

THE  
BUTTERFLIES AND MOTHS

OF  
CANADA;

WITH  
DESCRIPTIONS OF THEIR COLOR, SIZE, AND  
HABITS, AND THE FOOD AND META-  
MORPHOSIS OF THEIR LARVÆ.

BY  
ALEXANDER MILTON ROSS,  
M.D., F.R.S.L., ENG.  
MEMBER OF THE ENTOMOLOGICAL SOCIETIES OF ENGLAND, RUSSIA, FRANCE,  
AND BELGIUM, ETC.

---

---

ILLUSTRATED.

---

---

TORONTO:  
ROWSELL AND HUTCHISON,  
1873.

Entered according to Act of Parliament of Canada, in the year one thousand eight hundred and seventy-three, by ALEXANDER MILTON ROSS, in the office of the Minister of Agriculture.

TORONTO:  
PRINTED BY ROWSELL AND HUTCHISON,  
KING STREET.

## PREFACE.



THE work, now before the reader, has been prepared with the object of directing the attention of the student of Natural History, and the youth of our country, to the attractive and deeply interesting study of Canadian Entomology.

The want of a work descriptive of our Butterflies and Moths, that would be accessible in consequence of its moderate price and untechnical style, has been keenly felt by students of Natural History.

My aim has been to familiarize the subject by plain and brief descriptions; I have consequently avoided all unnecessary technicalities and abstruse questions of identity, which would tend to perplex rather than instruct.

The insects described in this work are represented by specimens in my own collection, which has been made in Ontario, Quebec, and New Brunswick.

In the classification and selection of names for our Butterflies and Moths, I have encountered much annoyance, owing to the existing chaos of synonymy in Entomology; but have selected, both from old and new names, such as I considered most expressive of the characteristics of the insects described.

No one can be more sensible than myself of the deficiencies of this work; yet I hope it may contribute something toward the progress of a science which in itself is extremely interesting, and, to an agricultural country like Canada, of great importance.

A. M. R.

EVERGREEN GROVE,  
TORONTO, MAY, 1873.



## CONTENTS.

	PAGE.
INTRODUCTION.....	xi

### **Butterflies and Moths of Canada.**

GROUP I. — <i>Papilioncs.</i> —Butterflies.....	1
GROUP II. — <i>Sphingidæ.</i> —Hawk Moths ...	22
GROUP III.— <i>Phalæncæ.</i> —Moths.....	33

#### GROUP I.

<i>Papilionidæ.</i> —Papilio Family .....	1
<i>Pieridæ.</i> —Yellow or White Butterfly Family.	5
<i>Nymphalidæ.</i> —Nymphalis Family .....	6
<i>Satyridæ.</i> —Satyrus Family .....	18
<i>Hesperidæ.</i> —Skipper Family . . . . .	20
<i>Lycænidæ.</i> —Azure Butterfly Family .....	21

#### GROUP II.

<i>Sphingidæ.</i> —Hawk Moth Family .....	22
<i>Ægeridæ.</i> —Egerian Family.....	29
<i>Zygonidæ.</i> —Glaucopidian Family .....	32

#### GROUP III.

<i>Bombycidæ.</i> —Silk Worm Family .....	33
<i>Noctuelitæ.</i> —Owlet Moth Family .....	54
<i>Geometridæ.</i> —Geometrid Family.....	57

	PAGE.
<i>Pyralidæ</i> .—Delta Moth Family .....	61
<i>Tortricidæ</i> .—Leaf Rolling Family .....	63
<i>Tincidæ</i> .—Tinca Family .....	65

### GENERA.

#### GROUP I.—*Papilioncs*.—(Butterflies).

Papilio .....	1
Pieris .....	5
Colias .....	6
Limenitis .....	6
Danais .....	8
Argynnis .....	9
Melitæa .....	10
Pyrameis .....	12
Vanessa .....	13
Grapta .....	16
Junonia .....	17
Satyrus .....	18
Neonympha .....	19
Chrysophanes .....	19
Thecla .....	21

#### GROUP II.—*Sphinges*.—(Hawk Moths).

Sphinx .....	22
Thyreus .....	25
Philampelus .....	26
Smerinthus .....	27
Sesia .....	28
Ægeria .....	29
Eudryas .....	31

GROUP III.—*Phalænæ*.—(Moths.)

	PAGE.
Lithosia .....	33
Deiopeia.....	34
Calimorpha .....	34
Crocata .....	35
Arctia.....	35
Spilosoma .....	36
Leucarctia .....	37
Hyphantria .....	37
Halesidota .....	38
Orgyia .....	39
Notodontæ.....	40
Lagoa .....	40
Limacodes .....	40
Psyche .....	41
Perophoræ .....	41
Actias.....	43
Platysamia .....	45
Callosamia .....	45
Telea .....	47
Hyperchiria .....	49
Citheronia .....	50
Eacles.....	50
Anisota .....	52
Clisiocampa .....	52
Hepialus.....	53
Xyleutes.....	53
Catocala .....	54
Brephos .....	55

	PAGE.
Leucaniæ .....	55
Agrotis .....	55
Gortyna .....	56
Apatela .....	56
Anisopteryx .....	57
Hibernia.....	58
Ennomos .....	58
Angerona .....	59
Nematocampa .....	59
Chærodes .....	59
Endropia .....	59
Amphidasys .....	60
Acidalia .....	60
Boarmia .....	60
Eupithecia .....	60
Hypena .....	61
Aglossa .....	61
Pyralis .....	61
Galleriæ .....	62
Pempeliæ .....	62
Anchylopera .....	63
Carpocapsa .....	64
Lozotænia .....	64
Tineæ.....	65
Instructions for Catching and Preserving Butterflies and Moths .....	67
Synopsis of Butterflies and Moths of Canada.	71





## LIST OF ILLUSTRATIONS.

Eng'd by Scudding, Toronto.

	PAGE.
<i>Papilio turnus</i> .—Yellow Swallow-tail.....	2
“ <i>asterias</i> .—Black Swallow-tail.....	4
<i>Limenitis arthemis</i> .—Circled Emperor .....	7
<i>Danais archippus</i> .—Queen of Spain Butterfly	8
<i>Argynnis aphrodite</i> .—Silver-spotted Fritil- lary .....	9
<i>Militæa tharos</i> .—Drappled Militæa .....	11
<i>Pyrameis cardui</i> .—Painted Lady .....	12
<i>Pyrameis atalanta</i> .—Red Admiral.....	13
<i>Vanessa antiopæ</i> .—Camberwell Beauty.....	14
“ <i>Milbertii</i> .—Red Empress .....	15
<i>Grapta interrogationis</i> .—Semi-colon Butter- fly .....	16
<i>Hesperia Leonardis</i> .—Leonard's Skipper ....	20
<i>Sphinx quinquemaculatus</i> . — Five-spotted Sphinx .....	23
<i>Smerinthus excacata</i> .—Blind Smerinthus ...	27
<i>Scesia thysbe</i> .—Bee moth .....	28
<i>Thyreus Abbottii</i> .—Abbot's Hawk Moth ...	25
<i>Philampelis achemon</i> . — Achemon Hawk Moth .....	26
<i>Eudryas gratæ</i> .—Beautiful Wood Nymph...	31
<i>Ægeria cxitosa</i> .—Peach-tree Borer.....	29

<i>Deiopeia bella</i> .—Beautiful Deiopeia .....	34
<i>Actias luna</i> .—Empress Luna .....	42
<i>Telea polythemus</i> .—Polythemus Moth .....	48
<i>Hyperchiria varia</i> .—Peacock Moth .....	49
<i>Eacles imperialis</i> .—Imperial Moth .....	51
<i>Callosamia promethca</i> .—Promethea Moth ...	46
<i>Clisiocampa americanus</i> . — American Tent Caterpillar Moth .....	52
<i>Platysamia cecropia</i> — Emperor Cecropia Moth .....	44
<i>Tortrix</i> .—Leaf Roller .....	63
<i>Tinea</i> .....	65

## INTRODUCTION.



The Order of Lépidoptera, or scale-winged insects, may be divided into three groups, comprising all the four-winged insects commonly known as Butterflies, Hawk-Moths, and Moths. They differ in size, figure, and color, but are uniform in having their bodies covered with fine hair, and their wings, with what, to the naked eye, appears like dust, but, when examined by a powerful microscope, are seen to be beautifully ornamented feathery scales, with microscopic lines. The tongue, or sucking tube, of nearly all the insects of this order, when at rest, is rolled up like a watch-spring, but is capable of being darted forth in an instant, and of sucking up with rapidity the nectareous fluids, on which its gay possessor lives. The insects of this order, though small in size, are great by their vast numbers, their varieties of form and color, their extremely delicate organizations, their remarkable instincts, and the extraordinary transformations of their larvæ.

**GROUP I.—Papiliones.—Butterflies.**

The Butterflies are readily distinguished from the Hawk-Moths, and Moths, by the brilliant coloring of their wings ; their thread-like and knobbed antennæ ; the elevated position of their wings when at rest ; and the fact that they fly by day only.

**GROUP II.—Sphinges.—Hawk-Moths.**

The insects of this group are the most powerful and robust of the order. They are principally distinguished by their rapid and vigorous flight, and the large size of many of the species. They generally fly during the evening or early hours of the morning. A few species belonging to this group fly during the bright-sunshine ; others are called humming-bird moths, on account of the noise they make in flying, and their habit of hovering over flowers while they extract the delicious juices with their tubular tongues. All the insects of this group have the body thick in the middle and tapering toward each end : the wings, long, slender, and pointed. When at rest, the wings are inclined like a roof, the upper covering the lower.

**GROUP III.—Phalaenac.—Moths.**

This group is the largest of the order, and comprises all the lepidoptera that cannot

properly be placed in the preceding groups. The moths are nocturnal in their habits. They differ in size, color, and figure: their wings present a great diversity of form. When at rest the upper wings cover the lower. The females belonging to a few species are wingless, and are destined to live only sufficiently long to deposit their eggs. Some of the species are beautifully colored, while the greater number are dark-gray, mottled with black, white, and brown.

Over twenty thousand different species of butterflies and moths belonging to the old world, and fully three thousand belonging to this continent have been identified by entomologists, and each species is distinguished from its nearest relation by some modification of structure best adapted to its peculiar sphere of life.

---

METAMORPHOSIS OF THE LARVÆ OF  
BUTTERFLIES AND MOTHS.

The young of Butterflies and Moths are called caterpillars. Nearly all the caterpillars of the Order of Lepidoptera are destructive to vegetation; they differ in size, color, and form, and feed upon leaves, blossoms, buds, seeds, roots, furs, grease, grain, and woollens. Each female butterfly or moth will lay from one hundred to five hundred eggs, from which the caterpillars are

produced ; and, by that wonderful provision of nature, instinct, the insect almost invariably deposits its eggs on the food necessary to its caterpillar state. During its life as a caterpillar it eats voraciously, and almost incessantly, changing its skin several times before it attains its full growth, when it exchanges its caterpillar dress for that of a chrysalis, which it accomplishes by bursting open the skin on the back, and withdrawing the fore-part of the body, until it is emancipated. It is then a chrysalis, apparently without head or limbs, and remains in this state for a variable length of time, motionless without taking food. But during this period of apparent rest, this total seclusion from the outer world, the greatest activity prevails within : all the organs required by the perfect insect are being developed. Some of these chrysalides are beautifully ornamented with golden spots, from which circumstance the name of chrysalis is derived. When the period for the second transformation arrives the chrysalis swells, and bursts the skin on the back, from which emerges the gay and beautiful butterfly to spend its brief life in sipping the juices of sweet-scented flowers, in making love to its mates, laying its eggs, and soon after (providing it escapes its many enemies) dying a natural death.

