, 1852)

Subspecies quinquefasciata (Smith) has been reported from BC.

Egira variabilis (Smith, 1891)

Egira hiemalis (Grote, 1874)

Egira simplex (Walker, 1865)

Egira crucialis (Harvey, 1875)

Egira cognata (Smith, 1894)
Egira curialis (Grote, 1873)
Subspecies indurata (Smith) has been reported from BC; the taxon candida (Smith) from Vancouver Island, currently treated as a junior synonym, may be a geographic subspecies, as well (L. G. Crabo, personal communication).

Egira dolosa (Grote, 1880)

Egira rubrica (Harvey, 1878)
Subspecies mustelina (Smith) and pulchella (Smith) have been reported from BC.

Egira perlubens (Grote, 1881)

Admetovis oxymorus Grote, 1873

Admetovis similis Barnes, 1904

Tribe Tholerini

Tholera americana (Smith, 1894)

Nepheleodes minians Guenée, 1852
The subspecies pectinatus Smith and tertialis Smith have been reported from BC.

Tribe Hadenini

Hadenella pergentilis Grote, 1883

Anarta nigrolunata Packard, 1867
This species was traditionally reported in North America under the name A. melanopa (Thunberg). However, as currently defined, A. nigrolunata is the Nearctic species and A. melanopa is restricted to the Palaearctic. The subspecies laerta Smith has been reported from BC.

Anarta trifolii (Hufnagel, 1766)
Subspecies albifusa (Walker) has been reported from BC.

Anarta mutata (Dod, 1913)

Anarta hamata (McDunnough, 1930)

Anarta oregonica (Grote, 1881)

Anarta inconcinna (Smith, [1888])
Until recently, this species was known as A. montanica (McDunnough), a recently designated synonym.

Anarta columbica (McDunnough, 1930)

Anarta alta (Barnes & Benjamin, 1924)
This species is known from western AB and likely occurs in BC’s Peace River region (L. G. Crabo, personal communication).

Anarta farnhami (Grote, 1873)

Anarta crotchii (Grote, 1880)

Anarta edwardsii (Smith, 1888)

Anarta decepta (Grote, 1883)

Coranarta luteola (Grote & Robinson, 1865)

Coranarta macrostigma (Lafontaine & Mikkola, 1987)

Polia discalis (Grote, 1877)
Lafontaine and Troubridge (2011) list this species from BC, but also state that BC material has been revised to P. piniae Buckett & Bauer; the latter is incorrect.

Polia piniae Buckett & Bauer, 1967
Polia nimbosa (Guenée, 1852)
Subspecies mystica (Smith) and mysticoides Barnes & Benjamin have been reported from BC.

Polia imbrifera (Guenée, 1852)

Polia rogenhoferi (Möschler, 1870)

Polia propodea McCabe, 1980

Polia richardsoni (Curtis, 1834)

Polia purpurissata (Grote, 1864)

Polia nugatis (Smith, 1898)

Melanchra adjuncta (Guenée, 1852)

Melanchra picta (Harris, 1841)

Melanchra pulverulenta (Smith, 1888)

Melanchra assimilis (Morrison, 1874)

Lacanobia nevadae (Grote, 1876)

Lacanobia atlantica (Grote, 1874)

Lacanobia radix (Walker, 1857)

Lacanobia subjuncta (Grote & Robinson, 1868)
Subspecies eleanora (Barnes & McDunnough) and subjuncta (Grote & Robinson) have been reported from BC.

Lacanobia grandis (Guenée, 1852)
Moved from Spiramater by Lafontaine and Schmidt 2010.

Spiramater lutra (Guenée, 1852)
Subspecies glaucopis (Hampson) has been reported from BC.

Trichordestra tacoma (Strecker, 1900)

Trichordestra dodii (Smith, 1904)

Trichordestra lilacina (Harvey, 1874)

Trichordestra liquida (Grote, 1881)
Subspecies meodana (Smith) has been reported from BC.

Papestra quadrata (Smith, 1891)
Subspecies ingravis (Smith) has been reported from BC.

Papestra biren (Goeze, 1781)

Papestra cristifera (Walker, 1858)

Papestra brenda (Barnes & McDunnough, 1916)

Papestra invalida (Smith, 1891)

Hada sutrina (Grote, 1881)

Mamestra configurata Walker, 1856

Mamestra curialis (Smith, 1888)

Sideridis fuscolutea (Smith, 1892)

Sideridis uscripta (Smith, 1891)

Sideridis rosea (Harvey, 1874)

Sideridis maryx (Guenée, 1852)
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2541 Hadena variolata (Smith, 1888)
The nominate subspecies and subspecies dealbata (Staudinger) occur in BC (Troubridge and Crabo 2002).
2542 Hadena capsularis (Guenée, 1852)
2543 Hadena caelestis Troubridge & Crabo, 2002
2544 Hadena ectrapela (Smith, 1898)
2545 Dargida procinctus (Grote, 1873)
2546 Dargida diffusa (Walker, 1856)
2547 Dargida terrapictalis (Buckett, 1969)

Tribe Leucaniini
2548 Mythimna oxygala (Grote, 1881)
Subspecies luteopallens (Smith) has been reported from BC.
2549 Mythimna yukonensis (Hampson, 1911)
2550 Mythimna unipuncta (Haworth, 1809)
2551 Leucania farcta (Grote, 1881)
2552 Leucania oregona Smith, 1902
2553 Leucania anteroclara Smith, 1902
This species name has often been misspelled “anteoclara”.
2554 Leucania multilinea Walker, 1856
2555 Leucania commoides Guenée, 1852
2556 Leucania insueta Guenée, 1852
Subspecies heterodoxa Smith and megadia Smith have been reported from BC.
2557 Leucania dia (Grote, 1879)
For many years, this taxon was considered a synonym or western subspecies of L. insueta Guenée. However, it was formally recognised as a distinct species by Pohl et al. (2010).

Tribe Eriopygini
2558 Lasionycta taigata Lafontaine, 1988
2559 Lasionycta secedens (Walker, [1858])
The nominate subspecies occurs in BC.
2560 Lasionycta fergusoni Crabo & Lafontaine, 2009
This is a recently recognised name for populations previously included within L. conjugata (Smith); the type locality is Pavilion, BC.
2561 Lasionycta mutilata (Smith, 1898)
2562 Lasionycta haida Crabo & Lafontaine, 2009
2563 Lasionycta luteola (Smith, 1893)
2564 Lasionycta leucocycla (Staudinger, 1857)
Subspecies albertensis (McDunnough) occurs in BC. Subspecies hampa (Smith) was reported from BC by Blackmore (1922a), but that is erroneous: hampa is restricted to the White Mountains of NH.
2565 Lasionycta poca (Barnes & Benjamin, 1923)
2566 Lasionycta illima Crabo & Lafontaine, 2009
*Lasionycta perplexa* (Smith, 1888)
This species now includes the synonym *marloffi* (Dyar), listed as a separate species by Cannings and Scudder (2007). It was synonymised with *L. perplexa* by Crabo and Lafontaine (2009).

*Lasionycta perplexella* Crabo & Lafontaine, 2009

*Lasionycta subfuscula* (Grote, 1874)
Subspecies *livida* Crabo & Lafontaine occurs in BC.

*Lasionycta quadrilunata* (Grote, 1874)
This species was not specifically reported from BC by Crabo and Lafontaine (2009), but it was reported from AK, YT, NT, AB and MT, and almost certainly occurs in BC.

*Lasionycta lagganata* (Barnes & Benjamin, 1924)

*Lasionycta carolynae* Crabo, 2009
Known from YT on Montana Mountain, very close to the BC border; this species may occur in BC.

*Lasionycta uniformis* (Smith, 1893)
Subspecies *multicolor* Crabo & Lafontaine (type locality: Gott Peak, BC) and *uniformis* (Smith) occur in BC.

*Lasionycta brunnea* Crabo & Lafontaine, 2009

*Lasionycta caesia* Crabo & Lafontaine, 2009

*Lasionycta gelida* Crabo & Lafontaine, 2009

*Lasionycta promulsa* (Morrison, 1875)

*Lasionycta macleani* (McDunnough, 1927)

*Lasionycta silacea* Crabo & Lafontaine, 2009

*Lasionycta impingens* (Walker, 1857)
The nominate subspecies occurs in BC.

*Psammopolia arietis* (Grote, 1879)

*Psammopolia wyatti* (Barnes & Benjamin, 1926)

*Lacinipolia meditata* (Grote, 1873)
Subspecies *columbia* (Smith) has been reported from BC.

*Lacinipolia lustralis* (Grote, 1875)

*Lacinipolia cuneata* (Grote, 1873)

*Lacinipolia anguina* (Grote, 1881)
Subspecies *larissa* (Smith) has been reported from BC.

*Lacinipolia stenotis* (Hampson, 1905)

*Lacinipolia vicina* (Grote, 1874)
Subspecies *acutipennis* (Grote) has been reported from BC.

*Lacinipolia pensilis* (Grote, 1874)
The nominate subspecies has been reported from BC.

*Lacinipolia renigera* (Stephens, 1829)

*Lacinipolia stricta* (Walker, 1865)
Subspecies *cinnabarina* (Grote) has been reported from BC.

*Lacinipolia lorea* (Guenée, 1852)
**Lacinipolia olivacea** (Morrison, 1874)
Subspecies *altua* (Smith), *lucina* (Smith), and *petita* (Smith) have been reported from BC.

**Lacinipolia bucketti** Selman & Leuschner, 2001
This coastal species is known in BC from an individual photographed by L. Avis near Port Alberni, and identified by L. Crabo (Crabo et al. 2015).

**Lacinipolia davena** (Smith, 1901)

**Lacinipolia comis** (Grote, 1876)

**Lacinipolia rectilinea** (Smith, 1888)

**Lacinipolia strigicollis** (Wallengren, 1860)

**Lacinipolia patalis** (Grote, 1873)
Subspecies *fletcheri* (Grote) has been reported from BC.

**Trichocerapoda oblita** (Grote, 1877)

**Anhimella perbrunnea** (Grote, 1879)

**Anhimella contrahens** (Walker, 1860)

**Anhimella pacifica** McDunnough, 1943

**Homorthodes furfurata** (Grote, 1875)
Subspecies *uniformis* (Smith) has been reported from BC.

**Homorthodes communis** (Dyar, 1904)

**Homorthodes fractura** (Smith, 1906)
Subspecies *mecrona* (Smith) has been reported from BC.

**Homorthodes discreta** (Barnes & McDunnough, 1916)

**Homorthodes hanhami** (Barnes & McDunnough, 1911)

**Homorthodes carneola** McDunnough, 1943

**Protorthodes curtica** (Smith, 1890)
Subspecies *bostura* (Smith) has been reported from BC.

**Protorthodes oviduca** (Guénée, 1852)

**Protorthodes rufula** (Grote, 1874)

**Pseudorthodes irrorata** (Smith, 1888)

**“Orthodes” goodelli** (Grote, 1875)
Subspecies *acutemina* (Grote) has been reported from BC.

**“Orthodes” obscura** (Smith, 1888)

**“Orthodes” noverca** (Grote, 1878)
Until recently this species was known as *Orthodes delecta* (Barnes & McDunnough), a recently designated synonym.

**“Orthodes” detracta** (Walker, 1857)
Subspecies *neoterica* (Smith) has been reported from BC.

**Zosteropoda hirtipes** Grote, 1874

**Tribe Noctuini**

**Subtribe Agrotina**

**Peridroma saucia** (Hübner, [1808])
The Variegated Cutworm, a serious agricultural pest.

**Anicla exuberans** (Smith, 1898)
Anicla tepperi (Smith, 1888)

Actebia fennica (Tauscher, 1806)

Actebia balanitis (Grote, 1873)

Reported by Lafontaine and Troubridge (2011) from BC as A. squalida (Guenée), a Palaeartic name historically applied to this species.

Dichagyris variabilis (Grote, 1874)

Copablepharon spiritum Crabo & Fauske, 2004

Copablepharon absidum (Harvey, 1875)

Copablepharon fuscum Troubridge & Crabo, 1996

Copablepharon viridisparsa (Dod, 1916)

Known from a single BC specimen in the CNC, collected at Brilliant (near Castlegar), 8 July 1946, by H. R. Foxlee. Subspecies hopfingeri Franclemont occurs in BC; it was listed by Cannings and Scudder (2007) as a separate species.

Euxoa bochus (Morrison, 1874)

Euxoa adumbrata (Eversmann, 1842)

This species has been historically included within the concept of E. lidia (Cramer), including by Lafontaine (1987). However, E. adumbrata has since been recognised as a distinct species. Euxoa lidia is restricted to the Old World. Subspecies thanatologia (Dyar) has been reported from BC.

Euxoa auxiliaris (Grote, 1873)

Euxoa shasta Lafontaine, 1975

The nominate subspecies occurs in BC.

Euxoa biformata Smith, 1910

Euxoa intermontana Lafontaine, 1975

Euxoa mimallonis (Grote, 1873)

Subspecies gagates (Grote) occurs in BC.

