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LEPIDOPTERISTS  
CALENDAR



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THE  
LEPIDOPTERIST'S  
CALENDAR:

GIVING THE TIME  
WHEN THE BRITISH LEPIDOPTERA APPEAR  
IN THE  
EGG, LARVAL, PUPAL, AND IMAGO STATES;  
WITH  
THE FOOD-PLANT, AND HABITAT.

BY

JOSEPH MERRIN,

(AUTHOR OF "BUTTERFLYING WITH THE POETS," ETC.)

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SECOND EDITION.

ENLARGED AND CORRECTED TO THE PRESENT TIME.

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GLOUCESTER:

HERBERT MARSDEN, REGENT STREET.

1875.

PRINTED BY  
JOHN BELLOWS, STEAM PRESS,  
GLOUCESTER.

K-QL562

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1875

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## INTRODUCTION.

(FROM THE FIRST EDITION.)

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To know how to do a thing is a great step towards its accomplishment; but to know exactly *when* to do it, is often the one thing needful to insure success. The regularity with which, at certain definite dates, most species of Butterflies and Moths ordinarily appear, is something almost marvellous; and many species are not obtained in fine condition through inattention to the time of their advent, while some may be missed altogether. Although every care has been taken in giving the dates of appearance, it is evident that some allowance must be made for the difference of locality, for our variable climate, and for other causes, which militate against an unerring accuracy being always attainable. The time given for the Imagoes includes the earliest at which they appear, in ordinary seasons, so that the Collector may be able to secure them in the best condition. It is hoped that the notes under most of the months will be found to contain some useful hints; and that the CALENDAR, altogether, will prove a useful TIME-GUIDE to the Lepidopterist throughout the year.

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# INTRODUCTION

TO THE SECOND EDITION.

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The study of Butterflies and Moths (Lepidoptera, or scale-winged insects), has been much more generally pursued in this country, than that of any other order of the class *Insecta*. Most of the large towns in England contain one or more students of this attractive order, who take a commendable pride in increasing and improving their collections of specimens ; while in many of our largest centres of population societies have been established to advance the science of Entomology, and increase the number of its students.

Under the encouragement of Government the study of Science generally has, of late years, been immensely extended. The preference largely given to the Physical Sciences, over the Natural Sciences, is doubtless due to the practical mode in which physics have been taught ; while the devotees of Nature have been offered little else than theory, as derivable from books. Field Botany, Field Geology, or Field Entomology has, to a large degree, had to be pursued by individual students, at their own discretion, unaided by that light of experiment and demonstration, which, in the hands of good, practical teachers, has so effectively helped forward the student of Physical Science. This is an omission which ought to be supplied, as the pursuit of Field Studies would be an immense benefit to the sedentary populations of our large cities and towns.

The favourable reception accorded to the First Edition of THE LEPIDOPTERIST'S CALENDAR proved that it supplied, however imperfectly, a want that was really felt. The present Edition has been re-cast, re-written, and considerably extended. While largely adding details regarding various species, the Author believes he has carried out several improvements, which



will make the Work both of wider scope, and of easier reference. The arrangement carried out (Doubleday's), is that which is now generally adopted in this country. The number of new species added to our Lists since the publication of the First Edition of the CALENDAR, in 1860, is considerable, and affords a striking proof of the intelligent energy which has been exercised in working out the Lepidoptera. This fact, coupled with the great increase which has taken place in our knowledge regarding a large number of species, rendered a NEW EDITION of the CALENDAR desirable, independent of the fact of its having been for some time out of print, and still in considerable request.

In a work of this kind, which is mainly made up of recorded observation, the great aim of the Author has been to indicate the leading points of what is known of the British Lepidoptera, in all their stages, and to record how they behave *in a state of nature*, rather than under the artificial treatment of the breeder, with a view to finding the species desired, with the smallest expenditure of time and trouble. While breeding insects from the egg is an admirable method of gaining insight into the habits of some species, which could not otherwise be obtained, and especially for the initial steps where the food-plant and habits are wholly unknown, it often has its drawbacks in hiding from view habits pursued in a state of nature, to obtain food, evade enemies, and other important points which pertain to the life-history of the species. Breeding has a legitimate function to perform, in helping to enlighten us as to the occult habits of many species; but to continue the process year after year with the same species, simply for the sake of obtaining "fine specimens" for cabinet exhibition and exchange, is not true science. No one ever heard of a botanist gathering seeds of a rare plant, and imitating the natural conditions in his own garden, and then offering the products of his industry in exchange for other plants he has not been able to obtain. One of the evil results of this system has been that (many rare or local species having been thus secured) no effort is made to obtain a knowledge of their habits in a state of nature, simply because the "blank" their absence caused in the cabinet has been filled up, and we know what the species can be got to eat, and how it behaves in the captivity of the breeding-cage.