Many of the caterpillars of the moths are remarkable for the perfection of their silken

cocoons (to which we owe the beautiful material called silk), with which they enclose their bodies for the first transformation. Some caterpillars suspend themselves by a silken thread, and transform without making a cocoon. Others burrow in the ground, and undergo their metamorphosis in the earth; and a few species transform in the interior of roots and stems. In either case they finally burst open the skin on the top of the back, cast it, and enter the pupæ state. At the proper time the pupæ skin bursts, and the moth comes forth, expands its wings gradually, until it has gained strength, and then flies away to enjoy its brief existence.







# BUTTERFLIES AND MOTHS

OF CANADA.

---

GROUP I.—*Papiliones*.

BUTTERFLIES.

---

PAPILIONIDÆ.—Swallow-tail Family.

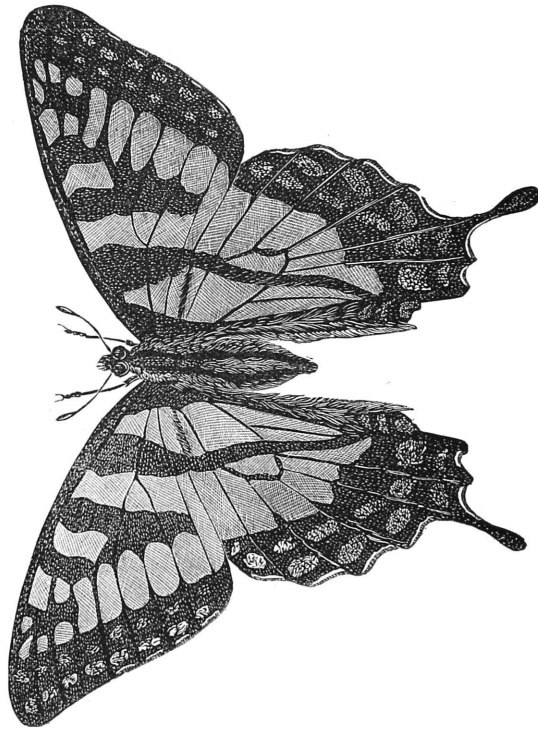
This family embraces the most conspicuous butterflies of the group. The hind wings are extended into a tail-like appendage, from which they derive their family name.

*Genus* PAPILIO.

*Papilio turnus*.—The Yellow Swallow-tail.

This is the largest and most beautiful butterfly of those commonly known as "Swallow-tails."

It expands five inches. The color is brilliant yellow, bordered and striped with black ; on the



THE YELLOW SWALLOW-TAIL.

forward wings are nine yellow spots ; on the hind wings, six oblong yellow spots. This

elegant butterfly flies in June, July, and August; and frequents groves, orchards, and gardens. The caterpillar is about three inches long, of a green color; and feeds upon the apple and other fruit trees.

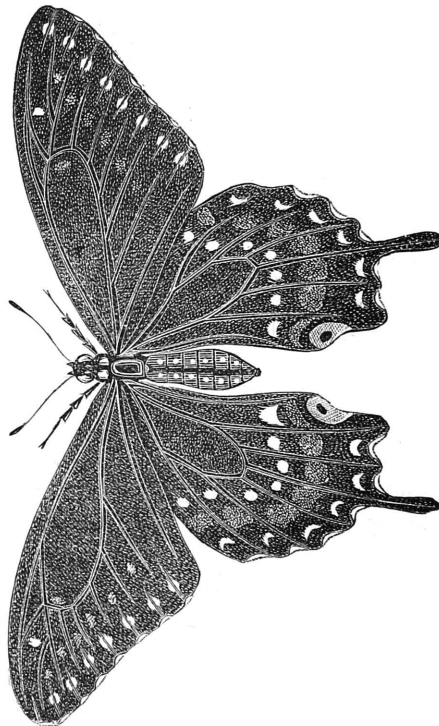
*Papilio troilus*.—The Orange Spotted Swallow-tail.

This elegant butterfly bears a striking resemblance to the preceding insect, but is smaller in size: the spots on the wings are much larger. The orange spots on the hind angle of the wings have not the black centre which characterizes the *Asterias*. It flies in June, July, and August. The caterpillar is two and a half inches long; and feeds principally upon the sassafras and lilac.

*Papilio asterias*.—The Black Swallow-tail.

This butterfly expands about four inches. Color; rich velvety-black, with a double row of bright yellow spots on the back, and a band of bright yellow spots across the wings, and seven blue spots between the double row of yellow spots, and a brilliant orange spot, with a black

centre near the hind angle of the wings. This butterfly flies in July and August ; and frequents



THE BLACK SWALLOW-TAIL.

groves and gardens. The caterpillar is two and a half inches long, of a pale green color ; and feeds upon carrots, parsley, and celery.

PIERIDÆ.—White Butterfly Family.

The insects of this family have the wings rounded, and entire, on the edges; the inner edges form a groove, which is a receptacle for the abdomen.

Genus PIERIS.

*Pieris oleracea*.—The Pot-herb Butterfly.

This delicate and very pretty butterfly is pure white; and expands two inches. The first brood appears in May, and a second in July. It frequents gardens and meadows. The caterpillar is light-green; and feeds upon cabbage, radish, and turnip leaves.

*Pieris rapæ*.—Garden White Butterfly.

This butterfly resembles the preceding insect, but is inferior in size. The caterpillar is pale-green, with a yellow line along the back. It feeds upon the cabbage.

*Pieris protodice*.—The Cabbage Butterfly.

This species is white, with dark markings on the upper surface of the wings. It expands about two inches. Flies from June until August. The caterpillar is light green; and feeds upon the cabbage.

*Genus COLIAS.**Colias philodice.*—The Yellow Butterfly.

This very common, but very pretty insect frequents the fields and roadsides in large numbers during the months of May, June, July, and August. Color: sulphur-yellow, bordered with black. It expands two and a half inches. The caterpillar is nearly three inches long, of a pale-green color; and feeds upon the leaves of the clover, hop, and pea.

---

## NYMPHALIDÆ.—Nymphalis Family.

The insects of this family have the hind wings scalloped, and the antennæ very slender.

*Genus LIMENITIS.**Limenitis ephestion.*—Orange-spotted Butterfly.

This butterfly expands about three inches. Color: bluish-black; on the hind edges of the wings are three black lines, and within the outer border is a row of spots of a bright orange color. It flies in July and August. The caterpillar feeds upon the cherry and oak.



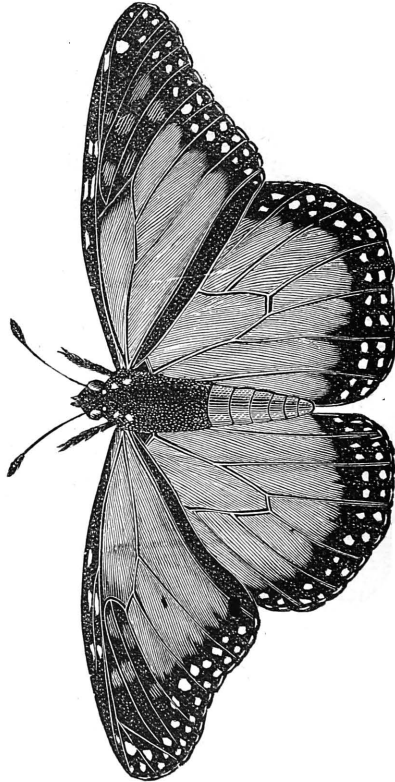
THE CIRCLED EMPEROR.

*Limenitis arthemis*.—The Circling Emperor.

This extremely beautiful butterfly is at once distinguished by the rich blue-black color of its wings, and the broad white curved band, which crosses both wings. The male has a row of orange colored spots on the hind wings. It expands about three inches and a half. Flies in July and August. The caterpillar feeds upon the honeysuckle and poplar.

*Limenitis misippus*.—The Dark Veinlet.

The prevailing color of this fine insect is tawny-yellow, with black veins, and a black border spotted with white. Expands three and a half inches. Flies in August and September, and frequents low lands. The caterpillar is light brown; three inches long; and feeds upon the poplar and willow.

*Genus* DANAIS.

QUEEN OF SPAIN BUTTERFLY.

The butterflies of this genus have rounded and entire wings; the head and thorax are covered with white spots.

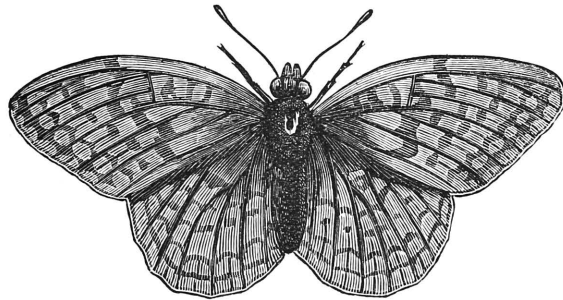


*Danais Archippus*.—Queen of Spain Butterfly.

This butterfly bears a striking resemblance to the Misippus, but is much larger, expanding four and a half inches. It flies in July, August, and September; and frequents low marshy lands. For several years past this species has been very common near Toronto. The caterpillar is of a dark-yellow and white color; and feeds upon the silk weed.

Genus ARGYNNIS.

The insects of this genus have numerous round silver-like spots beneath the hind wings.



THE SILVER-SPOTTED FRITILLARY.

*Argynnis aphrodite*.—The Silver-spotted Fritillary.

This butterfly expands three and a half inches. Color: tawny-yellow; under the tips of the fore-

wings are seven bright silvery spots, and underneath the hind wings are twenty-two or twenty-four large white silvery spots. The Aphrodite flies in June, July, and August; and frequents low lands. The caterpillar is dark-brown; and feeds upon the violet.

*Argynnis bellona*.—The Brimstone Butterfly.

This pretty little butterfly expands two inches. Color: tawny, with two rows of dark spots around the hind margin of the wings, and no silvery spots beneath the wings. Flies in June, July, and August; and frequents flower gardens. The caterpillar is brownish-black; and feeds upon violets.

*Argynnis myrina*.—The Black Spotted Fritillary.

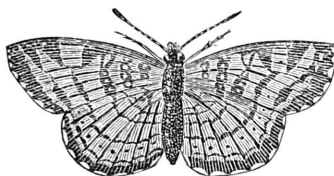
This little butterfly expands one inch-and-a-half. Color: tawny, with a border of black, around which is a row of black crescent-shaped spots. Flies in May and June, and a second brood in July and August. The caterpillar is dark-brown; and feeds upon the violet.

#### *Genus* MELITÆA.

The members of this genus are generally smaller than the preceding, and have no silvery spots beneath the wings.

*Melitæa phæton*.—The Black Melitæa.

This butterfly expands about two inches. Color: black, with a row of orange crescents around the hind border of the wings, and two reddish-orange spots on the front wings. Flies in June and July. Frequents pasture fields and marshy lands. The caterpillar feeds upon the plantain.



THE DRAPPLED MILITÆA.

*Melitæa tharos*.—The Drappled Militæa.

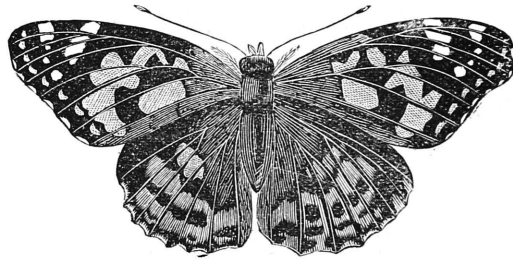
The Drappled Militæa expands about an inch and a half; the wings are short and broad; the color, tawny-orange, with black lines and spots. Flies from June to August. The caterpillar feeds upon the plantain.

*Melitæa Harrisii*.—Harris's Butterfly.

This species is not so common as the preceding. It expands about one and a quarter inches. Color: fulvous above, with blackish-brown markings.

*Genus PYRAMEIS.*

This genus embraces some beautiful insects, all of which have the wings scalloped.



PAINTED LADY.