Euxoa septentrionalis (Walker, 1865)

Euxoa olivia (Morrison, 1876)

Euxoa messoria (Harris, 1841)

Euxoa divergens (Walker, [1857])

Euxoa edictalis (Smith, 1893)

Euxoa westermanni (Staudinger, 1857)

Euxoa quebecensis (Smith, 1900)

Euxoa vallus (Smith, 1900)

The nominate subspecies occurs in BC.

Euxoa macleani McDunnough, 1927

Euxoa apopsis Troubridge & Lafontaine, 2010

Euxoa lewisi (Grote, 1873)

The nominate subspecies occurs in BC.

Euxoa altens McDunnough, 1946

Euxoa extranea (Smith, 1888)

Euxoa tristicula (Morrison, 1876)

Euxoa vetusta (Walker, 1865)
Euxoa atomaris (Smith, 1890)
Subspecies esta Smith (type locality: Wellington, BC) occurs in coastal BC, and subspecies detesta (Smith) occurs inland.

Euxoa pleuritica (Grote, 1876)

Euxoa pestula Smith, 1904

Euxoa simona McDunnough, 1932

U Euxoa medialis (Smith, 1888)
Reported from BC by ESBC (1906), but not by subsequent workers. No BC vouchers are known, but the species occurs in southwestern AB, and may also occur in southeastern BC.

Euxoa perexcellens (Grote, 1875)

Euxoa rufula (Smith, 1888)
Subspecies basiflava (Smith) was described from BC.

Euxoa intrita (Morrison, 1874)

Euxoa terrenus (Smith, 1900)

Euxoa scotogrammoides McDunnough, 1932

Euxoa pluralis (Grote, 1878)

Euxoa setonia McDunnough, 1927

Euxoa pallidimaculata Lafontaine, 1987

Euxoa declarata (Walker, 1865)

Euxoa campestris (Grote, 1875)

Euxoa rockburnei Hardwick, 1973

Euxoa silens (Grote, 1875)

Euxoa simulata McDunnough, 1946

Euxoa punctigera (Walker, 1865)

Euxoa pallipennis (Smith, 1888)

Euxoa tessellata (Harris, 1841)

Euxoa plagigera (Morrison, 1874)

Euxoa albibennis (Grote, 1876)

Euxoa hollemani (Grote, 1874)

Euxoa subandera Lafontaine, 1987

Euxoa catenula (Grote, 1879)
Subspecies lindseyi Blackmore (type locality: Goldstream, BC) occurs on Vancouver Island, and subspecies catenula occurs inland in BC.

Euxoa comosa (Morrison, 1876)
Subspecies lutulenta (Smith) and ontario (Smith) have been reported from BC.

Euxoa occidentalis Lafontaine & Byers, 1982

Euxoa infausta (Walker, 1865)

Euxoa satis (Harvey, 1876)

Euxoa brunneigera (Grote, 1876)

Euxoa excogita (Smith, 1900)

Euxoa bicollaris (Grote, 1878)
Euxoa satiens (Smith, 1890)
Euxoa ochrogaster (Guenée, 1852)
Euxoa nostra (Smith, 1890)
Euxoa choris (Harvey, 1876)
Euxoa obeliscoides (Guenée, 1852)
Euxoa lillooet McDunnough, 1927
Euxoa basalis (Grote, 1879)
Known in BC from a single specimen from Mt. Kobau, in the CNC.
Euxoa costata (Grote, 1876)
Euxoa castanea Lafontaine, 1981
Euxoa idahoensis (Grote, 1878)
Euxoa furtivus (Smith, 1890)
Euxoa brevipennis (Smith, 1888)
Euxoa servitus (Smith, 1895)
Euxoa auripennis Lafontaine, 1974
Euxoa olivalis (Grote, 1879)
Euxoa agema (Strecker, 1899)
Euxoa oblongistigma (Smith, 1888)
Euxoa tronellus (Smith, 1903)
Recently collected by D. Nicholson in the Cranbrook, BC, area; the determination was confirmed by J. D. Lafontaine.
Euxoa difformis (Smith, 1900)
Euxoa murdocki (Smith, 1890)
Euxoa infracta (Morrison, 1875)
Euxoa laetificans (Smith, 1894)
Euxoa quadridentata (Grote & Robinson, 1865)
Subspecies flutea Smith and quadridentata (Grote & Robinson) occur in BC.
Euxoa dargo (Strecker, 1898)
Euxoa cicatricosa (Grote & Robinson, 1865)
Euxoa aequalis (Harvey, 1876)
Subspecies alko (Strecker) occurs in BC.
Euxoa munis (Grote, 1876)
Euxoa atristrigata (Smith, 1890)
Euxoa nevada (Smith, 1900)
Euxoa cinereopallidus (Smith, 1903)
Euxoa mitis (Smith, 1894)
Euxoa aberrans McDunnough, 1932
Euxoa nomas (Erschov, 1874)
Euxoa macrodentata Hardwick, 1965
Euxoa perolivalis (Smith, 1905)
Euxoa perpolita (Morrison, 1876)
Euxoa taura Smith, 1905
Euxoa flavicollis (Smith, 1888)
Euxoa maines (Smith, 1903)
Euxoa ridingiana (Grote, 1875)
Euxoa wilsoni (Grote, 1873)
Feltia mollis (Walker, 1857)
Feltia nigrita (Graeser, 1892)
Feltia jaculifera (Guenée, 1852)
Feltia herilis (Grote, 1873)
Agrotis vetusta (Walker, 1856)
Agrotis ruta (Eversmann, 1851)
Agrotis venerabilis Walker, 1857
Agrotis vancouverensis Grote, 1873
Agrotis gravis Grote, 1874
Agrotis volubilis Harvey, 1874

Reports from BC by Dyar (1904) and other historical workers are erroneous. All known BC material is actually A. obliqua (Smith) or A. antica Crabo & Lafontaine (Lafontaine and Troubridge 2011). However, A. volubilis is known from AB’s Peace River region and may yet be found in adjacent northeastern BC.

Agrotis obliqua (Smith, 1903)
Agrotis antica Crabo & Lafontaine, 2004
Agrotis ipsilon (Hufnagel, 1766)

Subtribe Noctuina
Ochropleura implecta Lafontaine, 1998
This species has historically been reported in North America under the Palaearctic name O. plecta (Linnaeus).
Diarsia esurialis (Grote, 1881)
Diarsia calgary (Smith, 1898)
Diarsia dislocata (Smith, 1904)
Diarsia rubifera (Grote, 1875)
Diarsia rosaria (Grote, 1878)
The nominate subspecies occurs in BC. deWaard (2010) also reported the subspecies freemani Hardwick, but that may be a result of a barcoding misidentification; freemani was considered by Lafontaine (1998) to be restricted to east of the Rocky Mountains.

Cerastis enigmatica Lafontaine & Crabo, 1997
Reported by historical workers as C. cornuta (Grote) before the recognition of C. enigmatica as a distinct species.

Cerastis salicarum (Walker, 1857)
Paradiarsia littoralis (Packard, 1867)
The nominate subspecies has been reported from BC.
Lycophotia phyllophora (Grote, 1874)
Rhyacia clemens (Smith, 1890)
Chersotis juncta (Grote, 1878)
Noctua pronuba (Linnaeus, 1758)
Introduced from Europe to NS in about 1979, it quickly spread across North America.

Noctua comes Hübner, [1813]
Introduced from Europe to BC in about 1982, and to ON in 2006.

Cryptocala acadiensis (Bethune, 1870)

Spaelotis clandestina (Harris, 1841)

Spaelotis bicava Lafontaine, 1998
This species has been treated historically under the Palaearctic name S. havilae Grote before the description of S. bicava by Lafontaine (1998).

Eurois occulta (Linnaeus, 1758)

Eurois astricta Morrison, 1874
Subspecies subjugata (Dyar) (type locality: Kaslo, BC) occurs in BC.

Eurois nigra (Smith, 1892)
The nominate subspecies has been reported from BC.

Graphiphora augur (Fabricius, 1775)

Anaplectoides prasina ([Denis & Schiffermüller], 1775)

Anaplectoides pressus (Grote, 1874)

Aplectoides condita (Guenée, 1852)

Euteretagrotis perattentus (Grote, 1876)

Xestia xanthographa ([Denis & Schiffermüller], 1775)

Xestia smithii (Snellen, 1896)

Xestia normanianus (Grote, 1874)
Reported from BC’s Peace River region by Shepard (unpublished report B).

Xestia oblata (Morrison, 1875)

Xestia plebeia (Smith, 1898)

Xestia mustelina (Smith, 1900)

Xestia vernilis (Grote, 1879)
Historical records of this species from the BC coast refer to X. verniloides Lafontaine, described in 1998. However, at least some records from the BC Interior (“southern interior; Kootenays” (Blackmore 1927); Salmon Arm, Vavenby, Enderby, Canoe (UBC collection)) are correct, as are recent records by D. Nicholson. Lafontaine (1998) did not report this species from BC, but reported it from adjacent AB, ID and MT.

Xestia verniloides Lafontaine, 1998

Xestia infimatis (Grote, 1880)

Xestia finatimis Lafontaine, 1998

Xestia praevia Lafontaine, 1998

Xestia verniloides Lafontaine, 1998

This taxon includes X. youngii (Smith), synonymised by Lafontaine and Schmidt (2010). It was reported from BC by Crumb (1956), but that record is likely based on material of a related species such as X. praevia Lafontaine, which was not described at that time. However, X. dilucida, previously considered to be strictly eastern, was recently discovered in boreal AB and may occur in northeastern BC.
Xestia c-nigrum (Linnaeus, 1758)

Xestia maculata (Smith, 1893)

Xestia speciosa (Hübner, [1813])
Subspecies aproppita (Benjamin) occurs in BC.

Xestia mixta (Walker, 1856)

Xestia imperita (Hübner, [1831])

Xestia atrata (Morrison, 1874)
The nominate subspecies and probably subspecies yukona (McDunnough) occur in BC (Lafontaine 1998).

Xestia ursae (McDunnough, 1940)

Xestia tecta (Hübner, [1808])
This species is known from YT on Montana Mountain, very close to the BC border; it likely occurs in adjacent BC.

Xestia okakensis (Packard, 1867)
The nominate subspecies occurs in BC.

Xestia perquiritata (Morrison, 1874)
Subspecies partita (McDunnough) and perquiritata (Morrison) occur in BC.

Xestia fabulosa (Ferguson, 1965)

Xestia homogena (McDunnough, 1921)
The nominate subspecies occurs in BC.

Xestia intermedia (Kononenko, 1981)
Recent BC record by B. C. Schmidt.

Xestia bryanti (Benjamin, 1933)

Xestia lyngei (Rebel, 1923)
This species is known from YT on Montana Mountain, very close to the BC border; it likely occurs in adjacent BC.

Xestia lupa Lafontaine & Mikkola, 1998

Coenophila opacifrons (Grote, 1878)

Prognorisma substrigata (Smith, 1895)

Agnorisma bugrai (Koçak, 1983)

Pseudohermonassa tenuicula (Morrison, 1874)

Pseudohermonassa flavotincta (Smith, 1892)

Setagrotis pallidicollis (Grote, 1880)
This species was historically treated under the name S. cinereicollis (Grote), which is now considered a synonym of S. vocalis (Grote).

Tesagrotis atrifrons (Grote, 1873)

Tesagrotis piscipellis (Grote, 1878)

Tesagrotis corrodera (Smith, 1907)

Adelphagrotis stellaris (Grote, 1880)

Adelphagrotis indeterminata (Walker, 1865)

Parabagrotis formalis (Grote, 1874)

Parabagrotis insularis (Grote, 1876)

Parabagrotis cupidissima (Grote, 1875)
Parabagrotis exsertistigma (Morrison, 1874)
Parabagrotis sulinaris Lafontaine, 1998
Protolampra rufipectus (Morrison, 1875)
Protolampra brunneicollis (Grote, 1865)
Collected recently in BC near Okanagan Falls by deWaard (2010) and confirmed via DNA barcoding.
Abagrotis erratica (Smith, 1890)
Abagrotis trigona (Smith, 1893)
Abagrotis apposita (Grote, 1878)
Abagrotis vittifrons (Grote, 1864)
Abagrotis mirabilis (Grote, 1879)
Abagrotis glenni Buckett, 1968
Abagrotis pulchrata (Blackmore, 1925)
Abagrotis nefascia (Smith, 1908)
Abagrotis reedi Buckett, 1969
Abagrotis duanca (Smith, 1908)
Abagrotis nanalis (Grote, 1881)
Abagrotis discoidalis (Grote, 1876)
Abagrotis turbulenta McDunnough, 1927
Abagrotis hermina Lafontaine, 1998
Abagrotis dodi McDunnough, 1927
Abagrotis dickeli Lafontaine, 1998
Abagrotis placida (Grote, 1876)
Abagrotis orbis (Grote, 1876)
Abagrotis baueri McDunnough, 1949
Abagrotis variata (Grote, 1876)
Abagrotis scopeops (Dyar, 1904)
Abagrotis alternata (Grote, 1864)
Report of this species in BC by ESBC (1906) is unconfirmed and probably erroneous. However, it is known from southwestern AB (Lafontaine 1998) and may well occur in BC.
Abagrotis forbesi (Benjamin, 1921)
Abagrotis brunneipennis (Grote, 1875)
Abagrotis cupida (Grote, 1865)
Pronoctua typica Smith, 1894
Pronoctua peabodyae (Dyar, 1903)
Historically reported under the name P. pyrophiloides (Harvey) under a previous concept of that species.
Pronoctua craboi Lafontaine, 1998
Part III: Excluded Taxa

The following 322 species have been erroneously reported in published literature as occurring in BC. Some of the entries in this list reflect cases that are deemed to be errors or misidentifications, but many others result from recent taxonomic interpretations shifting the historical divisions between species and subspecies. Many are due to the recognition of separate Palaearctic and Nearctic species that were once considered conspecific. A few may be due to mislabelled material. One collection in particular, the “Bush-Wilson” collection of approximately 100 years ago was made up of eastern North American material that was mistakenly labelled as being from “Vancouver, BC” (the collection may once have been housed there), and has caused confusion about species ranges. There may still be mislabelled “Bush-Wilson” material (particularly bombycoids) deposited in collections (B. C. Schmidt, personal communication). Details of current species and subspecies assignments are provided for each entry. Species are listed here in the most recent taxonomic order, similar to the main checklist.