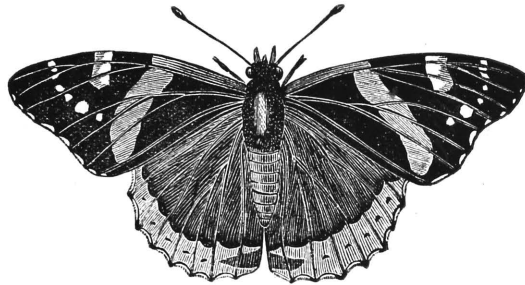
*Pyrameis cardui.*—The Painted Lady.

This common, but pretty, butterfly expands two inches and a half. Color: tawny, with a rose tinge, and spotted with black and white on the hind wings, which are marked beneath, and have five eye-like spots near the hind margin, and a white spot in the centre. Flies from June to August; and frequents meadows and low lands. The caterpillar feeds upon the sunflower, hollyhock, burdock, and thistle.

*Pyrameis Huntera.*—The Marbled Cynthia.

This butterfly expands two and a half inches. Color: tawny, spotted with white and black.

The hind wings are marbled underneath, and have two large eye-like spots near the hind margin. Flies from July to September; frequents open fields. The caterpillar feeds upon the thistle.



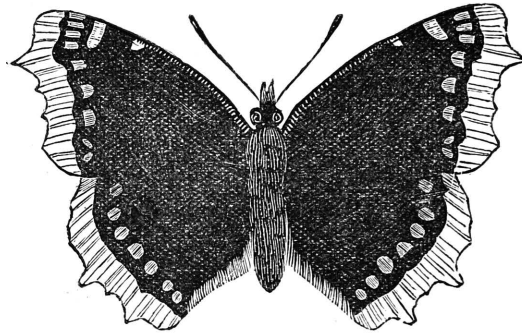
THE RED ADMIRAL.

*Pyrameis atalanta*.—The Red Admiral.

The Red Admiral expands nearly three inches. Color: black, with a band of reddish-orange across the middle of the fore wings, and spots of white near the tips; on the hind wings is a marginal red band on which is a row of black dots. Flies from June to September. Frequents open fields and roadsides. The caterpillar feeds upon the nettle.

Genus VANESSA.

All the butterflies of this genus have the wings angulated on the edges.



THE CAMBERWELL BEAUTY.

*Vanessa antiopa.*—Camberwell Beauty.

This is one of our most common butterflies. It expands about three and a half inches. Color : rich purplish-brown, with a broad yellow margin, near the inner edge of which there is a row of blue spots. Flies from June to September, and specimens are frequently seen in October. I have often found this butterfly in hollow trees and sheltered places in the winter, in a semi-torpid state. The caterpillar is black, dotted with white ; and feeds upon the leaves of the elm, poplar, and willow.

*Vanessa F-album.*—The J. Butterfly.

This insect derives its name from a white J-shaped mark on the under side of the hind wings. It expands two and a half inches. Color: tawny-red; each wing has a white spot between two black spots, near the outer angle. Flies in July and August; and frequents gardens and fields. The caterpillar feeds upon the leaves of the elm.



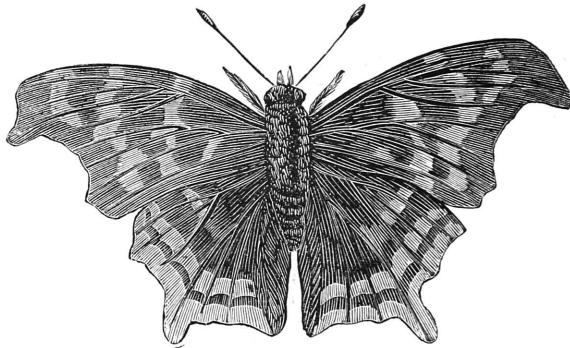
THE RED EMPRESS.

*Vanessa Milberti.*—The Red Empress.

This beautiful butterfly expands about two and a half inches. The prevailing color is black, with a wide orange-red band near the hind margin of all the wings. On the hind wings is a row of rich blue crescents, on the fore wings is a white spot near the tips, and reddish-orange spots in the centre of the front margin. Flies in June and July, and a second brood in August. Frequents roadsides. The caterpillar is brown; and feeds upon the nettle.

*Genus GRAPTA.*

The butterflies of this family are generally of a reddish-brown color; beneath the wings is a curved line and dot of a golden or silvery color; the wings are deeply incised.



THE SEMICOLON BUTTERFLY.

*Grapta interrogationis.*—The Semicolon  
Butterfly.

This very pretty butterfly is readily distinguished by a pale-yellow semicolon near the centre of the inner surface of the hind wings. It expands nearly three inches. Color: brownish-orange, with spots of deep brown. Flies from June to August; and frequents gardens and roadsides. The caterpillar feeds upon the leaves of the elm and grape.



*Grapta comma*.—The Comma Butterfly.

The Comma Butterfly is so called from a brilliant white comma-shaped mark beneath the hind wings. Color : dark orange, marked with black and brown. Expands two inches. Flies in July and August ; and frequents gardens and roadsides. The caterpillar is reddish-brown ; and feeds upon the leaves of the elm.

*Grapta c-argenteum*.—The Silver L Butterfly.

This butterfly expands about two inches, and is tawny-orange above, bordered and spotted with black ; underneath, gray, with a bright silvery L spot. Flies in July and August ; frequents gardens and open fields. The caterpillar is white, spotted with gray ; and feeds upon the elm and hop.

*Grapta faunus*.—The Cinnamon Butterfly.

The general color of this species resembles the preceding insect, but is darker and larger in size, and beautifully marbled underneath.

Genus JUNONIA.

*Junonia cœnia*.—The Peacock Butterfly.

This very rare and pretty butterfly expands three inches. Color : reddish-brown, with two

grayish eye-like spots, encircled with black on the hind wings; on the front wings are two spots with a white centre. Flies in August. The caterpillar is jet black, covered with small white spots, and feeds upon the nettle and thistle.

---

SATYRIDÆ.—Family Satyrus.

In this family the prevailing color is dark-brown. Wings entire, with eye-like spots beneath. Their flight is quick, and with a jerking motion.

*Genus* SATYRUS.

*Satyrus alope*.—The Brown Butterfly.

The color of this pretty little insect is dark-brown, shaded with light. Expands two and a quarter inches. Flies from July to September; frequents open woods and fields. The caterpillar is pale-green, with fine stripes of brown; feeds upon the leaves of the cherry and plum.

*Satyrus Boisduvallii*—Boisduvall's Butterfly.

This butterfly expands two and a quarter inches. Color: dark and light greenish-yellow, with four eye-like black spots on the fore wings.

Flies in July : frequents hilly lands. The caterpillar is light-green; and feeds upon various grasses.

Genus NEONYMPHÆ.

*Neonympha eurytris*.—The Eurytris Butterfly.

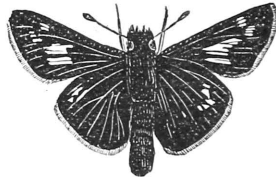
This little butterfly is dark-brown above, with black eye-like spots on the wings. It expands one inch and a quarter ; and flies in July. Frequents thick woods and low lands. The caterpillar is pale-green; and feeds upon the leaves of the wild cherry and various shrubs.

Genus CHRYSOPHANUS.

*Chrysophanus americana*.—The Copper Butterfly.

This beautiful butterfly expands one and a quarter inches ; the front wings are reddish-copper-colored, with small black spots; the hind wings have a copper-colored band on the border. Flies from June until September ; and frequents open woods and roadsides. The caterpillar is light-green; and feeds upon the sorrel. There are three broods in the year.





HESPERIAN

## HESPERIDÆ.—Skipper Family.

This family comprises a large number of very pretty little butterflies commonly called skippers, from their manner of flying with a skipping, jerking motion. In some sections of Canada the Hesperians appear in larger numbers, while in others they are very rare. They fly from June until September; and frequent the borders of woods, and shaded roadsides. In their habits and structure they somewhat resemble the moths. Their prevailing color is reddish-brown, marked with yellow, black, and white; they expand from three-fourths of an inch to two inches and a quarter; their feet are six in number. The caterpillars of the Hesperians feed upon the thistle and nettle. They are solitary in their habits: many of them hide in folded leaves, where they form a kind of cocoon, and undergo their transformation.

LYCÆNIDÆ.—Azure-Butterfly Family.

The family Lycænidæ embraces several delicate and extremely beautiful little butterflies of an azure-blue color, marked with minute black spots. They expand about three-fourths of an inch, and fly from July to September. They frequent open fields and hillsides, flying low, and oftentimes collecting together in numbers of twenty and thirty, and alighting on the flowers of the clover. The caterpillars of the Lycæna are green, with dark stripes.

*Genus* THECLA.

The insects of this family are distinguished from the preceding by two thread-like tails on each wing. They expand about one inch and a quarter, and are of a dusky-brown and red color. The caterpillars are green; and feed on the hop pine, and willow.



GROUP II.—*Sphinges*.

## HAWK MOTHS.

## SPHINGIDÆ.—Hawk Moth Family.

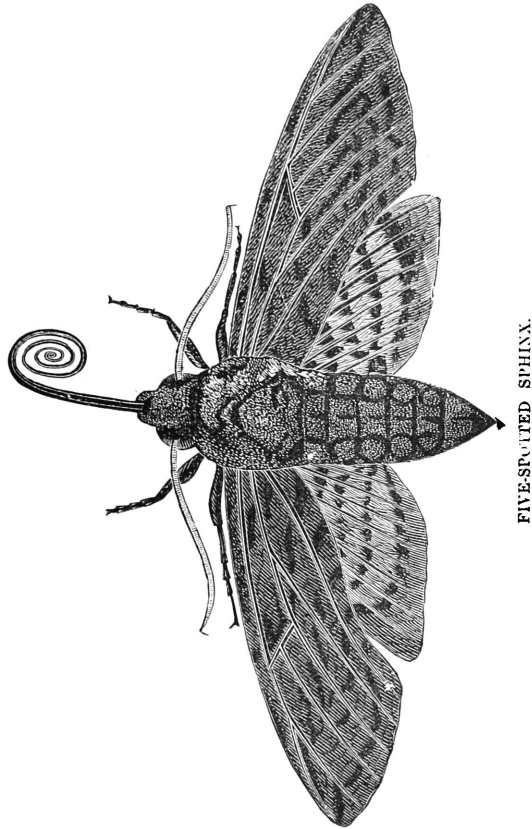
This family embraces several of the largest and stoutest insects of the group. They fly generally at twilight. Their wings are long, pointed, and well-suited for rapid flight. Their caterpillars have sixteen legs. When at rest they assume a sphinx-like attitude, from which the family name is derived. They are very large, and generally green colored. About the beginning of September they enter the ground for transformation, and the pupa remains there during the winter. In the following summer the chrysalis skin bursts, and the perfect insect comes to the surface of the ground, and flies away in search of food.

*Genus SPHINX.*

*Sphinx quinquemaculatus*.—The Five-spotted Sphinx.

This insect is one of the largest of the family. It derives its name from five round orange spots

on each side of the body. It expands about five



FIVE-SPOTTED SPHINX.

inches and a half. The prevailing color is gray, variegated with black. It flies in June, July, and

August. The caterpillar is pale-green ; three and a half inches in length ; and feeds upon the potato vine.

*Sphinx drupiferarum*.—The Plum Sphinx Moth.

The fore wings of this moth are brownish-black ; the discal dot and outer edge of the wings are light fulvous color. It expands four and a half inches. The caterpillar is green ; and feeds upon the plum tree.

*Sphinx gordius*.—The Apple Sphinx Moth.

This sphinx expands about four inches, and is of a dark brown color, with a roseate tinge. The thorax is brownish-black above. Flies in June, July, and August. The caterpillar is nearly four inches in length ; and feeds upon the apple.

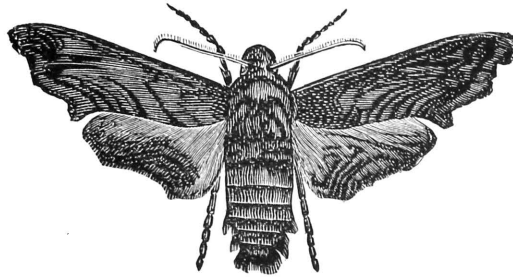
*Sphinx chersis*.—The Lilac Sphinx Moth.