**Micropterigidae**

E001  *Epimartyria pardella* Walsingham, 1880. This species was listed by Blackmore (1923) based on an old record at Fraser Mills. Those specimens are the very recently described *E. bimaculella* Davis & Landry, 2012.

**Hepialidae**

E002  *Gazoryctra pulcher* (Grote, [1865]). Reported from BC as “Hepialis pulcher mcglashlani Edwards” by Blackmore (1921). *Gazoryctra mcglashlani* Edwards is now a valid species; neither *G. mcglashani* or *G. pulcher* occur in BC.
Early records of this species in BC are based on specimens of *G. novigannus* (Barnes & Benjamin), which was not described until 1926.

**Tineidae**

*Morophagoides tessulatellus* (Zeller, 1846). This Palaearctic species was reported by Dietz (1905) under a previous taxonomic arrangement. All records of this species in North America refer to *M. burkerella* (Busck).

**Gracillariidae**

*Caloptilia elongella* (Linnaeus, 1761). This Palaearctic species was reported by ESBC (1906) under a previous taxonomic arrangement. North American records refer to *C. alnivorella* (Chambers).

*Caloptilia glutinella* (Ely, 1915). The record from Prentice (1965) for BC and YT is considered to be erroneous: no authentic voucher material could be found. This species is otherwise known only from CT.

*Marmara pomonella* Busck, 1915. Reported as a pest in BC by Belton (1988) but that is deemed erroneous as no vouchers are known.

*Phyllonorycter populiella* (Chambers, 1878). This species was not reported from the West by Davis and Deschka (2001). British Columbia material cited by ESBC (1906) and other early works is assumed to be another species.

**Yponomeutidae**

*Zelleria hepariella* Stainton, 1849. This Palaearctic species was reported in error by Cannings and Scudder (2007), based on misidentified specimens of *Z. pyri* Clarke.

**Ypsolophidae**

*Ypsolopha ustella* (Clerck, 1759). Historical reports of this species in BC are incorrect; it is restricted to the Palaearctic (J. Sohn, personal communication).

**Argyresthiidae**

*Argyresthia calliphanes* Meyrick, 1913. The identity of this species has long been confused with *A. goedartella* (Linnaeus). Forbes (1923) claims that most North American reports of the latter actually
refer to *A. calliphanes*. Until this matter is resolved, we list known BC material under *A. goedartella*, and treat *A. calliphanes* as an erroneous record.

**Oecophoridae**

E012 *Decantha borkhausenii* (Zeller, 1839). This Palaearctic species was reported by Cannings and Scudder (2007). North American material is *D. boreasella* (Chambers).

E013 *Endrosis lacteella* ([Denis & Schiffermüller], 1775). The report from BC by ESBC (1906) refers to *E. sarcitrella* (Linnaeus). *Endrosis lacteella* is restricted to the Old World.

**Cosmopterigidae**

E014 *Walshia amorphella* Clemens, 1864. Western Canadian specimens once identified as this species are actually *W. miscecolorella* (Chambers), long considered a synonym of *W. amorphella*.

**Gelechiidae**

E015 *Dichomeris flavocostella* (Clemens, 1860). Reported as an uncertain record from BC by Hodges (1986). No BC voucher material is known, and the species is otherwise unknown west of MB; the report is considered erroneous. Two specimens in the RBCM with no locality information may be the basis of Hodges’ record.

E016 *Chrysoesthia hermanella* (Fabricius, 1781). The report by Blackwelder (1923) is erroneous and refers to *C. drurella* (Fabricius). *Chrysoesthia hermanella* is restricted to the Old World.

E017 *Coleotechnites nigritus* (Hodges, 1983). The BC record by Cannings and Scudder (2007) is based on a misidentified specimen in the CNC. This species is not known to occur in Canada.

E018 *Carpatolechia proximella* (Hübner, 1796). The report by Cannings and Scudder (2007) is erroneous; it is based on misidentified material that is actually *C. belangerella* (Chambers).

E019 *Chionodes trophella* (Busck, 1903). Reported from BC by Blackmore (1924), but this species is not known north of UT and CO (Hodges 1999b). The BC report is probably based on the very similar *C. restio* Hodges, which is a recently-described Garry Oak feeder in southwestern BC.

E020 *Aroga paraplutella* (Busck, 1910). The report by Cannings and Scudder (2007) was based on misidentified material.
Elachistidae
E021  *Elachista stramineola* Braun, 1921. Misidentification by Braun (1948); this is *E. morwenella* Kaila, according to Kaila (1999b).

Coleophoridae
E022  *Coleophora tenuis* (Walsingham, 1882). The record of this species in BC by ESBC (1906) is deemed erroneous as no vouchers are known and it is otherwise unknown from Canada.

Momphidae
E023  *Mompha albapalpella* (Chambers, 1875). Historical records of this species in Canada are based on misidentified material of *M. conturbatella* (Hübner).
E024  *Mompha decorrella* (Stephens, 1835). Historical records of this Palaearctic species in North America refer to *M. unifasciella* (Chambers).

Alucitidae
E025  *Alucita hexadactyla* Linnaeus, 1758. Historical application of this name to North American material is incorrect; known BC specimens have been redetermined as *A. montana* Barnes & Lindsey.
E026  *Alucita huebneri* Wallengren, 1859. Like *A. hexadactyla* Linnaeus, the name *A. huebneri* was sometimes applied to *Alucita* material in North America. In BC, these records refer to *A. montana* Barnes & Lindsey.

Pterophoridae
E027  *Stenoptilia islandicus* (Staudinger, 1857). This Palaearctic species was reported by Landry (1987) under a previous taxonomic arrangement. North American material is *S. mengeli* Fernald.
E028  *Paraplatyptilia grandis* (Walsingham, 1880). The ESBC (1906) record was declared erroneous by Blackmore (1922b). British Columbia specimens are *Platyptilia carduidactylus* (Riley). Barnes and Lindsey (1921) repeated the BC report as a questionable record.
E029  *Paraplatyptilia modesta* (Walsingham, 1880). The ESBC (1906) record was declared erroneous by Blackmore (1922b). British Columbia specimens are *Platyptilia carduidactylus* (Riley).
E030  *Amblyptilia cosmodactyla* (Hübner, [1819]). This Palaearctic species was reported by ESBC (1906) following a previous taxonomic arrangement. North American material is *A. pica* (Walsingham).
Amblyptilia punctidactyla (Haworth, 1811). This Palaearctic species was reported by several early workers following a previous taxonomic arrangement. North American material is A. pica (Walsingham).

Geina periscelidactyla (Fitch, 1854). The ESBC (1906) record was declared erroneous by Blackmore (1922b). British Columbia specimens are Amblyptilia pica (Walsingham).

Dejongia californicus (Walsingham, 1880). An uncertain record by Barnes & Lindsey (1921), who reported that D. lobidactylus (Fitch) records from BC (reported by ESBC 1906) likely referred to this species. However, Landry (1987) confirmed the presence of D. lobidactylus in BC. Dejongia californicus is otherwise unknown from Canada so we consider Barnes & McDunnough’s conclusion erroneous.

Hellinsia fishii (Fernald, 1893). Reported by McDunnough (1923, 1927b) from BC to ON, but no Canadian voucher specimens are known so that is deemed erroneous.

Hellinsia paleaceus (Zeller, 1873). The BC record by ESBC (1906) and Barnes and Lindsey (1921) was declared erroneous by Blackmore (1922b). British Columbia specimens are H. corvus (Barnes & Lindsey).

Oidaematophorus guttatus Walsingham, 1880. The record by McDunnough (1927b) without current vouchers is considered to be a misidentification. This species is otherwise unknown in Canada and the northwestern USA.

Tortricidae – Tortricinae

Acleris bergmanniana (Linnaeus, 1758). This Palaearctic species was reported by Dyar (1904) and ESBC (1906) under a previous taxonomic arrangement. North American material is A. albicoma (Clemens).

Acleris permutana (Duponchel, 1836). Report of this Palaearctic species by Forbes (1923) follows a previous taxonomic arrangement. North American material is A. fragaria Kearfott.

Acleris lipsiana ([Denis & Schiffermüller], 1775). According to Clarke (1987), all reports of A. lipsiana in North America refer to A. inana (Robinson). Acleris lipsiana is strictly Palaearctic.

Acleris emargana (Fabricius, 1775). Historical application of this Palaearctic name to North American material is erroneous. All
North American populations have recently been recognised as a distinct species, *A. effractana* (Hübner) (Karsholt et al. 2005).

**E041** *Cnephasia asseclana* [Denis & Schiffermüller], 1775. This introduced species was reported from BC in error by Smith (1994) under the name *C. interjectana* (Haworth), a synonym (Lafontaine and Troubridge 2011).

**E042** *Phalonidia felix* (Walsingham, 1895). No vouchers are known for the Cannings & Scudder (2007) BC record; it presumably originated with CNC material that has since been redetermined as another species, so the BC record is deemed erroneous.

**E043** *Argyrotaenia ljungiana* (Thunberg, 1797). This Palaearctic species was reported by ESBC (1906) as “*Eulia politana* Haworth”, a synonym. It is assumed to refer to the very similar *A. occultana* Freeman, which had not been described at the time.

**E044** *Sparganothis pilleriana* ([Denis & Schiffermüller], 1775). The record by ESBC (1906) is thought to be erroneous, as no BC vouchers are known and this species is otherwise unknown in North America (Powell and Brown 2012).

**Tortricidae – Olethreutinae**

**E045** *Apotomis albeolana* (Zeller, 1875). The BC report by Blackmore (1923) is considered erroneous and refers to another species of *Apotomis*. *Apotomis albeolana* is not known west of ON in Canada.

**E046** *Olethreutes electrofuscum* (Heinrich, 1923). The report from BC by deWaard (2010), based on a barcoded specimen, is deemed erroneous. Barcodes are not reliable for diagnosis in this genus, and this species is otherwise known only in eastern North America.

**E047** *Olethreutes versicolorana* (Clemens, 1860). The report from BC by Blackmore (1922a) was erroneous and was corrected to *O. appendiceum* (Zeller) (Blackmore 1923).

**E048** *Ancylis geminana* (Donovan, [1806]). Reported in error by ESBC (1906) and other early authors as *A. biarcuana* (Stephens), a synonym of this Palaearctic species (see Heinrich 1923). North American records refer to *A. diminutana* (Haworth).

**E049** *Spilonota lariciana* (Heinemann, 1863). The report of this species in BC by Blackmore (1921) refers to *S. ocellana* ([Denis & Schiffermüller]); *S. lariciana* is strictly Palaearctic.

**E050** *Eucosma refusana* (Walker, 1863). This species was reported from BC by Cannings and Scudder (2007) on the basis of misidentified specimens of *E. verna* (Miller) in the CNC.
E051 *Eucosma circulana* Hübner, 1823. The record by Dyar (1904) and ESBC (1906) is assumed to be a misidentification; this species is otherwise unknown in western North America.

E052 *Eucosma salmicolorana* (Heinrich, 1923). Report of this species from BC by Cannings and Scudder (2007) is erroneous, it occurs in Canada only in the southern prairies east of the Rocky Mountains.

E053 "*Eucosma* occipitana" (Zeller, 1875). Reported by Cannings and Scudder (2007) under a previous taxonomic arrangement. All known Canadian records of *E. occipitana* refer to *Pelochrista kingi* Wright. "*Eucosma* occipitana" is not known to occur north of CO. The generic placement of this species is uncertain (Gilligan et al. 2014).

E054 *Pelochrista similiana* (Clemens, 1860). Reported from BC by Dyar (1904). This record is erroneous, and refers to *P. dorsisignatana* (Clemens). *Pelochrista similiana* is not known to occur west of MB (Wright 2011).

E055 *Pelochrista atomosana* (Walsingham, 1879). The record by Dyar (1904) and ESBC (1906) is assumed to be a misidentification; this species is otherwise unknown in western North America.

E056 *Pelochrista lathami* (Forbes, 1937). Western records of this species refer to *E. morrisoni* (Walsingham).

E057 *Pelochrista passerana* (Walsingham, 1879). This species was reported from BC by Blackmore (1923) but the record is deemed erroneous; no BC vouchers are known and the species is otherwise unknown north of CA.

E058 *Zeiraphera ratzeburgiana* (Saxesen, 1840). Historical application of this Palaearctic name in North America is based on a previous taxonomic concept. All North American material is *Z. canadensis* Mutuura & Freeman.

E059 *Zeiraphera diniana* (Guenée, 1845). Records of this Palaearctic species by Prentice (1965) and others are erroneous. North American material is *Z. improbana* (Walker).

E060 *Epinotia crenana* (Hübner, [1817]). This Palaearctic name has been used for many years for North American material now recognised as a distinct species, *E. columbia* (Kearfott).

E061 *Dichrorampha alpinana* (Treitschke, 1830). This Palaearctic species was reported by ESBC (1906) under a previous taxonomic concept. North American material is *D. simulana* (Clemens) (Heinrich 1926).

E062 *Grapholita molesta* (Busck, 1916). This exotic pest species, known as the Oriental Fruit Moth, was reported by Cannings and Scudder
(2007). It was intercepted at Summerland, BC, in 1956 on fruit imported from WA for canning. An eradication campaign was carried out at the cannery and in an adjacent orchard as a precautionary measure (Touzeau and Nielson 1957, 1958). However, it has never been collected in the wild in the province, so is hereby removed from the BC list.

**E063 Cydia strobilella** (Linnaeus, 1758). Historical records of this European species in North America are now recognised as a distinct species, *Cydia youngana* (Kearfott), which was raised from synonymy with *C. strobilella* by Svensson et al. (2012).

**E064 Cydia gallaesaliciana** (Riley, 1881). The BC record by Dyar (1904) and other early workers was based on a determination by Kearfott that is assumed to be erroneous. No vouchers are known, and the species is otherwise unknown west of MB.

**Papilionidae**

**E065 Papilio polyxenes** Fabricius, 1775. This Holarctic species was reported in error by Smith (1994), as *P. polyxenes asterius* Stoll, in a list of exotic species introduced to BC. It does not occur west of MB.

**E066 Papilio glaucus** Linnaeus, 1758. Reported in error from BC by Dyar (1904) and other early workers based on a previous taxonomic arrangement. British Columbia records refer to *P. canadensis* Rothschild & Jordan.

**Hesperiidae**

**E067 Pyrgus albescens** Plötz, 1884. A report of “Urbanus tessellata occidentalis” Skinner” from BC by Blackmore (1927) has been misinterpreted as a record of this species. *Hesperia tessellata* Scudder is a synonym of *Pyrgus communis* (Grote), which occurs in BC. However, *P. occidentalis* is now considered a synonym of *P. albescens*, which does not occur in Canada.

**E068 Pyrgus oileus** (Linnaeus, 1767). Report of this species by Dyar (1904) and ESBC (1906) under the name *montivagus* Reakirt, a synonym, is considered to be erroneous. This species does not occur in Canada or the Pacific Northwest.

**E069 Hesperia comma** (Linnaeus, 1758). North American specimens south of Beringia are *H. manitoba* (Scudder), long considered to be a subspecies of *H. comma* (Pohl et al. 2010).

**E070 Ochlodes agricola** (Boisduval, 1852). Historical records of this species are assumed to be erroneous. It has not been listed as occurring
in Canada since Llewellyn Jones (1951), and no Canadian vouchers are known.

**Pieridae**

E071 *Colias meadii* Edwards, 1871. Canadian records historically referred to as *C. meadii* are *C. elis* Strecker, which was long treated as a subspecies of *C. meadii*, but was raised to species status by Pohl et al. (2010). *Colias meadii* is restricted to the USA.

E072 *Euchloe hyantis* (Edwards, 1871). Reported from BC by various workers, including Cannings and Scudder (2007), but these records refer to *E. lotta* (Beutenmüller), considered a subspecies of *E. hyantis* until recently.

E073 *Pieris napi* (Linnaeus, 1758). Historical records of this Palaearctic species from North America are erroneous, due to a previous taxonomic arrangement. All North American populations are *P. oleracea* Harris.

**Lycaenidae**

E074 *Lycaena epixanthe* (Boisduval & LeConte, [1835]). Reported from BC in error by Belton (1988). This is an eastern species.

E075 *Satyrium fuliginosa* (Edwards, 1861). Reports of this species in BC by Layberry et al. (1998) and others all refer to *S. semiluna* Klots, then considered a subspecies of *S. fuliginosa*, but now considered a full species, following Warren (2005).

E076 *Satyrium acadica* (Edwards, 1862). The report of this species from southeastern BC by Ferris and Brown (1981) is incorrect, it refers to *S. sylvinus* (Boisduval).

E077 *Callophrys dumetorum* (Boisduval, 1852). The reports of this species in BC by Llewellyn Jones (1951) and earlier workers refer to *C. sheridanii* (Carpenter).

E078 *Callophrys xami* Reakirt, [1867]. The record by ESBC (1906), as "*Thecla blenina* Hewitson", a synonym, is erroneous. This species does not occur in northwestern North America.

E079 *Callophrys irus* (Godart, [1824]). The report by ESBC (1906) is erroneous, and refers to another *Callophrys* species. *Callophrys irus* is not known to occur in northwestern North America.

E080 *Celastrina ladon* (Cramer, [1780]). Reported from BC by Layberry et al. (1998), Guppy and Shepard (2001) and others going back to ESBC (1906). However, these records refer to *C. lucia* (Kirby) and *C. echo* (Edwards), once treated within the concept of a widespread
Holarctic “C. ladon”, but now considered to be separate species. True C. ladon is restricted to eastern North America.

E081 *Celastrina argiolus* (Linnaeus, 1758). Reports of this Palaearctic species in North America are based on a previous taxonomic arrangement. Western North American populations are now treated as *C. lucia* (Kirby) and *C. echo* (Edwards). In the east, they are *C. ladon* (Cramer).

E082 *Euphilotes battoides* (Behr, 1867). Reports of this species in BC by Layberry et al. (1998), Guppy and Shepard (2001) and others refer to *E. glaucon* (Edwards), then considered to be a subspecies of *E. battodes*.

E083 *Plebejus acmon* (Westwood, 1852). Records in Layberry et al. (1998), Guppy and Shepard (2001) and others going back to ESBC (1906) refer to *P. lupini* (Boisduval), recently raised to species status.

E084 *Plebejus podarce* (Felder & Felder, 1865). Reported from BC in error by Dyar (1904) and ESBC (1906), this taxon was until recently considered to be a subspecies of *P. glandon* (de Prunner). It is now recognised as a full species, and is restricted to OR and CA (Layberry et al. 1998).

**Nymphalidae – Heliconiinae**

E085 *Boloria napaea* (Hoffmansegg, [1826]). This Palaearctic name has been used for North American populations under a previous taxonomic arrangement. They are now treated as *B. alaskensis* (Holland), following Pelham (2008).

E086 *Boloria selene* ([Denis & Schiffermüller], 1775). This Palaearctic name has been used for North American populations under a previous taxonomic arrangement. They are now treated as *B. myrina* (Cramer), following Pelham (2008).

E087 *Boloria tritonia* (Boeber, 1812). This Palaearctic name has been used for North American populations under a previous taxonomic arrangement. North American populations are now treated as *B. astarte* (Doubleday), following Pelham (2008).

**Nymphalidae – Nymphalinae**

E088 *Vanessa caryae* (Hübner, 1812). Reports of this Palaearctic species in BC by ESBC (1906) and Blackmore (1927) are based on a previous taxonomic arrangement. All North American material is *V. annabella* (Field).
**Nymphalis l-album** (Esper, 1781). This Palaearctic species was reported by Guppy and Shepard (2001) and Pyle (2002), following a previous taxonomic arrangement. North American populations are *N. j-album* (Boisduval & LeConte).

**Polygonia marsyas** Edwards, 1870. ESBC (1906) reported “variety marsyas Edwards” from BC in error; *marsyas* was described from mislabelled Old World material (see Pelham 2008: Appendix II).

**Euphydryas chalcedona** (Doubleday, 1847). Records of this species in BC refer to *E. colon* (Edwards), long considered a subspecies of *E. chalcedona*, but treated as distinct by Pelham (2008). True *E. chalcedona* does not occur north of the USA.

**Chlosyne whitneyi** (Behr, 1863). Reported in BC by Guppy and Shepard (2001) and others as *C. whitneyi damoetis* (Skinner), now considered to be a separate species.

**Chlosyne acastus** (Edwards, 1874). Layberry et al. (1998) reported “*C. palla sterope* (Edwards)” from the southern Okanagan of BC, but those populations are actually *C. palla* (Boisduval), subspecies *calydon* (Strecker). The taxon *sterope* is now regarded as a subspecies of *C. acastus* (Edwards), which occurs in central WA and in the grasslands of AB, but is unknown from BC (Pyle 2002).

**Phyciodes tharos** (Drury, 1773). British Columbia records of *P. tharos* refer to *P. cocyta* (Cramer), which was recently split from *P. tharos*. Guppy and Shepard (2001) continued to treat *P. cocyta* as a subspecies of *P. tharos*.

**Nymphalidae – Satyrinae**

**Cercyonis sylvestris** (Edwards, 1861). The report by ESBC (1906) as “*Cercyonis sylvestris* Edwards variety *charon* (Edwards)” is erroneous. The taxon *charon* is a valid subspecies of *C. oetus* (Boisduval) that occurs in BC; however, *C. sylvestris* is strictly Palaearctic.

**Erebia disa** (Thunberg, 1791). The BC records by Blackmore (1927) and Llewellyn Jones (1951) refer to *E. mancinus* Doubleday & Hewitson, which was considered a synonym of *E. disa* at that time. *Erebia disa* is otherwise known only from YT, NT and NU near the Arctic Ocean.

**Erebia theano** (Tauscher, 1809). This Palaearctic name was applied to North American populations by Layberry et al. (1998) and others, following a previous taxonomic arrangement. The North American taxon is now known as *E. pawloskii* Ménétriés.
E098 *Oeneis rosovi* Kurentzov, 1960. This Palaearctic species was reported by Layberry et al. (1998) and Cannings and Scudder (2007) following a previous taxonomic arrangement. North American material is *O. philipi* Troubridge & Parshall.

E099 *Oeneis norna* (Thunberg, 1791). Listed from BC by ESBC (1906) as "*Oeneis norna* Thunberg variety *beanii* Elwes". The taxon *beanii* is now recognised as a subspecies of *O. melissa* (Fabricius). It occurs in BC. However, *O. norna* is strictly Palaearctic.

**Pyralidae**

E100 *Aglossa electalis* (Hulst, 1886). The historical records by Dyar (1904) and ESBC (1906) refer to *A. cacamica* (Dyar), which had not been described at that time. *Aglossa electalis* does not occur in northwestern North America.

E101 *Euzophera aglaeella* Ragonot, 1887. Reported by Blackmore (1923), but now assumed to be erroneous. No vouchers are known, and this species was not reported from Canada or the northern USA by Neunzig (1990).

E102 *Pima albiplagiatella* (Packard, 1874). All records west of QC refer to *P. occidentalis* Heinrich, which was considered a subspecies of *P. albiplagiatella* prior to Neunzig (2003).

E103 *Sciota termitalis* (Hulst, 1886). The BC record by Heinrich (1956), repeated by Cannings and Scudder (2007), is considered erroneous. Earlier western determinations were thought by Neunzig (2003) to refer to *S. levigatella* (Hulst), which Heinrich (1956) considered to be a synonym of *S. termitalis*.

E104 *Sciota inconditella* (Ragonot, 1893). Reported by Blackmore (1923, 1924) as "*S. virgatella* subspecies *inconditella* Ragonot", from Shawnigan Lake and Duncan, BC. Only two purported BC vouchers exist, both in the UBC collection. They were redetermined by GRP: one is *S. fraudifera* (Heinrich), and the other is a *Sciota* species, but definitely not *S. virgatella* (Clemens) or *S. inconditella*. *Sciota inconditella* is not known from western North America (Neunzig 2003).

E105 *Sciota subcaesiella* (Clemens, 1860). Reported by Blackmore (1922a) as a subspecies of *S. virgatella* (Clemens) from Goldstream, BC. This is assumed to be a misidentification; the species is known only from eastern North America.