This insect closely resembles the five-spotted sphinx in color, and size, but is reddish-gray beneath. Flies in July, and August. The caterpillar is dark-green ; and feeds upon the lilac.





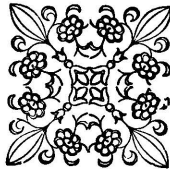
Genus THYREUS.



ABBOT'S HAWK MOTH.

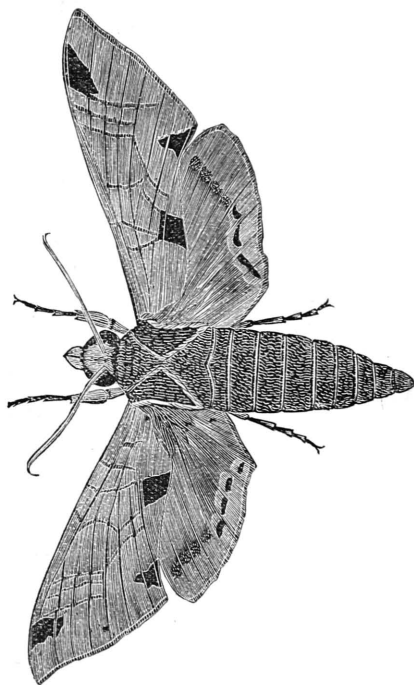
*Thyreus Abbottii*.—Abbot's Hawk Moth.

This Hawk Moth expands about three and a half inches; prevailing color: chocolate, with darker variegations. The hind wings are yellow, with a dark-brown border. Both fore and hind wings are scalloped. Flies in June and July. The caterpillar is brownish yellow; and feeds upon the grape-vine.



*Genus PHILAMPELUS.**Philampelus Achemon.*—Achemon Hawk Moth.

The Achemon expands about three and a half



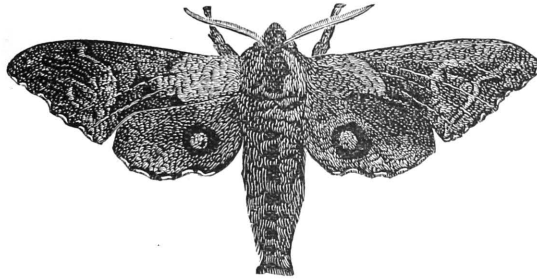
ACHEMON HAWK MOTH.

inches; the prevailing color is brownish-gray, with triangular patches of dark-brown on the thorax, and [two] square patches on each fore-

wing; the hind wings are pink, near the middle of which is a deep red spot, and behind a broad ash-colored border. Flies in July and August. The caterpillars feed upon the grape-vine, common creeper, and other indigenous vines.

*Genus SMERINTHUS.*

The moths of this family have the wings scalloped, and notched on the outer edge. The caterpillars have a stout thorn on the tail.



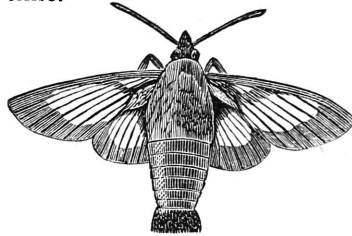
BLIND SMERINTHUS.

*Smerinthus excæcata.*—Blind Smerinthus.

This moth expands two and a half inches; the prevailing color is fawn, clouded with brown; the hind wings are rose colored in the centre with a black spot, the centre of which is blue. Flies in June, July, and August. The caterpillars feeds upon the leaves and buds of the apple tree.

*Genus SESIA.*

This genus contains several beautiful sphinges, which are distinguished by their broad fanshaped tails, and clear, transparent wings. They fly in the day-time.



THE BEE MOTH.

*Sesia thysbe.*—The Bee Moth.

This pretty insect flies in June and July, and may be seen on very hot days hovering over flowers, after the manner of humming birds. The abdomen of this sphinx is of a reddish color; the thorax, green; the legs, white. The caterpillar has a dorsal stripe, and short recurved horn; and feeds upon the lilac.

*Sesia diffinis.*—The Green Bee-moth.

The color of this moth is yellowish-green; abdomen, black; legs, black. Flies in July and August. Its habits are similar to the preceding species. The caterpillar is green, above; and dark-red, beneath.

## ÆGERIDÆ.—Egerian family.

The insects of this family bear a striking resemblance to bees or wasps. Their wings are narrow and transparent; the body large. They fly by day, especially in the bright sunshine. The caterpillars of this species live within the roots and stems of plants, and are white, cylindrical, and conical with stout horns. Their transformation takes place in an oval cocoon made of the chips they make in boring their tunnels, cemented by a sticky matter. They are very destructive to garden shrubs and plants.

*Genus ÆGERIÆ.*

PEACH-TREE BORER.

*Ægeria exitosa.*—The Peach-tree Borer.

The wings of this insect are transparent, and beautifully bordered and veined with light-blue, which is the prevailing color in both sexes of this species. It expands one inch and a quarter, and flies from the middle of June until the last of November. The female lays her eggs near the

roots of the tree ; when they are hatched they penetrate the bark, and greatly injure, and; in many cases, destroy the trees.

*Ægeria tipuliforme*.—The Currant-bush Borer.

The body of this borer is blue ; the wings, transparent, and fringed with black ; across the tips of the fore wings is a light copper-colored band. It expands about three-fourths of an inch. The female lays her eggs in the buds of the currant bush. When the caterpillar is hatched, it forms a burrow in the stems several inches in length, causing them to split open, and the bush to die.

*Ægeria cucurbitæ*.—The Squash-vine Borer.

The body of this insect is of an orange color, with spots of black. It expands one inch and a quarter. The caterpillar feeds upon the squash plant.

*Ægeria polistiformis*.—The Grape-root Borer.

The Grape-root Borer expands about one inch and a half. Color: dark brown, tinged with orange. Flies from June until September. The caterpillar feeds upon the roots of the grape vine.

*Genus* EUDRYAS.

Several pretty moths belong to this family, and are commonly called Wood Nymphs. Some of the species are beautifully colored, and the fore legs densely tufted. The caterpillars feed upon the grape vine.



THE BEAUTIFUL WOOD NYMPH.

*Eudryas grata*.—The Beautiful Wood Nymph.

The Beautiful Wood Nymph is one of the prettiest of the family. The fore wings are pure white, with a broad stripe along the front edge, and a band around the outer hind margin of a brownish-purple color; the hind wings are yellow, with a border of purplish-brown. Expands about two inches. Flies in June, July, and August. The caterpillar feeds upon the grape vine and common creeper.

## ZYGÆNIDÆ.—Glaucopidian Family.

This family forms a connecting link between the diurnal and nocturnal insects. It comprises a number of species, which have the body very slender, the wings pointed and covered with extremely fine powdery scales; the head, large and full; the anterior, tapering; the color, green with variegations of purple and black. They fly on bright sunny days. The caterpillars are green, and have sixteen feet.





GROUP III.—*Phalaenae*.

MOTHS.

---

BOMBYCIDÆ,—Silk Worm Family.

This large group of insects, includes several very large and magnificent moths which have thick bodies, head small, and the fore legs covered with hairs. The caterpillars of this family, with few exceptions, spin cocoons of silk, from which the silk of commerce is manufactured.

*Genus* LITHOSIA.

The Lithosians have slender bodies, and narrow wings, which are beautifully spotted in some species. The caterpillars are cylindrical, and covered with short hairs.

*Lithosia miniata*.—Striped Lithosian.

The fore wings are scarlet, with three slate-coloured stripes. It expands about one inch and a quarter. The caterpillar feeds upon various lichens.

*Genus* DEIOPEIA.*Deiopeia bella*.—Beautiful Deiopeia.

This very pretty moth expands about one inch and a half; the fore wings are deep yellow, crossed by six white bands, on each of which is a row of black dots; the hind wings are scarlet, edged with black; the thorax is dotted with black; the body is white. Flies from July to September.

*Genus* CALIMORPHA.*Calimorpha militaris*.—The Soldier Moth.

The Soldier Moth expands one inch and three quarters; the fore wings are white, bordered with brown, with a brown band from the inner margin to the tip; the hind wings are white, without spots; the body, white; the head, yellowish. Flies in July and August. The caterpillar is dark colored, striped with yellow; and feeds upon various plants.

*Genus CROCATA.*

The moths of this family are small in size, and of a light-red color.

*Genus ARCTIA.*

The Arctians have stout bodies, broad wings, and feathered antennæ.

*Arctia Virgo.*—Virgin Tiger Moth.

This moth is quite rare in this section of Canada, (the specimens in my collection were obtained near Lake Memphremagog, Quebec.) It emits a most disagreeable odor when caught. In appearance it is very pretty. The color of the fore wings is reddish-flesh and buff, marked with spots and stripes of black ; the hind wings are vermillion-red, with black blotches. Flies in July and August. The caterpillar is brown; and feeds upon the plantain, and other herbaceous plants.

*Arctia phalerata.*—The Harnessed Moth.

This beautiful moth expands nearly two inches. The prevailing color is light-buff; the hind wings, red, with several black spots near the margin ; the fore wings have two longitu-

dinal black stripes, and four black spots, each somewhat resembling a triangle. Flies in July and August. The caterpillar is brown, with tufts of stiff brown hairs.

*Arctia Isabella*.—The Isabella Tiger Moth.

This moth is by far the most beautiful of the family. It expands two inches and three-quarters. The fore wings are tawny-brown, with spots and dots of black; the hind wings are orange-colored. Flies in the latter part of June and during July. The caterpillar feeds upon garden plants of various kinds; is dark-colored, with stiff hairs. During the winter it remains in a torpid condition; in the spring, it makes a cocoon, and transforms in July.

Genus SPILOSOMA.

The insects of this family are gray, white, or yellow, with small black dots and stripes, and are commonly known as "Millers."

*Spilosoma Virginica*.—Virginia Ermine Moth.

This moth is a pure white, with a small black spot on the fore wings; on the hind wings are two black dots; on the back and sides there is a row of black dots. It expands about two inches. Flies in June, July, and August.

*Genus* LEUCARCTIA.*Leucartia Acræa*.—Salt Marsh Moth.

This insect is more common in New Brunswick than in Ontario. It expands two inches and a half; the fore wings, white; the hind wings, yellow, with spots of black; the abdomen is yellow, and spotted with black. The female of this species is grayish colored, and somewhat larger than the male. This moth flies in June and July.

*Genus* HYPHANTRIA.*Hyphantria textor*.—The Weaver.

The Weaver is pure white, without spots, and expands about one inch and a half. Flies in July and August. The caterpillar is green, with a yellowish-tinge, and dotted with black. It weaves a transparent web over the branches of trees; and feeds upon the outer skin of the leaves of the apple and cherry tree.

*Hyphantria cunea*.—Spotted Weaver.

This insect is also white, but differs from the preceding by the black dots which cover its wings. Flies from the last of June to August. The caterpillar is brownish-black, dotted with white.

*Genus* HALESIDOTA.

The moths of this genus have slender bodies, long, thin, and yellowish wings, crossed by streaks of a brown color. The caterpillars have tufts of hair along the back, and are short and thick.

*Halesidota caryæ*.—The Hickory Moth.

This moth is of a pale-yellow ochre color, and expands about two inches. Along the entire border of the wings are three rows of white spots. Flies in June and July.

*Halesidota tessellaris*.—Checkered Tussock-Moth.

The Checkered Tussock-Moth is a shade darker in color than the preceding insect, and the fore wings are crossed by five rows of small dark spots. It expands two inches and a quarter. Flies in June, July, and August.

*Halesidota maculata*.—The Oak Moth.

The general color of this moth is pale yellow ochre, marked on the fore wings with brown spots. Flies in June and July. The caterpillar feeds upon the oak.