E106 *Sciota virgatella* (Clemens, 1860). Reported by Blackmore (1923, 1924) as "*S. virgatella* subspecies *inconditella* Ragonot". Purported
vouchers have been redetermined as other *Sciota* species (see note above on *S. inconditella*). *Sciota virgatella* is not known from western North America (Neunzig 2003).

E107 *Pyla aeneella* Hulst, 1895. Canadian records, including from BC by Cannings & Scudder 2007, are erroneous: no confirmed vouchers are known, and the species is reported only from CO and UT by Neunzig 2003.

E108 *Dioryctria abietella* ([Denis & Schiffermüller], 1775). This Palaearctic name was used in North America before 1973 when Nearctic populations were described as a separate species, *D. reniculelloides* Mutuura & Munroe.

E109 *Sarata atrella* (Hulst, 1890). Erroneous BC record by ESBC (1906) and Blackmore (1922a). Vouchers in the RBCM were redetermined as *S. pullatella* (Ragonot) by GRP.

E110 *Zophodia convulutella* (Hübner, 1796). This Palaearctic species was reported in error by Heinrich (1956) under a previous taxonomic arrangement. North American populations are *Z. grossulariella* (Hübner).

E111 *Phycitodes reliquella* (Dyar, 1904). Historical records of this species in western North America refer to *P. mucidella* (Ragonot), a closely related species. As defined by Neunzig (1997), *P. reliquella* is restricted to eastern North America.

**Crambidae**

E112 *Euchromius ocelleus* (Haworth, 1811). Reports of this species from western Canada, including from BC by Blackmore (1924), refer to *E. californicalis* (Packard). *Euchromius ocelleus* is not known from the area.

E113 *Crambus dumetellus* Hübner, 1813. This Palaearctic species was reported by various authors prior to Klots (1942) under a previous taxonomic arrangement. North American populations are *C. whitmerellus* Klots.

E114 *Crambus gausapalis* Hulst, 1886. Reported from BC by ESBC (1906), but not by subsequent authors. The record is assumed to be erroneous, because the species is not known to occur in northern North America.

E115 *Stegea eripalis* (Grote, 1878). The BC record by Dyar (1904) and ESBC (1906) is considered to be erroneous and likely refers to *S. salutalis* (Hulst). *Stegea eripalis* is otherwise unknown west of the Great Lakes region.
Anania coronata (Hufnagel, 1767). This Palaearctic name was used in North America until very recently. North American populations are now recognised as a distinct species, A. tertialis (Guenée) (Yang et al. 2012).

Anania terrealis (Trietschke, 1829). This Palaearctic species was reported by early workers up to Forbes (1923). North American populations are A. mysippusalis (Walker).

Pyrausta generosa (Grote & Robinson, 1867). Report of this species from BC by ESBC (1906) refers to P. orphisalis Walker. The two species were historically confused. Pyrausta generosa does not occur west of southern AB.

Herpetogramma aeglealis (Walker, 1859). BC record by Dyar (1904) and ESBC (1906) is assumed erroneous: no BC vouchers are known, and this species is otherwise unknown in western Canada.

Udea ferrugalis (Hübner, 1796). This Palaearctic species was reported by ESBC (1906) following a previous taxonomic arrangement. North American populations are U. rubigalis (Guenée).

Nomophila noctuella ([Denis & Schiffermüller], 1775). North American records of this Palaearctic species are erroneous, due to a previous taxonomic concept. North American populations are N. nearctica Munroe.

Drepanidae


Ceranemota tearlei (Edwards, 1886). The record from Blackmore (1927) and Llewellyn Jones (1951) is erroneous and refers to C. albertainae Clarke (Lafontaine and Troubridge 2011). Crabo et al. (2015) treat C. albertainae as a synonym of C. tearlei, and list records in the Pacific Northwest, including BC, under the latter name.

Lasiocampidae

Phyllodesma occidentis (Walker, 1855). Erroneous record by Franclemont (1973) under a previous concept of this species. Western Canadian populations are now considered to be P. americana (Harris). Phyllodesma occidentis does not occur in northwestern North America.

Malacosoma americana (Fabricius, 1793). This otherwise eastern North American species was reported as an uncertain record by
Llewellyn Jones (1951) and Forbes (1954); the specimen is either mislabelled or misidentified.

**Saturniidae**

E126 *Tolype laricis* (Fitch, 1856). Historical records of this species, including by Franclemont (1973), are considered to be misidentifications of *T. dayi* Blackmore. No confirmed *T. laricis* material is known west of MB (B. C. Schmidt, personal communication).

**Saturniidae**

E127 *Ormiscodes ribesii* Edwards, 1875. This species was described from a reared female from “Esquimault”, BC, by Edwards (1874). The ESBC (1906) subsequently listed it as a questionable record for BC. This is the only known report of this tropical species from North America; Fergusson (1971) presumed it was either mislabelled or an accidental introduction.

E128 *Hyalophora columbia* (Smith, 1865). British Columbia records of *H. columbia* refer to *H. gloveri* (Strecker), historically treated as a subspecies or synonym, but recognised as distinct by Pohl et al. (2010). True *H. columbia* does not occur west of MB.

**Sphingidae**

E129 *Sphinx gordius* Cramer, 1780. Reported from BC by Shepard (unpublished report B), but that record refers to *S. poecila* Stephens. *Sphinx gordius* is an eastern species, occurring only as far west as SK.

E130 *Smerinthus saliceti* Boisduval, 1875. Erroneous record by Llewellyn Jones (1951). Specimens from western Canada that are similar in appearance to *S. saliceti* are currently considered to be *S. ophthalmica* Boisduval (Pohl et al. 2010). However, these may in fact represent another biological entity. More taxonomic work is required on this group in western Canada (B. C. Schmidt, personal communication).

E131 *Deidamia inscripta* (Harris, 1839). This introduced species was reported in error from BC by Smith (1994).

**Geometridae – Larentiinae**

E132 *Dysstroma walkerata* (Pearsall, 1909). This species has been reported from BC by many workers; however, all BC material is *D. pseudimmanata* (Heydemann). *Dysstroma walkerata* is a species of the eastern boreal forest (Pohl et al. 2010).

E133 *Eulithis populata* (Linnaeus, 1758). Reported from BC by Dyar (1904). Nevertheless, he thought the specimens may be *E. propulsata*
Colostygia turbata Hübner, [1799]. Records of this Palaearctic species by various authors, including Cannings and Scudder (2007), are based on a previous taxonomic arrangement. North American populations are _C. circumvallaria_ (Taylor).

Thera contractata (Packard, 1873). The BC record by Fischer et al. (unpublished report) is based on a misidentification; this species is restricted to eastern North America.

Hydriomena impluviata ([Denis & Schiffermüller], 1775). This Palaearctic species was reported by ESBC (1906), under the name _Geometra autumnalis_ Ström, a synonym. The report likely refers to _H. renunciata_ (Walker), a very similar species.

Hydriomena pluviata (Guenée, [1858]). Llewellyn Jones’ (1951) BC record is assumed to be a misidentification: this species is otherwise known in Canada only from QC.

Entephria aurata (Packard, 1867). The report of this species in BC by Forbes (1948) is considered erroneous. Western populations are _E. multivagata_ (Hulst) (Troubridge 1997).

Stamnodes gibbicostata (Walker, 1862). The report of this species in BC by ESBC (1906) is erroneous, based on a previous taxonomic interpretation. British Columbia populations were described as _S. blackmorei_ by Swett (1915).

Xanthorhoe designata (Hufnagel, 1767). Historical records of this Palaearctic species, up to and including Llewellyn Jones (1951), are based on a previous taxonomic concept. North American populations are now known as _X. labradorensis_ (Packard).

Xanthorhoe incursata (Hübner, [1813]). North American populations previously treated under this Palaearctic name have recently been recognised as distinct, under the name _X. lagganata_ Swett & Cassino (Pohl et al. 2010).

Epirrhoe tristata (Linnaeus, 1758). This Palaearctic species was reported by historical workers under a previous taxonomic arrangement. North American populations are now recognised as _E. sperryi_ Herbulot.

Euphyia unangulata (Haworth, 1809). Llewellyn Jones (1951) and Lafontaine and Troubridge (2011) used this Palaearctic name following a previous taxonomic arrangement. North American populations are now known as _E. intermediata_ (Guenée).
E144  *Epirrita dilutata* ([Denis & Schiffermüller], 1775). This Palaearctic species was reported from BC by ESBC (1906) under a previous taxonomic arrangement. North American populations are *E. autunnata* (Borkhausen).

E145  *Eubaphe unicolor* (Robinson, 1869). This species has been reported on historical BC lists, but no vouchers are known north of the southwestern USA. Those reports are deemed erroneous.

E146  *Horisme vitalbata* ([Denis and Schiffermüller], 1775). Historical use of this Palaearctic name is incorrect; North American populations were recognised as a distinct species, *E. incana* Swett, in 1918.

E147  *Eupithecia subvirens* Dietze, 1875. The report of this species from BC by Llewellyn Jones (1951)—under the name *E. laisata* Strecker, a synonym—is assumed to be erroneous. It was not reported from Canada by Bolte (1990).

E148  *Eupithecia chiricahuata* McDunnough, 1944. Report by Llewellyn Jones (1951) is assumed to be a misidentification. It is otherwise known only from AZ (Lafontaine and Troubridge 2011).

E149  *Eupithecia sobrinata* (Hübner, [1817]). This species was reported from BC by Prentice (1963) as “*E. sobrinata niphadophilata* (Dyar)”, and by Llewellyn Jones (1951) as “*E. sobrinata interruptofasciata* Packard”. Both *E. niphadophilata* and *E. interruptofasciata* are now recognised as distinct species in North America. *Eupithecia sobrinata* is restricted to the Palaearctic.

E150  *Eupithecia fletcherata* Taylor, 1907. BC records reported by Forbes (1948) and Prentice (1963) refer to *E. sharronata* Bolte, which was not described until 1990.

E151  *Eupithecia arceuthata* (Freyer, 1842). This Palaearctic name was used by Prentice (1963); North American populations are *E. intricata* (Zetterstedt). The name *arceuthata* was omitted from the world Geometridae catalogue of Scoble (1999).

E152  *Eupithecia multiscripta* (Hulst, 1896). The report of this species from BC by Llewellyn Jones (1951) is assumed to be erroneous; it was not reported from Canada by Bolte (1990). It may be based on non-BC material in the RBCM.

E153  *Eupithecia innotata* (Hufnagel, 1767). Llewellyn Jones (1951) used this Palaearctic name for what is now known as *E. perfusca* (Hulst).

E154  *Eupithecia togata* (Hübner, [1817]). This Palaearctic name was used by early workers up to Llewellyn Jones (1951). North American populations are now known as *E. columbrata* McDunnough.
E155 *Eupithecia abietaria* (Goeze, 1781). Erroneous BC record by Forbes (1948), who reported *E. pini* Retzius, a synonym of this Palaearctic species. This record refers to *E. columbrata* McDunnough.

E156 *Eupithecia scabrogata* Pearsall, 1912. Reports of this species from BC by various workers, beginning with Blackmore (1921) and up to Llewellyn Jones (1951), are assumed to be erroneous. The species was not reported from Canada by Bolte (1990).

E157 *Eupithecia subapicata* Guénéé, [1858]. Reported from BC by ESBC (1906), but no BC vouchers are known, and the species was not reported from BC by subsequent authors. It is assumed to be erroneous.

E158 *Eupithecia implorata* (Hulst, 1896). The report of this species from BC by Llewellyn Jones (1951) is assumed to be erroneous; it was not reported from Canada by Bolte (1990).

E159 *Eupithecia cestata* (Hulst, 1896). The report of this species from BC by Llewellyn Jones (1951) is assumed to be erroneous; it was not reported from Canada by Bolte (1990).

**Geometridae – Sterrhinae**


E161 *Scopula quadrilineata* (Packard, 1876). This species was listed in error by Cannings and Scudder (2007) and deWaard (2010); no vouchers are known west of SK.

E162 *Leptostales hepaticaria* (Guenée, [1858]). Reports from BC by Dyar (1904) and other early workers are assumed to be erroneous. No BC voucher material is known, and the species is otherwise known only from the southeastern USA. These historical records probably refer to *L. rubromarginaria* (Packard).

**Geometridae – Ennominae**

E163 *Speranza sulphurea* (Packard, 1873). This species is restricted to eastern North America as far west as MB; western material is *S. amboflava* (Ferguson), which was historically considered a subspecies of *S. sulphurea* (Ferguson 2008).

E164 *Speranza anataria* (Swett, 1913). According to Ferguson (2008), all Canadian specimens west of ON are *S. boreata* Ferguson.
E165  *Speranza denticulodes* (Hulst, 1896). Erroneous record by Llewellyn Jones (1951) and other early workers. British Columbia records refer to *S. bitactata* (Walker). *Speranza denticulodes* is restricted to the southwestern USA (Ferguson 2008).