Genus ORGYIA.

The moths of this genus derive their name from a habit they possess of extending their fore legs when at rest. The females are wingless, and differ in color from the males.

*Orgyia leucostigma*.—White-marked Moth.

The prevailing color of this moth is dark-ashen gray, on the fore wings are bands of a brown color; near the tips of the wings is a black spot, and a small white crescent-shaped spot. The females of this species are wingless, and of a lighter color than the males. The males fly in August and September. The caterpillar of this moth has long hairs extending over the head and tail. It feeds on the apple tree.

*Orgyia antiqua*.—The Vaporer Moth.

The color of this moth is brownish-rust; on the outer angle of the fore wings is a white spot, and two dark-brown streaks. It expands about one inch and a quarter. The caterpillar has four yellow tufts on the back; its head, is black, and the sides dark, spotted with red. It feeds upon the thorn and other shrubs.

*Genus* NOTODONTA.

*Notodonta unicornis*.—The Unicorn Moth.

This moth derives its name from a horn that arises from the fourth ring of the caterpillar of this species. The color of the moth is a light-brown, with dark-brown lines and patches of greenish-white on the fore wings; hind wings, dusky-white. It expands about an inch and a half, and flies in June and July. The caterpillar feeds on the apple and plum tree.

*Genus* LAGOA.

*Lagoa crispata*.—Common Lagoa Moth.

This insect expands about an inch and a quarter. Color: orange-slate. The fore wings are quite short, broad, and are covered with woolly hairs. The caterpillar feeds upon the raspberry, blackberry, and apple.

*Genus* LIMACODES.

*Limacodes scapha*.—The V-Moth.

This moth derives its name from the lines on the fore wings so crossing as to form the letter V. Color: cinnamon-brown. Expands about one inch and an eighth. The caterpillar is green, spotted with brown above, and a lighter brown beneath. Feeds upon the cherry and plum.



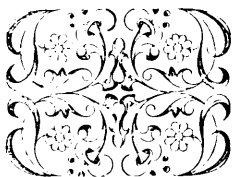
Genus PSYCHE.

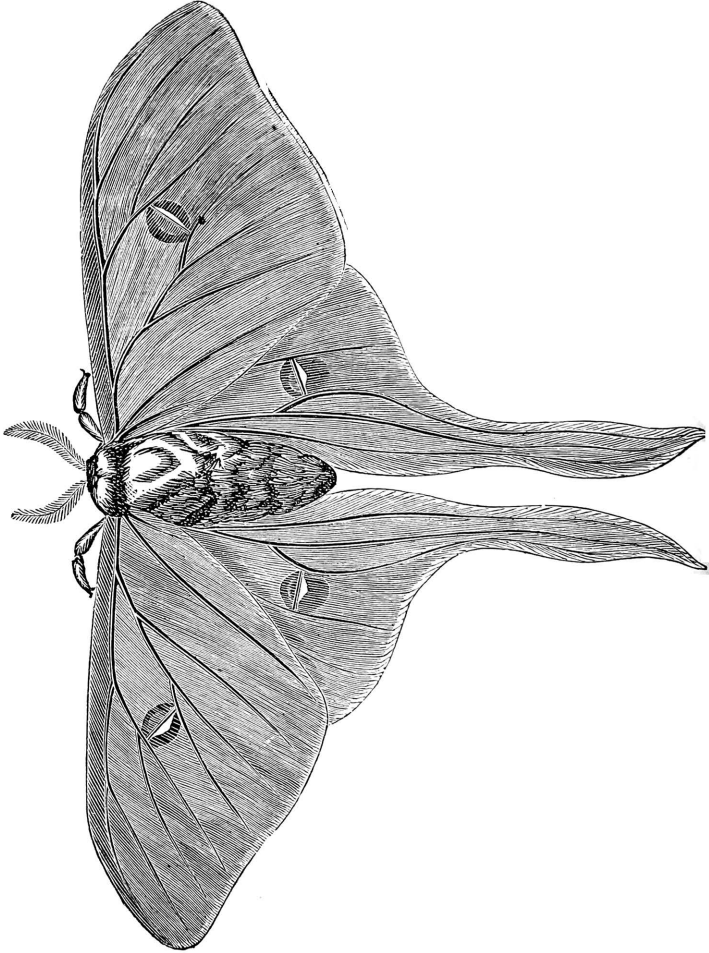
The moths of this genus have broad and thin wings; bodies, hairy and thick. The females are wingless. In the caterpillar state they live in cases made of bits of the plants on which they feed.

Genus PEROPHORA.

*Perophora Melshimerii*.—Melshimer's Sack-bearer.

This moth is reddish-gray, dotted with black. The caterpillar is reddish-brown, and cylindrical in form.



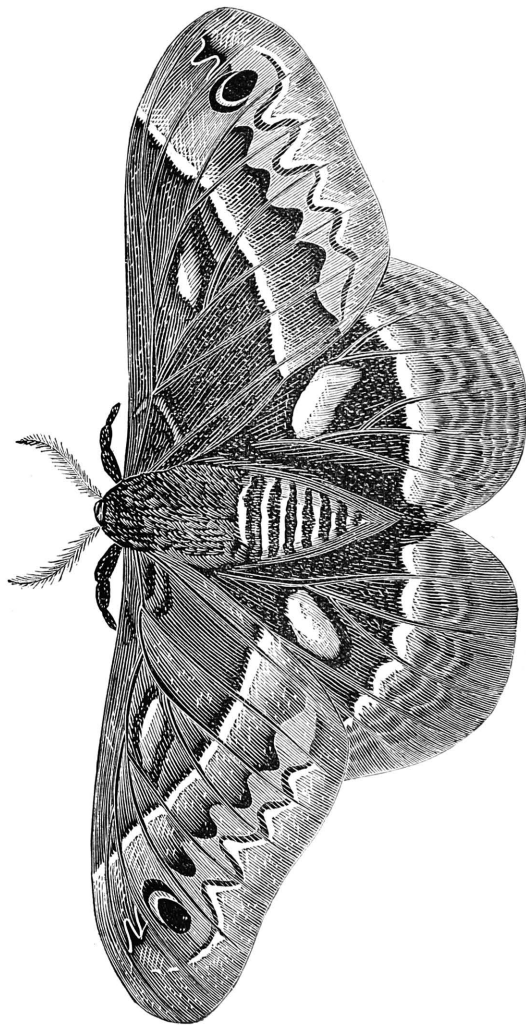


*Genus* ACTIAS.

The magnificent moths of this family are represented in Canada by the beautiful Luna, "fair empress of the night."

*Actias luna*.—The Empress Luna Moth.

No description can do adequate justice to the exquisite beauty of this elegant moth. It surpasses all others in delicacy of tint and texture. The prevailing color is a rich pale green, with a broad purple border all round; on each of the wings is an eye-like spot, which is transparent in the centre, and encircled by a ring of yellow and black. The hind wings are prolonged into a tail of one inch and three quarters in length; the body is covered with a soft, downy, white substance; the legs are purple-brown. It expands from five inches to five and a half; and flies in June and July. The caterpillar is pale greenish-blue, with a yellow stripe on each side of the body, and the back is crossed, between the rings, by bands of the same color. It measures about three inches in length; feeds upon the walnut and hickory; and constructs its cocoon by drawing two or more leaves together, and spinning its cocoon inside, in which it remains until the following spring, when the last metamorphosis occurs, and the perfect insect appears.



EMPEROR CECROPIA MOTH.

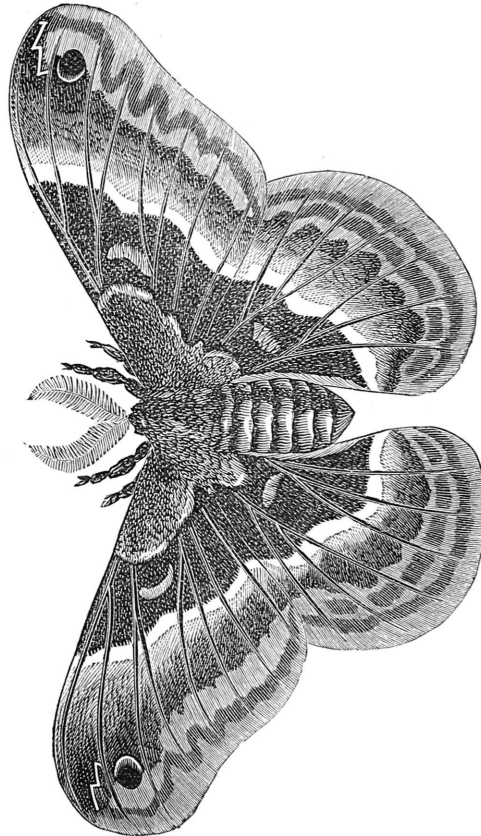
*Genus* PLATYSAMIA.*Platysamia cecropia*.—The Emperor Cecropia Moth.

The Emperor Cecropia Moth is the largest of Canadian moths; it expands from five and a half to six and a quarter inches. Color: reddish-rusty-brown; the hind margins of the wings are slate-colored; near the centre of each wing is a dark red kidney-shaped spot, with a narrow black edge and a light centre. The hind wings are rounded; the fore wings are marked with a white stripe, which is wavy, and of a brick-red color on the outer edge; the same stripe crosses the hind wings near the margin; near the tip of the fore wings is a black spot, with a bluish crescent. The caterpillar is green; three inches long; and feeds upon the cherry, plum, and apple tree, and also on the barberry and other bushes.

*Genus* CALLOSAMIA.*Callosamia promethea*.—The Promethea Moth.

This fine moth expands four inches. Color: smoky-brown; the wings are crossed by a wavy whitish line, with a clay-colored border; near the tips of the fore wings is an eye-like spot within a whitish-blue crescent. The female

moth differs in color, being light reddish-brown, with the same markings as the male. Flies in



THE PROMETHEA MOTH.

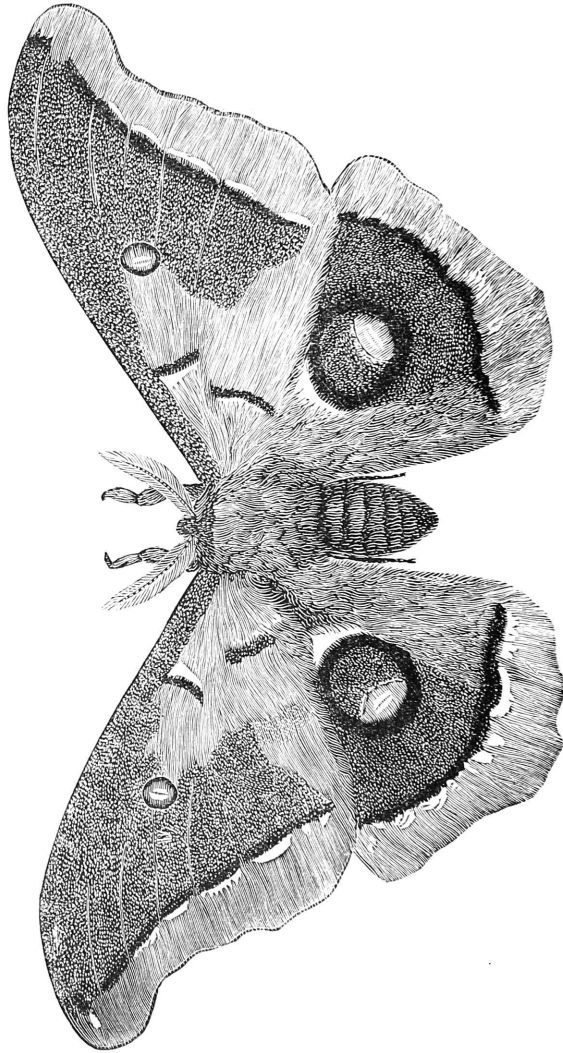
June, July, and August. The caterpillar feeds upon the sassafras tree.