E166  *Speranza flavigaria* (Packard, 1876). Reported from BC by ESBC (1906) under the name “*Diastictis subfalcata* Hulst”, a synonym, but no vouchers or other BC reports exist. According to Forbes (1948), early reports of this species were confused with *S. occiduaria* (Packard).

E167  *Speranza pustularia* (Guenée, [1858]). The BC record by Blackmore (1922a) is erroneous; this eastern North American species is known to occur only as far west as the Great Plains of southern SK (Ferguson 2008).

E168  *Psamatodes atrimacularia* (Barnes & McDunnough, 1913). This species was erroneously reported from BC by Cannings and Scudder (2007); it is restricted to southern TX (Ferguson 2008).

E169  *Macaria regulata* (Fabricius, 1775). Erroneous record by ESBC (1906) under the name “*Philobia enotata* Guenée”, a synonym of this Palaearctic species. The record probably refers to *M. notata* (Linnaeus), which is similar in appearance.

E170  *Macaria bicolorata* (Fabricius, 1798). Records from BC by historical workers, beginning with ESBC (1906), are erroneous; this species occurs only in the eastern USA. These records refer to *M. masquerata* Ferguson, although Ferguson (2008) did not report that species from BC.

E171  *Macaria minorata* Packard, 1873. Reported by ESBC (1906) and Forbes (1948) under a previous taxonomic arrangement. Their records refer to *M. sexmaculata* Packard. *Macaria minorata* is not known to occur west of ON and MN.

E172  *Macaria granitata* Guenée, [1858]. Historical reports of this species from BC, beginning with Dyar (1904), are erroneous; this species is restricted to eastern North America (Ferguson 2008).

E173  *Digrammia continuata* (Walker, 1862). Historical reports of this species from BC (Dyar 1904; Ross and Evans 1958) refer to *D. setonana* (McDunnough) (Ferguson 2008). However, *D. setonana* is doubtfully distinct from *D. continuata* (Ferguson 2008; B. C. Schmidt, personal communication). If future research proves that to be the case, then *D. setonana* would become a synonym of *D. continuata*, the older name.
Digrammia atrofasciata (Packard, 1876). The report from Osoyoos, BC, by ESBC (1906) is considered to be erroneous, as the species is known only from the southwestern USA. The record likely refers to D. setonana (McDunnough), which was not described until 1927.

Digrammia ordinata (Walker, 1862). The record by deWaard (2010) and deWaard et al. (2011) is a misidentification; this species is not known to occur west of MB and ND (Ferguson 2008). These specimens likely are D. sexpunctata (Bates).

Digrammia hebetata (Hulst, 1881). Erroneous record under a previous taxonomic arrangement. British Columbia material is D. rippertaria (Duponchel). Digrammia hebetata is restricted to the southwestern USA, occurring only as far north as CO and UT (Ferguson 2008).

Orthofidonia exornata (Walker, 1862). Report of this species from BC by Cannings and Scudder (2007) and others is incorrect. Recent genetic barcode work indicates that all western Canadian Orthofidonia are O. tinctoria (Walker) (B. C. Schmidt personal communication).

Ematurga amitaria (Guenée, [1858]). This species was reported from “AK to NS” by Powell and Opler (2009), erroneously implying that it occurs in BC. It does not occur as far west as BC or AK (Ferris et al. 2012).

Hypomecis umbrosaria (Hübner, [1813]). Reported from BC by Dyar (1904). The record is assumed to be erroneous, as there are no vouchers or other BC or Canadian records. His record most likely refers to Protoboarmia porcelaria (Guenée).

Stenoporpia dissonaria (Hulst, 1896). Report of this species in BC by Llewellyn Jones (1951) is considered to be erroneous: it is otherwise not known north of CO and UT (Rindge 1968).

Iridopsis vellivolata (Hulst, 1881). The BC record by Llewellyn Jones (1951) is considered erroneous. This species is otherwise known from eastern North America only as far west as central SK (Rindge 1966; McGuffin 1977).

Iridopsis humaria (Guenée, [1858]). Reported from BC by Dyar (1904) as “Selidosema humarium emasculatum Dyar” under a previous taxonomic arrangement. British Columbia specimens are I. emasculatum, which is now recognised as a full species.

Eufidonia notataria (Walker, 1860). Reports of this species from BC by various authors (initially by Blackmore 1923) are considered to
be erroneous; it is otherwise known from eastern Canada only as far west as MB (McGuffin 1977).

E184 Erannis defoliaria (Clerck, 1759). Reported from BC by ESBC (1906) under a previous taxonomic arrangement as “E. defoliaria Clerck variety vancouverensis Hulst”. Erannis vancouverensis is now recognized as a distinct species; E. defoliaria is strictly Palaearctic.

E185 Drepanulatrix bifilata (Hulst, 1880). Report of this species in BC by various early authors, beginning with ESBC (1906), under the name “Deilinia perpallidaria Grote”, a synonym, is considered erroneous. This species occurs in the southwestern USA only as far north as northern CA (Rindge 1949).

E186 Euchlaena effecta (Walker, 1860). The BC record by Blackmore (1927) and Llewellyn Jones (1951) is based on a misidentification (McGuffin 1981).

E187 Euchlaena amoenaria (Guenée, [1858]). Report of this species from BC by early workers (as E. astylusaria (Walker), now a subspecies) is erroneous, due to a previous taxonomic arrangement. The record refers to E. madusaria (Walker), which at that time was considered a synonym of E. astylusaria (McDunnough 1938).

E188 Euchlaena pectinaria ([Denis & Schiffermüller], 1775). Dyar’s (1904) report of this species from Kaslo refer to E. tigrinaria (Guenée), subspecies sirenaria (Strecker). Dyar considered sirenaria to be a synonym of E. pectinaria.

E189 Pero ancetaria (Hübner, 1806). Erroneous record by ESBC (1906) and Taylor (1908b) under a previous taxonomic arrangement. This name was mistakenly applied to P. honestaria (Walker) (Poole 1987). True P. ancetaria is not known to occur in Canada.

E190 Pero giganteus Grossbeck, 1910. Records of this species in BC by Blackmore (1927) and Llewellyn Jones (1951) refer to P. mizon Rindge (Rindge 1955).

E191 Ennomos subsignaria (Hübner, [1823]). No vouchers are known of this species in BC; Llewellyn Jones’ (1951) record is assumed to be erroneous. Ennomos subsignaria is not known west of eastern AB.

E192 Thallophaga nigroseriata (Packard, 1874). Report from BC by ESBC (1906) is considered erroneous; the record probably refers to T. hyperborea (Hulst).

E193 Nepytia semiclusaria (Walker, [1863]). Report of this species by Blackmore (1927) and Llewellyn Jones (1951) is assumed to be erroneous: it is otherwise unknown from Canada.
Nepytia pellucidaria (Packard, 1873). Report of this species by Blackmore (1927), as a subspecies of *N. semiclusaria* (Walker), is assumed to be erroneous: it is not otherwise known from Canada.

Notodontidae

*Pheosia dimidiata* Herrich-Schäffer, 1856. This is a Palaearctic name used by ESBC (1906) following an old taxonomic concept. North American material has since been recognised as *P. rimosa* Packard.

*Nadata oregonensis* Butler, 1881. Erroneous BC record by Blackmore (1927); a purported voucher specimen in the UBC collection is *N. gibbosa* (Smith). *Nadata oregonensis* is not known from Canada.

*Oligocentria perangulata* (Edwards, 1882). Historical reports of this species in BC are assumed to be erroneous, as no BC voucher specimens are known, it has not been reported since Blackmore (1924), and the species is otherwise unknown in Canada.

Erebidae – Lymantriinae

*Orgyia leucostigma* (Smith, 1797). The BC record by Forbes (1948) is considered to be erroneous: this species is known from eastern Canada only as far west as MB.

*Euproctis chrysorrhoea* (Linnaeus, 1758). The record of this species in BC by Smith (1994) is erroneous and refers to *E. similis* (Feussly). Historically, there was confusion as to the application of the name *E. chrysorrhoea* to either the Browntail Moth or the Goldtail Moth. This was clarified by Ferguson (1978), but misapplication of the name continued. The Browntail Moth, *E. chrysorrhoea*, was introduced to eastern North America in 1897, but it did not spread beyond New England and the Canadian Maritime provinces.

*Euproctis similis* (Feussly, 1775). A single specimen of this European species, known as the Goldtail Moth, was collected in 1948 at Wellington, BC, and more recently several specimens were collected at Delta, BC. These are treated herein as unestablished interceptions, and the species is hereby excluded from the resident BC fauna.

Erebidae – Arctiinae

*Crambidia impura* Barnes & McDunnough, 1913. Reports of this species from western Canada are based on misidentified *C. casta* (Packard). True *C. impura* is restricted to the southwestern USA (B. C. Schmidt, personal communication).
Grammia figurata (Drury, 1773). Earlier reports of G. figurata (as G. celia (Saunders), a synonym) refer to the recently described G. margo Schmidt. The taxon celia is now considered to be a synonym of G. figurata (Drury), an eastern species that does not occur in BC.

Grammia blakei (Grote, 1865). Blackmore (1927) reported this species from BC under a different taxonomic arrangement, as “Apantesis blakei superba Stretch” and “Apantesis blakei elongata Stretch”. The taxon superba is now regarded as a subspecies of G. nevadensis (Grote & Robinson), and G. elongata is recognised as a full species. Grammia blakei does not occur in BC.

Virbia fragilis (Strecker, 1878). Records of V. fragilis from BC refer to V. ferruginosa (Walker). True V. fragilis does not occur north of WY (B. C. Schmidt, personal communication).

Virbia lamae (Freeman, 1941). The report of this species from BC by Shepard (unpublished report B) is considered to be erroneous. It probably refers to an undescribed Virbia species near aurantiaca (Hübner), which is provisionally placed under the name V. aurantiaca in the BC list.

Virbia immaculata (Reakirt, 1864). Report of this species in BC by Blackmore (1927) and Llewellyn Jones (1951) is assumed to be erroneous and probably refers to V. ferruginosa (Walker). Virbia immaculata is not known from western Canada. This record may be based on non-BC material in the RBCM.

Gnophaela latipennis (Boisduval, 1852). British Columbia records by Dyar (1904) and other early workers refer to G. vermiculata (Grote), which was then considered a subspecies of G. latipennis.

Cisseps packardii (Grote, 1865). The records by Dyar (1904) and other early workers refer to C. fulvicollis (Hübner); C. packardii is not known to occur in Canada.

Erebidae – Hypeninae

Hypena modestoides Poole, 1989. Specimens that have been identified as H. modestoides in Canada and the Pacific Northwest are actually a plain form of H. decorata Smith. True H. modestoides is a small gray species confined to southwestern CA.

Hypena scabra (Fabricius, 1798). This species was reported from BC by ESBC (1906), but no BC vouchers are known. It is otherwise unknown west of central AB, and the record is considered erroneous. However, there is a slight chance it could occur in BC’s Peace River region.
Erebidae – Erebiniae

E211 Catocala clintonii Grote, 1864. Reported from BC by ESBC (1906), but no BC vouchers are known so the record is deemed erroneous. The species is otherwise known from eastern North America only as far west as MB.

E212 Bulia mexicana (Behr, 1870). Reported in error by ESBC (1906) and Blackmore (1927) under a previous taxonomic arrangement. These records refer to B. deducta (Morrison). Bulia mexicana does not occur north of Mexico.

E213 Drasteria mirifica (Edwards, 1878). Erroneous record by Llewellyn Jones (1951) under a previous taxonomic arrangement. His record refers to D. hastingsii (Edwards), then considered a subspecies of D. mirifica, but now elevated to full species status. Drasteria mirifica does not occur in BC.

E214 Drasteria graphica Hübner, 1818. Erroneously reported in Llewellyn Jones (1951). This is strictly an eastern species (Lafontaine and Troubridge 2011).

E215 Zale calycanthata (Smith, 1797). This species was reported from BC by early workers, but Blackmore (1923) noted that these reports referred to Z. norda (Smith) (now Z. minerea norda). Zale calycanthata is strictly an eastern species (Lafontaine and Troubridge 2011).

Nolidae

E216 Nycteola revayana (Scopoli, 1772). Historical records of this Palaearctic species in North America refer to N. cinereana Neumögen & Dyar.

Noctuidae – Plusiinae

E217 Syngrapha u-aureum (Guenée, 1852). Reports of this species from BC by Dyar (1904) and ESBC (1906) refer to S. interrogatiosis (Linnaeus). True S. u-aureum is not known to occur west of Churchill, MB (Lafontaine and Poole 1991).

E218 Syngrapha hochenwarthi (Hochenwarth, 1785). Reports of this Palaearctic species by early workers up to Crumb (1956) refer to S. ignea (Grote).

Noctuidae – Pantheinae

E219 Colocasia flavicornis (Smith, 1884). This species was reported from BC by Blackmore (1927) and Llewellyn Jones (1951), but
those records are assumed to be erroneous. No voucher material is known west of SK (Lafontaine and Troubridge 2011).

**E220** *Charadra deridens* (Guenée, 1852). Report of this species “from NS to BC (not yet recorded from AB)” by Schmidt and Anweiler (2010) is incorrect; the species occurs in eastern Canada only as far west as southeastern SK (G. G. Anweiler, personal communication 2012). Other reports from BC (Cannings and Scudder 2007; Powell and Opler 2009) are also incorrect.

**Noctuidae – Acroictinae**

**E221** *Acronicta leporina* (Linnaeus, 1758). This Palaearctic species has been reported by many authors following a previous taxonomic arrangement. North American populations are *A. vulpina* (Grote).

**E222** *Acronicta interrupta* (Guenée, 1852). Reported in error by Llewellyn Jones (1951). This species does not occur west of CO and UT (Lafontaine and Troubridge 2011).

**E223** *Acronicta ovata* (Grote, 1873). Reported in error by Blackmore (1927) and Llewellyn Jones (1951). This is strictly an eastern species (Lafontaine and Troubridge 2011).

**Noctuidae – Cuculliinae**

**E224** *Cucullia serraticornis* Lintner, 1874. This species was erroneously reported from BC by Blackmore (1927) under the name *C. solidaginis* Strecker, a synonym. The error is likely based on a misidentification of *C. strigata* (Smith). *Cucullia serraticornis* occurs only in CA and AZ (Poole 1995).

**Noctuidae – Oncocnemidinae**

**E225** *Sympistis saundersiana* (Grote, 1876). The record by Forbes (1954) of this species from BC is assumed to be erroneous, as no BC vouchers are known and it is otherwise unknown west of east-central AB.

**E226** *Sympistis viriditincta* (Smith, 1894). The ESBC (1906) and Forbes (1954) records of this species from BC are assumed to be erroneous, as no BC vouchers are known and it is otherwise unknown west of east-central AB.

**E227** *Sympistis infixa* (Walker, 1856). All historical BC records of this species refer to *S. dinalda* (Smith).

**E228** *Sympistis simplex* (Smith, 1888). Report of this species in BC by Lafontaine and Troubridge (2011) is considered to be erroneous.
It was not reported by CBIF (2003), and is otherwise unknown in Canada.

**E229** *Sympistis chandleri* (Grote, 1873). Erroneous record by earlier workers based on a previous taxonomic arrangement. These BC records refer to *S. poliochroa* (Hampson), at that time considered to be a synonym of *S. chandleri*.

**E230** *Sympistis hayesi* (Grote, 1873). Western Canadian material previously identified as *S. hayesi* are *S. sandaraca* (Buckett & Bauer), not described until 1967.

**E231** *Sympistis major* (Grote, 1881). Historical reports of this species in BC refer to *S. amun* Troubridge and *S. chons* Troubridge. True *S. major* is restricted to the southwestern USA (Troubridge 2008). Crabo et al. (2015) consider *S. chons* and *S. amun* to be synonyms of *S. major*.

**E232** *Sympistis homogena* (Grote, 1877). Reports of this species in BC by Blackmore (1927) and others refer to *S. cherti* Troubridge (Troubridge 2008).

**E233** *Sympistis piffardi* (Walker, 1862). Historical records of this species from BC refer to *S. chalybdis* (Troubridge & Crabo). *Sympistis piffardi* occurs only east of the Rocky Mtns. (G. G. Anweiler, personal communication).

**E234** *Sympistis chorda* (Grote, 1880). The BC record of this species by Llewellyn Jones (1951) refers to *S. extremis* (Smith), then considered to be a subspecies of *S. chorda*.

**E235** *Sympistis definita* (Barnes & McDunnough, 1912). Reported in error from BC by Powell and Opler (2009) prior to their knowledge of work by Troubridge (2008) describing many new species in the group. This record probably refers to *S. dunbari* (Harvey), a similar species (L. G. Crabo, personal communication).

**E236** *Sympistis lapponica* (Thunberg, 1791). Historical reports of this species in BC, beginning with Dyar (1904), are erroneous and probably refer to *S. wilsoni* Barnes & Benjamin, which was described in 1924.

**Noctuidae – Condicinae**

**E237** *Ogdoconta cinereola* (Guenée, 1852). Reports of this species in BC by Llewellyn Jones (1951) and Cannings and Scudder (2007) are based on Bush-Wilson material in the CNC that is presumed to be eastern material that was mislabelled as “Vancouver”. This species is not known to occur in western North America (L. G. Crabo, personal communication).
Noctuidae - Heliothinae

E238 *Pyrrhia umbra* Hufnagel, 1766. Reported in error in Llewellyn Jones (1951) and other historical lists as well as in Crumb (1956). *Pyrrhia umbra* is strictly Palaearctic; records of it in North America generally refer to *P. cilisca* (Guenée), but that species does not occur west of MB. These western records are a further misidentification applicable to *P. exprimens* (Walker).

E239 *Protoschinia scutosa* ([Denis & Schiffermüller], 1775). Reports of this Palaearctic species by early workers, up to and including Llewellyn Jones (1951), refer to *P. nuchalis* (Grote).

E240 *Schinia perminuta* (Edwards, 1881). No BC vouchers are known of this species, and the BC record originating with Blackmore (1923) is presumed to be erroneous. It is likely a misidentification of *S. villosa* (Grote) (Lafontaine and Troubridge 2011) or of *S. intermontana* Hardwick (L. G. Crabo, personal communication).

E241 *Melaporphyria immortua* Grote, 1874. This species was reported specifically from BC by Forbes (1954), but despite an exhaustive search for Canadian material to include in a report commissioned by COSEWIC on this enigmatic species, no specimens were found west of Edmonton, AB (Schmidt and Anweiler unpublished report). Forbes’ report is therefore deemed erroneous. It may have originated with two specimens from MB at the RBCM.

Noctuidae – Noctuinae – Elaphriini

E242 *Elaphria georgei* (Moore & Rawson, 1939). Misidentification reported in Llewellyn Jones (1951). This is strictly an eastern species (Lafontaine and Troubridge 2011).

E243 *Elaphria festivoides* (Guenée, 1852). Historical reports of this species in BC going back to Dyar (1904) refer to *E. allapallida* Pogue & Sullivan, which was not described at that time.

E244 *Elaphria grata* Hübner, 1818. Reported in error by Llewellyn Jones (1951) and others, based on a misidentification. This is strictly an eastern species (Lafontaine and Troubridge 2011).

Noctuidae – Noctuinae – Caradrinini

E245 *Caradrina multiöera* Walker, [1857]. Historical reports of this species from BC are based on dark specimens of *C. montana* Bremer. True *C. multiöera* does not occur west of MB (L. G. Crabo, personal communication).
Noctuidae – Noctuinae – Phlogophorini

E246  Euplexia lucipara (Linnaeus, 1758). Historical reports of this Palaearctic species in North America refer to E. benesimilis McDunnough.

Noctuidae – Noctuinae – Apameini

E247  Apamea apamiformis (Guenée, 1852). Erroneous record by ESBC (1906); this species occurs in eastern North America only as far west as MB. The BC record probably refer to A. vultuosa (Grote), which is similar in appearance.

E248  Apamea remissa (Hübner, [1809]). This species is now considered to reside only in Beringia. All North American material outside of Beringia that has previously been referred to under this name, e.g., by Cannings and Scudder 2007, is now treated under the name A. indocilis (Walker).

E249  Apamea lignicolora (Guenée, 1852). Historical reports of this species in BC refer to A. atriclava (Barnes & McDunnough), which was once thought to be a subspecies of A. lignicolora; true A. lignicolora is not known to occur west of AB (Mikkola et al. 2009).

E250  Apamea auranticolor (Grote, 1873). Canadian material historically referred to as A. auranticolor (often under the synonym barnesii (Smith)) is now treated under the name A. sora (Smith).

E251  Apamea genialis (Grote, 1874). The record by ESBC (1906) is assumed to be erroneous, as this species is restricted to CA. British Columbia records probably refer to A. commoda (Walker), which can look very similar (Mikkola et al. 2009) and was not reported by ESBC (1906).

E252  Apamea albina (Grote, 1874). The record by ESBC (1906) is assumed to be erroneous, as this species is restricted to CA and southern OR. The record probably refers to A. amputatrix (Fitch), which can look very similar (Mikkola et al. 2009) and was not reported by ESBC (1906).

E253  Apamea relicina (Morrison, 1875). Records by Dyar (1904) and ESBC (1906) are considered to be erroneous; no BC vouchers are known, and this species is otherwise unknown in northwestern North America.

E254  Apamea lateritia (Hufnagel, 1766). Reports of this Palaearctic species in North America refer to A. scoparia Mikkola, Mustelin & Lafontaine, described in 2000.
Apamea dubitans (Walker, 1856). Reports by Llewellyn Jones (1951), Crumb (1956) and others refer to A. cogitata (Smith), then considered to be a subspecies of A. dubitans but now treated as a full species. True A. dubitans does not occur in western North America.

Apamea maillardi (Geyer, [1834]). Historical reports of this Palaearctic species in North America refer to A. zeta (Treitschke).

Loscopia velata (Walker, 1865). Forbes’ (1954) report from BC based on “a single specimen seen from Vancouver; determination uncertain” is deemed erroneous, due to mislabelling. The specimen (in the CNC) was once part of the Bush-Wilson collection that is known to contain mislabelled material. This species is otherwise restricted to eastern NA only as far west as MB (Mikkola et al. 2009).

Eremobina leucoscelis (Grote, 1874). This species was reported “from the west coast” by Forbes (1954) as “race hanhami Barnes & Benjamin” under a previous taxonomic arrangement. The taxon hanhami (described from Duncan, BC) is now a synonym of E. claudens (Walker).

“Oligia” modica (Guenée, 1852). Report of this species in BC by Cannings and Scudder (2007) is considered erroneous. It is not known to occur west of Saskatoon SK (Pohl et al. 2010; B. C. Schmidt, personal communication).

“Oligia” egens (Walker, [1857]). The report of this species from BC by ESBC (1906) (as “Hadena transfrons Neumögen”, a synonym) is deemed erroneous. It is a Great Plains species that does not occur near BC.

Macronoctua onusta Grote, 1874. This species was reported from BC by Cannings and Scudder (2007) based on a single specimen that was brought in with eastern plant material (L. G. Crabo, personal communication). It has never become established in BC and it is hereby excluded from the BC fauna.

Amphipoea ocula Linnaeus, 1761. This species was reported from BC (as A. nictitans (Linnaeus), a synonym) by Blackmore (1927) and Jones (1951) under a previous taxonomic arrangement. The North American species is now known as A. americana (Speyer). It was considered to be a subspecies of A. nictitans prior to Forbes (1954). Amphipoea ocula is strictly Palaearctic.

Amphipoea pacifica (Speyer, 1875). This species was reported from BC by Cannings and Scudder (2007), based on misidentified material. All BC Amphipoea has been redetermined as A. americana
(Speyer), except for the sole specimen of *A. interoceanica* (Smith) (L. G. Crabo and B. C. Schmidt, personal communications). See note under the latter species in the main list.

E264 *Hydraeca micacea* (Esper, 1789). This introduced species was reported in error from BC by Smith (1994). It is not known to occur west of ON (Belton 1988).

**Noctuidae – Noctuinae – Arzamini**

E265 *Bellura gortynoides* Walker, 1865. Reported by ESBC (1906) from BC, but Llewellyn Jones (1951) considered it a doubtful record. It probably refers to *B. obliqua* (Walker).

**Noctuidae – Noctuinae – Xylenini**

E266 *Lithomoia solidaginis* (Hübner, [1803]). Historical reports of this species in North America refer to *L. germana* (Morrison).

E267 *Lithophane patefacta* (Walker, 1858). This eastern species was reported on several previous BC checklists, but no authentic BC material is known (L. G. Crabo, personal communication). These erroneous reports likely refer to the very similar *L. innominata* (Smith) (B. C. Schmidt, personal communication).

E268 *Lithophane lamda* (Fabricius, 1787). Reports of this species in North America refer to *L. fagina* Morrison and *L. thaxteri* Grote; *L. lamda* is strictly Palaearctic.


E270 *Lithophane antennata* (Walker, 1858). This pest of apple trees was reported from BC by Belton (1988), who described an infestation in apple orchards at Kamloops in the 1940s. However, no BC vouchers are known, and this species is otherwise unknown in Canada west of MB. That report is assumed to be a misidentification referable to *L. georgii* Grote.

E271 *Lithophane torrida* (Smith, 1899). Reported from BC by Llewellyn Jones (1951) and other early workers. The BC material has been redetermined as *L. pertorrida* (McDunnough) (Lafontaine and Troubridge 2011).

E272 *Eupsilia sidus* (Guenée, 1852). Report of this species by Prentice (1962) from the BC Interior, and repeated by Belton 1988, is considered erroneous. This species is not known to occur west of ON.
Epiglea apiata (Grote, 1874). Report of this species in BC by Forbes (1954) was based on a misidentified specimen of Mesogona olivata (Harvey) (L. G. Crabo, personal communication).