## Genus TELEA.

*Telca polyphemus*.—Polyphemus Moth.

The Polyphemus is named after one of the mythological giants. It expands from four and a half to five and three quarter inches. The general color is dark yellow, clouded and shaded with black. Near the margin of the fore wings is a grayish colored band; near the shoulders are two short curved red and white lines; within the outer edge of the hind wings is a dark grayish band, with an outer edge of reddish-white. In the centre of each hind wing is a transparent spot, divided by a fine line, and encircled by rings of yellow and black, the whole surrounded by a large blue spot shaded into black. The transparent spot on the fore wings is smaller than that on the hind wings, and has no dark surrounding rings. It flies in June and July. The caterpillar is pale green; and feeds upon the oak and hickory. (*Page 48*).

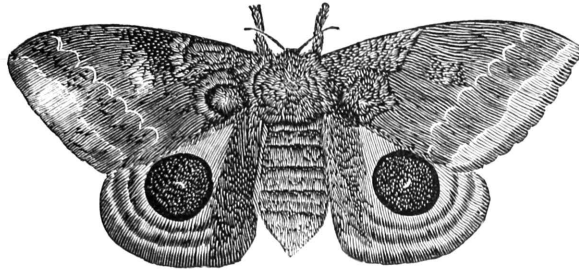




POLYPHEMUS MOTH.



Genus HYPERCHIRIA.



PEACOCK MOTII.

*Hyperchiria varia*.—The Peacock Moth.

The prevailing color of this beautiful insect is rich sulphur yellow; spotted on the fore wings with reddish-purple; the hind wings, near the body, and on the hind margin, are bordered with purple; near the centre of the hind wings is a large round blue eye-like spot, with a black margin. The female differs from the male in being reddish-brown in color, and in having a small eye-like spot on the fore wings. Flies in July and August. The caterpillar feeds upon the corn, and the leaves of the maple.



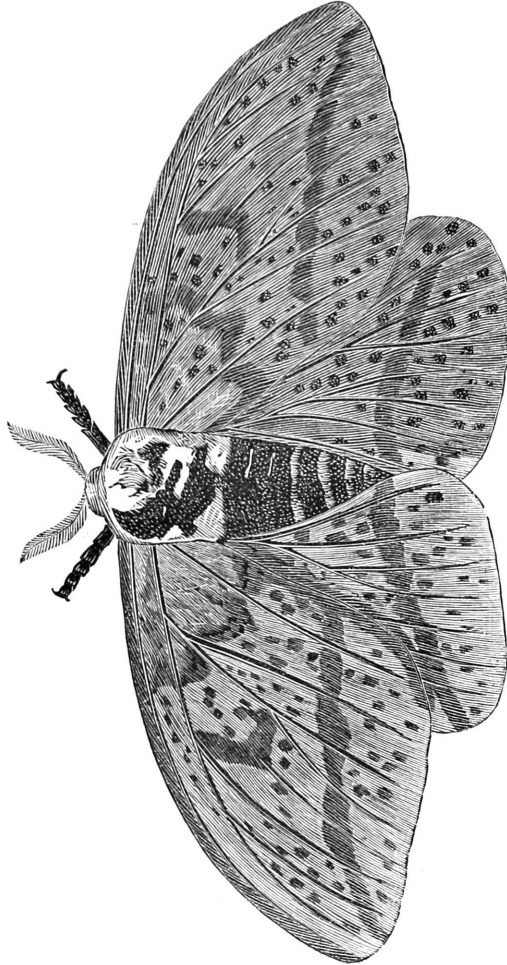
*Genus* CITHERONIA.*Citheronia regalis*.—The Royal Moth.

This magnificent moth is olive-colored on the fore wings, on which there are several yellow spots and red lines; the hind wings are reddish orange, with two yellow spots before, and a row of olive-colored spots between, the veins behind. It expands from five to five and a half inches. Flies in July and August. The caterpillar feeds upon the leaves of the walnut and hickory. Its metamorphosis takes place in the ground.

*Genus* EACLES.*Eacles imperialis*.—The Imperial Moth.

The Imperial Moth expands from four to five inches. The general color is yellow, thinly sprinkled with fine dots of a brownish-purple; near the hind margin of each wing is a light-purple band. This beautiful moth flies in July and August. The caterpillar feeds upon the leaves of the oak. It makes no cocoon, but burys itself in the earth to undergo its transformation.





IMPERIAL MOTH.

*Genus ANISOTA.**Anisota senatoria.*—The Senator Moth.

The Senator Moth expands about two inches; the wings are ochre-yellow colored, tinged with reddish-purple, and crossed by a brownish-purple band. The fore wings are sprinkled with fine black dots, and near the middle have a large white spot. It flies from the last of June until August. The caterpillar enters the ground for transformation.

*Genus CLISIOCAMPA.*

AMERICAN TENT CATERPILLAR MOTH.

*Clisiocampa americana.*—The American Tent Caterpillar Moth.

This moth derives its name from the large tent-like web which the caterpillars of this species place in apple trees, and under which they remain when not feeding. As the caterpillars increase in size they increase the size of their web. They feed at regular hours; resting at noon and in stormy weather within their tent. The moth is

reddish-brown ; the fore wings are crossed by two whitish lines. It expands about two inches and a quarter ; and flies in July.

*Clisiocampa disstria*.—The Forest Tent  
Caterpillar.

The Forest Tent Caterpillar Moth has longer wings than the preceding moth ; the color is nearly the same, but the wings have two parallel dark-brown lines. The caterpillars construct their tents in the oak and birch trees ; their habits are nearly the same as the American Tent Caterpillar.

*Genus* HEPIALUS.

*Hepialus argenteo-maculata*.—Silver-spotted  
Moth.

This moth expands about three inches ; the color is dark ashy-gray ; on the fore wings is a bright triangular silvery spot, and a round dot near the base. It flies in July and August. The caterpillar feeds upon the hop.

*Genus* XYLEUTES.

*Xyleutes robiniae*.—The Locust Tree Carpenter  
Moth.

The fore wings of this moth are gray, marked with dark lines and spots. It expands nearly

three inches, and flies in July and August. The male has a dark yellow spot near the hind margin of the hind wings. The caterpillars bore holes in various directions, in the oak and locust trees; and spin a thick cocoon.

---

NOCTUÆLITÆ.—Owlet Moth Family.

Nearly all the moths of this very large family are dark colored; fly by night, and enter the open windows and fly about the rooms, attracted by the light of the lamp or candle, on warm, foggy summer evenings. The fore wings are narrow and small; bodies, thick; antennæ, tapering. The caterpillars are striped, and taper toward each end. They build earthen cocoons. Over two thousand species belonging to this family have been identified.

*Genus* CATOCALA.

The moths of this genus are quite numerous in Canada. The prevailing color of the fore wings is gray, mottled with black, brown, and white; the hind wings are red, or magenta, with a median and marginal black band, the outer edge of which is yellowish-white. They expand from two and a half to three inches and a

quarter; and fly in July and August. The caterpillars feed upon the leaves of the wild plum, and other trees.

*Genus* BREPHOS.

The two specimens in my collection, of this genus, have the fore wings quite broad. Color: grayish-black, mottled with brown; the hind wings are black, with a wide orange-yellow band across the centre, and a pale yellowish outer edge. They expand about three inches; and flies in July and August.

*Genus* LEUCANIÆ.

The moths of this genus are usually yellowish-white. The caterpillars are smooth and marked with fine lines; they feed upon grasses, and occasionally prove very destructive to fields of wheat. During the day they hide in the tufts of grass, but when night sets in they become very active in pursuit of food, to the great injury of the farmer. About the middle of August they construct earthen cocoons for their transformation.

*Genus* AGROTIS.

The general color of the moths of this genus is dark ashy-gray, with two light spots on

the fore wings. They expand from one inch to one inch and a half; and fly about the last of August. Their common name is "Dart Moths," which they derive from their manner of flying. The caterpillars are called cut-worms. They are very destructive to gardens and fields; during the day they lie concealed, and at night come forth to feed upon tender plants and leaves. They undergo their metamorphosis in the ground.

*Genus GORTYNA.*

The moths of this genus are yellowish-black, with a tawny spot on the fore wings; the hind wings are grayish-yellow. They expand from one to one and a half inches. The caterpillars are called Spindle Worms; they are dark yellowish colored, and smooth, with warty spots; they live in the roots and stems of plants and corn, and are exceedingly destructive.

*Genus APATELA.*

*Apatela americana.*—The Gray Maple Moth.

This moth flies in July and August. Color: light gray. Expands nearly three inches. The caterpillar is light yellow; and feeds upon the leaves of the maple.



## GEOMETRIDÆ.—Geometrid Family.

The moths of this family are small, have slender bodies, and very delicate wings, which are spread horizontally when at rest. Their prevailing colors are green and yellow of different shades. They fly by day as well as night. The caterpillars are known by the name of Span Worms, or Loopers, from their peculiar motion in passing over surfaces, which is produced by the absence of legs on the basal rings of the abdomen. In walking, they bring the hind legs close to the fore legs, which causes the worm to present the form of a loop. In some parts of the country they are called Drop Worms, from their habit of descending from the branches of trees by suspending and lowering themselves by a fine silk thread, and return to the branches by the same thread. They are generally smooth, and often, when at rest, stand on their hind legs with the body erect. They feed upon grain, by burrowing into the kernel, and feeding upon the soft mealy substance within. Their transformation takes place beneath or on the surface of the ground.

*Genus* ANISOPTERYX.

*Anisopteryx vernata*.—The Canker-worm Moth.

The wings of the male are large, thin, and silky. It expands about one inch and a quarter,

and flies in September. The females are wingless. The caterpillars are called Canker Worms. They make their appearance on the apple trees when the leaves first start from the buds, and commence their destructive ravages. When they have attained their full size they are one inch long; and of a dark-ash color above, and yellowish beneath. In June they cease eating, and enter the ground to transform. In September the moths come out of the ground, and deposit their eggs on the nearest trees.

*Genus* HIBERNIA.

*Hibernia tiliaria*.—The Autumn Moth.

The color of the fore wings of this moth are dark-buff, sprinkled with fine brown dots, and crossed by two wavy brown lines: the color of the hind wings is lighter. It expands one inch and three quarters. The caterpillar is yellow; and feeds upon the apple and elm.

*Genus* ENNOMOS.

*Ennomos magnaria*.—Dusted Sulphur Moth.

This moth expands about two inches and a quarter. Color: dark sulphur-yellow, dotted with black; two dark-brown lines cross the wings. Flies in July and August. The caterpillar feeds upon the elm and ash.

Genus ANGERONA.

*Angerona crocataria*.—Citron Moth.

The Citron Moth expands about two inches and a quarter. Color: bright-yellow, with irregular patches of light-brown. Flies in July and August. The caterpillar feeds upon the strawberry plant.

Genus NEMATOCAMPA.

The insects of this genus fly in July and August, and expands from three quarters to an inch and a half. The two specimens in my collection are light yellow-ochre color, sprinkled with reddish-brown dots: the wings are crossed by lines of the same color. The caterpillars feed upon the strawberry.

Genus CHÆRODES.

*Chærodes transversata*.—Maple Moth.

This pretty moth expands from two to two and a half inches. Color: light yellow ochre. The margin of the wings are slightly angulated. Flies in July. The caterpillar feeds upon the maple.

Genus ENDROPIA.

The moths of this genus have the edges of the wings deeply notched. The prevailing color is dark-yellow, dotted with black. The wings are crossed by lines of brownish-black.

*Genus AMPHIDASYS.*

The moths of this genus have the wings small, white, and dotted with spots of grayish-black. They fly in July and August. The caterpillars feed upon the blackberry and gooseberry.

*Genus ACIDALIA.*

This genus comprises a larger number of moths which have whitish-yellow wings, crossed by narrow bands of a darker color.

*Genus BOARMIA.*

The only specimen I have found of this genus expands one inch and three quarters. Color : light-gray, thickly dotted with brown. The wings are crossed by three brownish-black lines.

*Genus EUPITHECIA.*

This genus comprises several small moths which have long thin fore-wings. The general color is glossy-gray.



PYRALIDÆ.—Delta Moth Family.

The moths of this family derive their family name from the form of their wings, which, when closed, bear a resemblance to the letter Delta, of the Greek alphabet. The caterpillars are slender, and usually green.

*Genus* HYPENA.

*Hypena humuli*.—The Hop-vine Moth.

The Hop-vine Moth expands one inch and a quarter. The fore wings are mottled gray, with a dark gray oblique spot on the tips. Flies in August and September. The caterpillar is light green, and very active in its movements. It feeds upon the common climbing plants.

*Genus* AGLOSSA.

*Aglossa pinguinalis*.—The Grease Moth.

The fore wings of this moth are grayish black, mottled with brown, and crossed by bands of a lighter shade. The caterpillar is brown, and feeds upon substances of an oily, fatty nature.

*Genus* PYRALIS.

*Pyralis farinalis*.—The Meal Moth.

The Meal Moth expands about one inch. The fore wings are rusty brown, crossed by white

lines; on the base and tip is a brown spot. The caterpillar is of a whitish color, with a brown head, and is often found in old flour barrels.

*Genus GALLERIA.*

*Galleria cereana.*—The Wax Moth.

The male Wax Moth is gray colored; the fore wings scalloped and streaked with purplish-brown on the outer edge; the hind wings are grayish-yellow and bronzed. The female moth is larger and darker in color; she deposits her eggs at night, while the bees are at rest, either in the hive or on the outside. The caterpillars feed upon the wax.

*Genus PEMPELIA.*

*Pempelia grossularia.*—Gooseberry Worm Moth.

The color of this moth is light gray. It expands about three quarters of an inch. Flies in May and June. The caterpillars are pale green, and feed upon gooseberries and currants.



## TORTRICIDÆ.—The Leaf-Rolling Family.



LEAF ROLLER.

The moths of this family are quite small; the fore wings ornamented with spots and bands, the hind wings plain, and their inner edges folded against the side of the body. They generally fly by night, and rest during the day on the plant on which the caterpillar feeds. The caterpillars roll the edges of leaves together into rolls, which are left open at each end. They feed upon the buds and tender leaves of various plants and trees.

*Genus* ANCHYLOPERA.*Anchylopera fragariae*.—The Strawberry Leaf Moth.

The fore wings of this moth are reddish-brown with spots and streaks of black and white. The female deposits her eggs on the plants, as soon as the caterpillars are hatched, they fold the leaves together and feed upon the inner surface. There are two broods of caterpillars in the year. They are very destructive.

*Genus CARPOCAPSA.**Carpocapsa pomonella.*—The Apple Moth.

The fore wings of this little moth are gray, with darker lines. The female deposits her eggs on the apples and pears. As soon as the caterpillars are hatched, they burrow into the core of the fruit, which is soon destroyed, and falls to the ground.

*Genus LOZOTÆNIA.**Lozotænia rosaccana.*—The Rose Moth.

This pretty little moth flies in July and August; is light-brown, with bands of rusty-brown. The male has a fold of scales which extend to the tip of the fore wings, which are slightly turned upwards. The caterpillar feeds on the folded leaves of the rose and strawberry, which are drawn together by a silken thread.





## TINEIDÆ.—Tinea Family.



TINEA.

The Tineids are the smallest insects of the order, and comprise a great number of species. They differ from the moths of the preceding families, not only by their smaller size, but also by their narrow wings, which are usually rolled round the body when at rest. The caterpillars are extremely destructive in many respects.

*Genus* TINEA.*Tinea flavifrontella*.—The Cloth Moth.

The wings of this pretty little moth are long and slender, and fringed with a delicate silken fringe. The female lays her eggs in woollens, upon which the caterpillars feed.

*Tinea tapetzella*.—The Carpet Moth.

The fore wings of the Carpet Moth are yellowish-white, and black at the base; hind wings, dark-gray; head, white. The caterpillar feeds upon carpets.

*Tinea granella*.—The Grain Moth.

This moth is found flying in granaries during July and August. The female lays from fifty to a hundred extremely minute eggs on the grains of wheat. In a few days the caterpillars are hatched, and prove very destructive.



INSTRUCTIONS  
FOR  
CATCHING AND PRESERVING  
**Butterflies and Moths.**

---

The articles required for catching and preserving butterflies and moths are few, simple, and inexpensive. They consist of

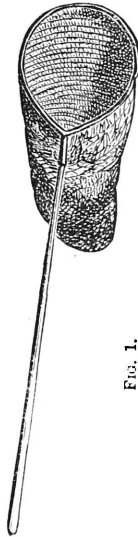


FIG. 1.

1st. A net (*Fig. 1*), which is made as follows:—Make a ring with a diameter of ten inches, out of brass wire, to which have soldered a screw two inches in length to fasten in a socket on the end of a stick about six feet long. The bag should be twenty inches deep, and made of gauze, or other very light material, which should be sewed to a narrow border of cotton cloth placed around the ring. The whole should be sufficiently light to easily handle with one hand.

2nd. A small glass stoppered bottle, to hold chloroform with which to kill the insect after it is caught.

3rd. A light wood or tin pocket-box, with a cork bottom, in which to carry the captured insects home.

4th. A "setting-box," twelve inches square and four deep, with a cork bottom, grooved, to hold the bodies of the insects (*Fig. 2*), and facilitate

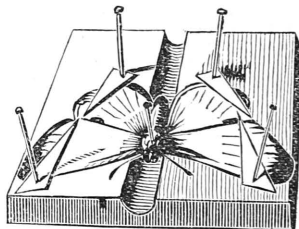


FIG. 2.

the spreading of their wings into the desired position.

5th. An assortment of long, slender, and small headed pins of different sizes.

6th. A cabinet or box, with a glass top and cork bottom, in which to permanently place the collection of insects.

When a butterfly or a moth is caught, seize it by the thorax with the thumb and forefinger,

and press it until it is stupified ; this can be done while the insect is in the net ; (be careful not to derange the delicate scales with which the wings are covered), then pour a drop of chloroform on its head, which will generally kill it at once, unless it is a large moth ; then pass a pin through the side of the thorax, and pin the insect on its side to the cork bottom of the pocket-box until you return, when it should be at once placed in the "setting-box."

The method of "setting" butterflies and moths is as follows : Place the body of the insect in the groove, expand and arrange the wings and antennæ, and secure them with card braces, transfixed with pins, as in *Fig. 2*. The insects should remain in the "setting-box" for ten days, before they are permanently placed in the cabinet. But one pin should transfix the insect, and that should be passed through the thorax to the extent of half an inch, so that the specimen, when placed in the cabinet, will be fully one quarter of an inch from the bottom. A piece of gum camphor should be kept in the "setting-box" to prevent the ravages of destructive larvæ.

As butterflies have a chosen locality, their capture is in some respects easy. It should be remembered, however, that butterflies do not fly during the prevalence of a north or north-east

wind, however favorable the locality may be at other times.

Hawk Moths frequent flowers and flower gardens during the morning or evening twilight, and, consequently, should be sought for while they are on the wing in search of food. From the buzzing noise they make in flying, and their habit of hovering over the flowers while they extract the sweets, they are often mistaken for humming-birds.

When one of these large-bodied insects is caught and killed, it is well to slit open the abdomen, remove the contents, and insert cotton wool saturated with spirits of camphor.

Moths, in general, fly by night only, and, consequently, must be sought for at night. A plan I have found very successful in catching them, is, to mix a little rum or whiskey with some common molasses, and apply it to the trunks of trees growing on the skirts of woods and fields, especially such as have a western aspect. Do this about sunset, and retire for an hour or two; then return with a lighted lamp, approach the trees cautiously, holding your net in readiness to catch such moths as are hovering about, or have fallen from the trees intoxicated. Calm, warm, and dark nights, are the most favorable for catching moths.

SYNOPSIS  
OF  
BUTTERFLIES AND MOTHS  
OF CANADA.

---

GROUP I.—*Papiliones*.—*Butterflies*.

---

PAPILIONIDÆ.—Swallow-tail Family.

*Genus* PAPILIO.

*Papilio turnus*.—Yellow Swallow-tail.

“ *asterias*.—Black Swallow-tail.

“ *tröilus*.—Orange-spotted Swallow-tail.

PIERIDÆ.—White Butterfly Family.

*Genus* PIERIS.

*Pieris oleracca*.—Pot Herb Butterfly.

“ *rapæ*.—Garden White Butterfly.

“ *protodice*.—Cabbage Butterfly.

*Genus* COLIAS.

*Colias philodice*.—Yellow Butterfly.

## NYMPHALIDÆ.—Nymphalis Family.

*Genus* LIMENITIS.*Limenitis cphestion*.—Orange-spotted Butterfly.“ *arthemis*.—Circled Emperor.“ *missippus*.—Dark Veinlet.*Genus* DANAIS.*Danais archippus*.—Queen of Spain Butterfly*Genus* ARGYNNUS.*Argynnis aphrodite*.—Silver-spotted Fritillary.“ *bellona*.—Brimstone Butterfly.“ *myrina*.—Black-spotted Fritillary.*Genus* MILITÆA.*Militæa phaeton*.—Black Militæa.“ *tharos*.—Drappled Militæa.“ *Harrissii*.—Harris's Butterfly.*Genus* PYRAMEIS.*Pyrameis cardui*.—Painted Lady.“ *Huntera*.—Marbled Cynthia.“ *atalanta*.—Red Admiral.*Genus* VANESSA.*Vanessa antiopa*.—Camberwell Beauty.“ *F. album*.—J. Butterfly.“ *Milbertii*.—Red Empress.



Genus GRAPTA.

*Grapta interrogationis*.—Semicolon Butterfly.

“ *comma*.—Comma Butterfly.

“ *c-argenteum*.—Silver L. Butterfly.

“ *faunus*.—Cinnamon Butterfly.

Genus JUNONIA.

*Junonia cania*.—The Peacock Butterfly.

Genus SATYRUS.

*Satyrus alope*.—Brown Butterfly.

“ *Boisduvallii*.—Boisduvall's Butterfly.

Genus NEONYMPHÆ.

*Neonymphæ eurytris*.—Eurytris Butterfly.

Genus CHRYSOPHANUS.

*Chrysophanus americana*.—Copper Butterfly.

HESPERIDÆ.—Skipper Family.

LYCÆNIDÆ.—Azure-Butterfly Family.

Genus THECLA.



GROUP II.—*Sphinges*.—*Hawk-Moths*.

---

SPHINGIDÆ.—Hawk Moth Family.

*Genus* SPHINX.

*Sphinx quinquemaculatus*.—Five-spotted Sphinx.

“ *drupiferarum*.—Plum Sphinx.

“ *gordius*.—Apple Sphinx.

“ *chersis*.—Lilac Sphinx.

*Genus* THYREUS.

*Thyreus Abottii*.—Abbot's Hawk Moth.

*Genus* PHILAMPELUS.

*Philampelus achemon*.—Achemon Hawk Moth.

*Genus* SMERINTHUS.

*Smerinthus exaccata*.—Blind Smerinthus.

*Genus* SESIA.

*Sesia thysbe*.—Bee Moth.

“ *diffinis*.—Green Bee Moth.

ÆGERIDÆ.—Ægerian Family.

Genus ÆGERIÆ.

- Ægerie exitosæ*.—Peach-tree Borer.
- “ *tipuliforme*.—Currant-bush Borer.
- “ *cucurbitæ*.—Squash-vine Borer.
- “ *polistiformis*.—Grape-root Borer.

Genus EUDRYAS.

*Eudryas grateæ*.—Beautiful Wood Nymph.

ZYGÆNIDÆ.—Glaucopidian Family.



GROUP III.—*Phalaenae*.—*Moths*.

—

BOMBYCIDÆ.—Silk Worm Family.