Agrochola lota (Clerck, 1759). Reported from BC by Llewellyn Jones (1951) and Crumb (1956) under a previous taxonomic arrangement, as “Nephelodes emmedonia pectinata Smith”. Although emmedonia Cramer is now a synonym of A. helvola (Linnaeus), which does not occur in the Nearctic, that name has generally been applied to Agrochola lota Clerck in North America. However, BC material is currently treated under the name Nephelodes minians Guenée (Noctuinae: Tholerini), of which pectinatus is a subspecies.

Agrochola helvola (Linnaeus, 1758). This species was indirectly reported from BC if one logically follows the synonym trail. Llewellyn Jones (1951) and Crumb (1956) erroneously reported Nephelodes emmedonia pectinata (Smith) from BC; pectinatus is now a subspecies of Nephelodes minians Guenée. However, emmedonia Cramer is now a synonym of A. helvola, which does not occur in North America.

Xanthia togata (Esper, 1788). This Palaearctic name was widely used in North America under a previous taxonomic arrangement. North American material was recently described as a distinct species, X. tatago Lafontaine & Mikkola.

Aseptis perfumosa (Hampson, 1918). Reports by Llewellyn Jones (1951) and Crumb (1956) are based on a misidentification. This species is known only from CA (Lafontaine and Troubridge 2011).

Brachylomia curvifascia (Smith, 1891). Reported from BC by Llewellyn Jones (1951) and others based on an earlier taxonomic concept of the species. British Columbia records refer to other Brachylomia species.

Brachylomia rectifascia (Smith, 1891). Reported from BC by Llewellyn Jones (1951) and others based on an earlier taxonomic concept. Western Canadian specimens are B. cascadia Troubridge & Lafontaine. True B. rectifascia does not occur north of central CA (Troubridge and Lafontaine 2007). Crabo et al. (2015) continue to use the name B. rectifascia for BC populations, considering B. cascadia to be a subspecies.

Hyppa xylinoides (Guenée, 1852). Records by Llewellyn Jones (1951) and other early workers refer to H. contrasta McDunnough.
Cosmia epipaschia (Grote, 1883). Reports from BC by Blackmore (1927) and Crumb (1956) are erroneous; known BC voucher specimens are C. praeacuta (Smith).

Enargia paleacea (Esper, 1788). The report of this Palaearctic species by ESBC (1906) refers to E. decolor (Walker).

Xylotype capax (Grote, 1868). Reported in error by Dyar (1904) and other early workers under a different taxonomic concept. The BC records refer to X. arcadia Barnes & Benjamin.

Ufies plicatus Grote, 1873. Historical reports of this species in BC refer to U. hulstii Smith, recently recognised as distinct (Lafontaine and Schmidt 2011).

Noctuidae – Noctuinae – Orthosiini

Perigonica pectinata (Smith, 1888). Reports of this species from BC by ESBC (1906) and Blackmore (1927), and from the Peace River region of northeastern BC by Shepard (unpublished report B), are considered erroneous. No verified BC vouchers are known and the species is otherwise unknown in Canada.

Noctuidae – Noctuinae – Hadenini

Anarta melanopa (Thunberg, 1791). This Palaearctic name was used for many years in North America following a previous taxonomic concept. As currently defined, A. nigrolunata Packard is the Nearctic species.

Scotogramma densa Smith, 1893. Historical reports of this species from BC by Dyar (1904) and other early workers are deemed incorrect as no vouchers are known.

Scotogramma ptilodonta (Grote, 1883). This species was reported by Llewellyn Jones (1951) as subspecies nevada Barnes & McDunnough, but Lafontaine and Troubridge (2011) considered that a misidentification. Scotogramma ptilodonta is a Great Basin and southern Rockies species.

Coranarta cordigera (Thunberg, 1792). The report of this Palaearctic species by Llewellyn Jones (1951) refers to C. luteola (Grote & Robinson).

Trichordestra legitima (Grote, 1864). The record by Llewellyn Jones (1951) from Vernon is considered to be erroneous. Crumb (1956) repeated the Llewellyn Jones (1951) record, but listed it as uncertain. No voucher specimens of this species are known in BC, and it is widely believed to occur only in eastern Canada. However,
a specimen has recently been collected from the boreal forest of northeastern AB (Pohl et al. 2010), so it may yet be found in BC, perhaps in the Peace River region.

E291 *Dargida albilinea* (Hübner, [1821]). The report of this Palaearctic species by Llewellyn Jones (1951) refers to *D. diffusa* (Walker).

**Noctuidae – Noctuinae – Eriopygini**

E292 *Lasionycta conjugata* (Smith, 1899). This species was reported in error by Cannings and Scudder (2007), based on a previous taxonomic concept. Crabo and Lafontaine (2009) described northern populations as *L. fergusoni* Crabo & Lafontaine. *Lasionycta conjugata* is restricted to the southern Rocky Mountains, only as far north as WY.

E293 *Lasionycta phoca* (Möschler, 1864). This is a historical misidentification going back to Blackmore (1924). *Lasionycta phoca* is strictly an eastern species (Lafontaine and Troubridge 2011).

E294 *Lasionycta discolor* (Smith, 1899). Records of this species in western Canada refer to *L. uniformis* (Smith) (Crabo and Lafontaine 2009).

E295 *Lacinipolia buscki* (Barnes & Benjamin, 1927). The uncertain record by deWaard (2010) is deemed erroneous, this species is otherwise restricted to southwestern USA.

E296 *Homorthodes mania* (Strecker, 1899). Report by Blackmore (1927) and Llewellyn Jones (1951) is considered to be a misidentification. This species is otherwise known only from the southwestern USA (Lafontaine and Troubridge 2011).

E297 *Orthodes cynica* Guenée, 1852. Report of this species in BC by Blackmore (1922a) is assumed to be erroneous. No BC vouchers are known, and it is otherwise unknown west of central SK.

E298 “Hexorthodes” *senatoria* (Smith, 1900). Report of this species in BC by Dyar (1904) and other early workers is erroneous. It occurs only in the southwestern USA (Lafontaine and Troubridge 2011).

E299 “Hexorthodes” *nipana* (Smith, 1910). Misidentification by Llewellyn Jones (1951), under the name “*Polia montara* Smith”, a synonym; this species is otherwise known only from the southern USA (Lafontaine and Troubridge 2011).

**Noctuidae – Noctuinae – Noctuini**

E300 *Actebia squalida* (Guenée, 1852). This Palaearctic species was reported in error from BC by Lafontaine and Troubridge (2011). The BC record refers to *A. balanitis* (Grote).
**E301** *Euxoa lidia* (Cramer, 1782). This Palaearctic species has been reported for many years in North America under a previous taxonomic concept. North American material has recently been recognised as distinct, *E. adumbrata* (Eversmann).

**E302** *Euxoa dissona* (Möschler, 1860). The report from Field, BC, by Llewellyn Jones (1951) is assumed to be a misidentification, as no vouchers are known. This is a subarctic species known only as far west as Churchill, MB.

**E303** *Euxoa trifasciata* (Smith, 1888). Reported by Dyar (1904) and ESBC (1906), but not by subsequent workers. No BC vouchers are known; this is assumed to be a misidentification. However, the species is known from south-central WA and could occur in BC.

**E304** *Euxoa fuscigerus* (Grote, 1874). This species was reported from BC by Blackmore (1923, 1927) and Llewellyn Jones (1951) as *Euxoa feniseca* (Harvey), a synonym. No vouchers are known, and it is otherwise unknown north of CA, so the record is assumed to be a misidentification.

**E305** *Euxoa stigmatalis* (Smith, 1900). Reported from BC by Blackmore (1927) and Llewellyn Jones (1951), as *E. stigmatalis* and *E. stigmatalis atrofuscata* (Smith). *Euxoa atrofuscata* is now considered a full species, which occurs in BC. The record of *E. stigmatalis* is deemed erroneous. No BC vouchers of true *E. stigmatalis* are known, and it is otherwise not known to occur as far north as Canada. It is either *E. atrofuscata* or, possibly, *E. punctigera* (Walker).

**E306** *Euxoa velleripennis* (Grote, 1874). This species was reported from BC by ESBC (1906), but not by subsequent workers. The BC record is considered erroneous, as the species is known from eastern Canada only as far west as MB (Lafontaine 1987).

**E307** *Euxoa redimicula* (Morrison, 1874). Erroneous record by Dyar (1904) and other early workers up to Llewellyn Jones (1951); their records refer to *E. auripennis* Lafontaine, which had not been described at that time.

**E308** *Euxoa teleboa* (Smith, 1890). This species was reported in error by Lafontaine (1998); it is restricted to the Great Plains (Lafontaine 1987). A specimen from BC in the CNC is assumed to be mislabelled or an unestablished introduction.

**E309** *Euxoa latro* (Barnes & Benjamin, 1927). The BC record by Lafontaine and Troubridge (2011) was based on a misidentification.

**E310** *Feltia subgothica* (Haworth, 1809). Historical reports of this species from BC are erroneous, based on a previous taxonomic concept.
British Columbia material is *F. jaculifera* (Guenée), which was considered a synonym of *F. subgothica* at the time.

**E311** *Agrotis buchholzi* (Barnes & Benjamin, 1929). The uncertain BC record by deWaard (2010) is deemed erroneous, this species occurs only in eastern USA (Lafontaine 2004).

**E312** *Ochropleura plecta* (Linnaeus, 1761). This Palaearctic species has historically been reported in North America under a previous taxonomic concept. North American material has been described recently as a distinct species, *O. implecta* Lafontaine.

**E313** *Cerastis cornuta* (Grote, 1874). This species has been reported in error by historical workers going back to ESBC (1906). British Columbia records refer to the recently described *C. enigmatica* Lafontaine & Crabo.

**E314** *Spaelotis unicava* Lafontaine, 1998. The BC record by deWaard (2010) is a misidentification; this species is restricted to the southwestern USA, only as far north as southern OR (Lafontaine 1998).

**E315** *Spaelotis havilae* Grote, 1881. This Palaearctic species was reported from North America prior to the description of Nearctic material as a distinct species, *S. bicava* Lafontaine.

**E316** *Xestia baja* ([Denis & Schiffermüller], 1775). Historical records of this Palaearctic species in North America, e.g. by Forbes (1954), refer to *X. smithii* (Snellen) which was once considered to be a race of *X. baja*. True *X. baja* does not occur in North America.

**E317** *Xestia elimata* (Guenée, 1852). Erroneous record by Blackmore (1927) and Llewellyn Jones (1951). Those records refer to *X. praevia* Lafontaine, which had not been described at that time.

**E318** *Xestia laetabilis* (Zetterstedt, 1839). This Palaearctic species was reported from North America prior to the description of Nearctic material as a distinct species, *X. lupa* Lafontaine & Mikkola.

**E319** *Pseudohermonassa bicarnea* (Guenée, 1852). The report from BC by Forbes (1954) is deemed erroneous. This species is strictly eastern, occurring only as far west as SK.

**E320** *Setagrotis vocalis* (Grote, 1879). Reported from BC by various historical workers, often under the name *S. cinereicollis* (Grote), a synonym. These records refer to *S. pallidicollis* (Grote), of which *cinereicollis* was once considered a synonym. *Setagrotis vocalis* has recently been recognised as a distinct species by Lafontaine (1998); it is known from the Great Basin as far north as southern MT and is replaced by *S. pallidicollis* to the northwest.
Abagrotis anchocelioides (Guenée, 1852). Historical reports of this species from BC going back to Dyar (1904) are assumed to be erroneous; no BC vouchers are known, and the species is otherwise not known to occur West of MB (Lafontaine 1998).

Pronoctua pyrophiloides (Harvey, 1876). Reports of this species from BC by various historical workers refer to P. peabodyae (Dyar). Northern specimens of the latter were historically considered to be P. pyrophiloides until Lafontaine (1998) clarified the matter. True P. pyrophiloides is restricted to CA and southern OR.
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Appendix

Unpublished Sources Cited in the Publication


All entries are listed by species numbers, not page numbers. All higher taxa, genera, species and common names listed in the BC checklist, and in the excluded species list, are included below. Species-level names (including subspecies and synonyms) are followed by the author, and then by the current genus placement in square brackets. Whole numbers and decimal numbers indicate the species number in the BC checklist; numbers preceded by an “E” indicate excluded species list numbers. Higher taxa and genus entries refer to the first mention of the taxon in the BC checklist and in the excluded list. Species numbers in regular font refer to primary entries for that name; entries in italics indicate where that taxon is mentioned within the note on another species. Insect species mentioned only in the introductory sections, and all plant species mentioned throughout the text, are not included in the index.

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Moths and butterflies (Lepidoptera) are one of the most diverse and economically important groups of insects, with approximately 157,000 species worldwide. This book establishes a definitive list of the species that occur in BC, and clarifies erroneous records in past works. It provides a knowledge baseline that will be useful to resource and conservation managers, biodiversity researchers, taxonomists, amateur collectors, and naturalists.