*Genus* LITHOSIA.*Lithosia miniata*.—Striped Lithosian.*Genus* DEIOPEIA.*Deiopeia bella*.—Beautiful Deiopeia.*Genus* CALIMORPHA.*Calimorpha militaris*.—Soldier Moth.*Genus* CROCATA.*Genus* ARCTIA.*Arctia virgo*.—Virgin Tiger Moth.“ *phalerata*.—Harnessed Moth.“ *Isabella*.—Isabella Tiger Moth.*Genus* SPILOSOMA.*Spilosoma virginica*.—Virginia Ermine Moth.*Genus* LEUCARCTIA.*Leucarctia acraea*.—Salt Marsh Moth.

Genus HYPHANTRIA.

- Hyphantria textor*.—Weaver.  
" *cunea*.—Spotted Weaver.

Genus HALESIDOTA.

- Halesidota caryae*.—Hickory Moth.  
" *tessellaris*.—Checkered Tussock  
Moth.  
" *maculata*.—Oak Moth.

Genus ORGYIA.

- Orgyia leucostigma*.—White-marked Moth.  
" *antiqua*.—Vaporer Moth.

Genus NOTODONTA.

- Notodonta unicornis*.—Unicorn Moth.

Genus LAGOA.

- Lagoa crispata*.—Common Lagoa Moth.

Genus LIMACODES.

- Limacodes scapha*.—V-Moth.

Genus PSYCHE.

Genus PEROPHORA.

- Perophora Melsheimerii*.—Melsheimer's Sack-  
bearer.

*Genus* ACTIAS.*Actias luna*.—Empress Luna Moth.*Genus* PLATYSAMIA.*Platysamia cecropia*.—Empress Cecropia Moth.*Genus* CALLOSAMIA.*Callosamia promethea*.—Promethea Moth.*Genus* TELEA.*Telea polythemus*.—Polythemus Moth.*Genus* HYPERCHIRIA.*Hyperchiria varia*.—Peacock Moth.*Genus* CITHERONIA.*Citheronia regalis*.—Royal Moth.*Genus* EACLES.*Eacles imperialis*.—Imperial Moth.*Genus* ANISOTA.*Anisota senatoria*.—Senator Moth.*Genus* CLISIOCAMPA.*Clisiocampa americana*.—American Tent Caterpillar Moth.*disstria*.—Forest Tent Caterpillar.

*of Canada.*

79

*Genus* HEPIOLA.

*Hepiolas argenteo maculata.*—Silver-spotted  
Moth.

*Genus* NYLEUTES.

*Nyleutes robinia.*—Locust-tree.

NOCTULELIDÆ.—Owlet Moth Family.

*Genus* LEUCANLE.

*Genus* BREPHOS.

*Genus* AGROTIS.

*Genus* CATOCALA.

*Genus* GORTYNA.

GEOMETRIDÆ.—Geometrid Family.

*Genus* ANISOPTERYX.

*Anisopteryx vernata.*—The Canker-worm Moth.

*Genus* HIBERNIA.

*Hibernia tiliaria.*—The Autumn Moth.

*Genus* ENNOMOS.

*Ennomos magnaria.*—Dusted Sulphur Moth.

*Butterflies and Moths**Genus* ANGERONA.*Angerona crocataria*.—Citron Moth.*Genus* NEMATOCAMPA.*Genus* CHÆRODES.*Chærodes transversata*.—Maple Moth.*Genus* ENDROPIA.*Genus* AMPIIIDASY.*Genus* ACIDALIA.*Genus* BOARMIA.*Genus* EUPITHECIA.

PYRALIDÆ.—Delta Moth Family.

*Genus* HYPENA.*Hypena humuli*.—The Hop-vine Moth.*Genus* AGLOSSA.*Aglossa pinguinalis*.—The Grease Moth.*Genus* PYRALIS.*Pyralis farinalis*.—The Meal Moth.*Genus* GALLERIA.*Galleria cereana*.—The Wax Moth.



Genus PEMPELIA.

*Pempelia grossularia*.—Gooseberry Worm Moth.

TORTRICIDÆ.—The Leaf-Rolling Family.

Genus ANCHYLOPERA.

*Anchylopera fragariae*.—The Strawberry Leaf Moth.

Genus CARPOCAPSA.

*Carpocapsa pomonella*.—The Apple Moth.

Genus LOZOTENIA.

*Lozotenia rosaceana*.—The Rose Moth.

TINEIDÆ.—Tinea Family.

Genus TINEA.

*Tinea flavifrontella*.—The Cloth Moth.

" *tapetzella*.—The Carpet Moth.

" *granella*.—The Grain Moth.





## INDEX OF COMMON NAMES.



### A.

	PAGE.
Apple Moth .....	64
Autumn Moth .....	58
American Tent Caterpillar Moth .....	52
Apple Sphinx .....	24
Abbot's Hawk Moth .....	25
Achemon Hawk Moth.....	26

### B.

Black Swallow-tail .....	3
Brimstone Butterfly.....	10
Black Spotted Fritillary .....	10
Black Militæa .....	11
Brown Butterfly .....	18
Boisduvall's Butterfly .....	18
Blue Butterflies.....	21
Beautiful Deiopeia .....	34
Beautiful Wood Nymph .....	31
Bee Moth .....	28
Blind Smerinthus .....	27

## C.

Common Lagoa Moth .....	40
Checkered Tussock Moth .....	38
Currant-bush Borer .....	30
Coffee Butterfly.....	19
Common Butterfly .....	17
Camberwell Beauty .....	14
Circled Emperor .....	7
Cabbage Butterfly.....	5
Carpet Moth .....	65
Cloth Moth .....	65
Citron Moth .....	59
Canker Worm Moth.....	57
Comma Butterfly .....	17

## D.

Drappled Militæa .....	11
Dark Veinlet .....	7
Dusted Sulphur Moth .....	58

## E.

Emperor Cecropia Moth .....	45
Empress Luna Moth .....	43
Eurytris Butterfly .....	19

## F.

Five-spotted Sphinx.....	22
Forest Tent Caterpillar Moth.....	53

*Index.* 85

G.

Gooseberry-worm Moth .....	60
Grain Moth .....	66
Gray Maple Moth.....	56
Green Bee Moth .....	28
Garden White Butterfly .....	5
Grape-root Borer .....	30

H.

Harris's Butterfly .....	11
Hickory Moth .....	38
Harnessed Moth .....	35
Hop-vine Moth.....	59
Imperial Moth .....	58

J.

J Butterfly .....	15
-------------------	----

L.

Lilac Sphinx .....	24
Locust Tree Carpenter Moth ... ..	53

M.

Melscheimer's Sack-bearer .....	41
Marbled Cynthia .....	12

O.

Orange-spotted Butterfly.....	6
Orange-spotted Swallow-tail .....	3
Oak Moth .....	38

## P.

Polyphemus Moth.....	47
Promothea Moth .....	45
Plum Sphinx.....	24
Peach-tree Borer .....	29
Pot-herb Butterfly .....	5
Painted Lady .....	12
Peacock Butterfly.....	17
Peacock Moth .....	49

## Q.

Queen of Spain Butterfly .....	9
--------------------------------	---

## R.

Rose Moth.....	64
Royal Moth .....	50
Red Empress.....	15
Red Admiral.....	13

## S.

Spotted Weaver .....	37
Salt Marsh Moth .....	37
Soldier Moth.....	34
Striped Lithosian .....	33
Squash-vine Borer .....	30
Silver L Butterfly.....	17
Semicolon Butterfly ... ..	16
Strawberry-leaf Moth .....	63
Senator Moth .....	52

*Index.* 87

T.

Tiger Moth ..... 36

U.

Unicorn Moth ..... 40

V.

V Moth ..... 40

Vaporer Moth ..... 39

Virgin Tiger Moth ..... 35

Virginia Ermine Moth ..... 36

W.

White-marked Moth..... 39

Weaver ..... 37

Wax Moth..... 60

Y.

Yellow Swallow-tail ..... 1

Yellow Butterfly ..... 6







## INDEX OF TECHNICAL NAMES.



### A.

	PAGE.
<i>Anchylopera fragariæ</i> .....	63
<i>Angerona crocataria</i> .....	59
<i>Anisopteryx vernata</i> .. .....	57
<i>Apatela americana</i> .. .....	56
<i>Anisota senatoria</i> .....	52
<i>Actias luna</i> .....	43
<i>Argynnis aphrodite</i> ... .....	9
" <i>bellona</i> .....	10
" <i>myrina</i> .....	10
<i>Arctia virgo</i> .....	35
" <i>phalerata</i> .....	35
" <i>Isabella</i> .....	36
<i>Ægeriæ exitosæ</i> .....	29
" <i>tipuliforme</i> .....	30
" <i>cucurbitæ</i> .....	30
" <i>polistiformis</i> .....	30

### C.

<i>Carpocapsa pomonella</i> .....	64
<i>Clisiocampa disstria</i> .....	53
" <i>americana</i> .....	52

<i>Index.</i>		PAGE.
o		
Citheronia regalis .....		50
Callosamia promethca .....		45
Chærodes transversata .....		59
Colias philodice.....		6
Chrysophanus americana .....		19
Calimorpha militaris.....		34
D.		
Deiopeia bella .....		34
Danaïs archippus .....		9
E.		
Eudryas gratæ .....		31
Ennomos magnaria .....		58
Eacles imperialis .....		50
G.		
Grapta interrogationis .....		16
“ comma .....		17
“ c-argenteum .....		17
“ faunus .....		17
Galleria cereana .....		60
H.		
Hyphantria textor .....		37
“ cunea .....		37
Halesidota caryæ .....		38
“ tessellaris.....		38
“ maculata.....		38

*Index.* 91

	PAGE.
Hibernia tiliaria .....	58
Hypena humuli .....	59
Hepialus argenteo-maculata .....	53
Hyperchiria varia.....	49

J.

Junonia cænia .....	17
---------------------	----

L.

Lozotænia rosaceana .....	64
Lagoa crispata .....	40
Limacodes scapha.....	40
Leucartia acræa .....	37
Lithosia miniata .....	33
Limenitis ephestion .....	6
"    arthemis .....	7
"    misippus .....	7

M.

Melitæa phæton .....	11
"    tharos .....	11
"    Harrisii .....	11

N.

Notodonta unicornis.....	40
Neonympha eurytris.....	19

O.

Orgyia leucostigma .....	39
"    antiqua .....	39

	PAGE.
Philampelus achemon .....	26
Pempelia grossularia.....	60
Platysamia cecropia .....	45
Perophora Melscheimerii.....	41
Papilio turnus .....	1
" troilus .....	3
" asterias .....	3
Pieris oleracea .....	5
" rapæ.....	5
" protodice.....	5
Pyrameis cardui .....	12
" Huntera .....	12
" atalanta.....	13

## S.

Sphinx quinquemaculatus .....	22
" drupiferarum .....	24
" gordius .....	24
" chersis .....	24
Smerinthus excæcata .....	27
Sesia thysbe .....	28
" diffinis .....	28
Spilosoma virginica .....	36
Satyryus alope.....	18
" Boisduvallii .....	18

## T.

Telea polyphemus.....	47
Tinea flavifrontella .....	65

*Index.* 93

	PAGE.
Tinea tapetzella .....	65
“ granella .....	66
Thyreus Abbottii .....	25

V.

Vanessa antiopa .....	14
“ J-album .....	15
“ Milbertii .....	15

X.

Xyleutes robinæ .....	53
-----------------------	----



*IN PRESS.*

---

BY THE SAME AUTHOR :

**THE FERNS OF CANADA :**

*Described and Illustrated.*

Crown 8vo., cloth, fine tinted paper, extra gilt  
side, pp. 100.

---

BY THE SAME AUTHOR :

**THE WILD FLOWERS OF CANADA :**

*Described and Illustrated.*

Crown 8vo., cloth, fine tinted paper, extra gilt  
side, pp. 150.