In collecting the many details set forth in the CALENDAR, the Author has received important aid from several Entomologists,

including Mr. Charles G. Barrett, Mr. J. B. Hodgkinson, Mr. J. Sang, M. Ragonot, Mr. H. Marsden, Mr. G. T. Porritt, Mr. R. Mitford, Rev. H. Harpur Crewe, Mr. Howard Vaughan, Rev. B. Smith, and others, to all of whom he desires to express his grateful acknowledgments.

With respect to the plan of the CALENDAR, it may be explained that under each month of the year is given the species, as they appear, as

- OVA**, or Eggs ;  
**LARVÆ**, or Caterpillars ;  
**PUPÆ**, or Chrysalides ; and as  
**IMAGOS**, or perfect Insects ;

With the Plant, or Material upon which they may be found ; or the kind of Hiding-place, or Habitat, in which they are most frequently met with. Where no peculiar habitat could be tabulated, in the case of the Tortrices and the Tinæa, some of the more noted localities are mentioned. The Lists of Ova, as well as of Pupæ, might have been enlarged ; but only those species have been notified about which something definite can be stated. It is only chiefly those Larvæ which hibernate that have had the earlier period of the larval condition noted, in order that the full term of its duration may be indicated. In most other cases the period of approaching maturity only has been given.

After the work open to the Collector, each month, has been thus set forth,

## A List of British Lepidoptera,

WITH THE TIMES OF THEIR APPEARANCE.

follows, the months being indicated by Roman numerals. The life of an Insect, in its various stages, can thus be seen at a glance ; while details pertaining to each species will be found specified under the month which is given in the body of the Book, thus rendering a paged Index unnecessary. So few of the smaller species being mentioned as OVA and PUPÆ, they are omitted from the LIST, the Larvæ and Imagos only being given.

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# Explanation of Abbreviations.

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In order to save space, a few abbreviations have been used in the Monthly Lists. They are as follow :—

s.	...	...	...	Sometimes ; that the species is not constant in appearing at the time indicated
r.	...	...	...	Root ; that the species is found at the root of the plant mentioned
sub.	...	...	...	Subterranean ; that the species pupates in the earth
fl.	...	...	...	Flower, or flowers
♂	...	...	...	Male
♀	...	...	...	Female
l.	...	...	...	Light
b.	...	...	...	Beginning of a month
m.	...	...	...	About the middle of a month
e.	...	...	...	Towards the end of a month
var.	...	...	...	Variety
N.	...	...	...	North
S.	...	...	...	South
E.	...	...	...	East
W.	...	...	...	West
2	...	...	...	Second appearance, or second brood
3	...	...	...	Third, ditto
h.	...	...	...	Hibernates, or hibernation

# Corrections and Additions.

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P. 35, for the title *Larvæ* on the top of this p. read *Pupæ*.

" 53, near the bottom of the second column *dele* B. uliginosana.

" 99, line 8, *dele* B. uliginosana.

" 115, line 21, for B. uliginosana, read D. Lorquiniana.

Add to the hibernating larvæ appearing in the spring months : N. genistella, from Sept., in a web, among furze.

Add to p. 93, after " fraxinata : " extensaria, a large and rare Eupethecia, reported by Mr. Prest, of York, to have been taken, by Mr Sawyer, on some waste ground near Hull, about the middle of the summer of 1873.

\* \* A few typographical errors in the names will be found in the body of the Book, but they have been corrected in the LIST.

# The Lepidopterist's Calendar

---

## JANUARY

### OVA]

Beyond a continuation of the winter's work of searching for pupæ, &c., which will be found specified under the months best adapted for *commencing* it, the Lepidopterist will not find much to do in the way of out-door occupation this month. Now is the time to ramble into fresh districts, with the view of discovering new localities, the character of which may often be judged of by the trees, herbage, and general appearance, although no insect-life be stirring. With a view to future reference, the result of such visits should not fail to be recorded in the Entomological Diary, which no one engaged in the study should omit to keep.

While egg-searching may be carried on at those times when little or nothing is stirring in the insect-world, and

“The banks that wore a smiling green,  
With rank defilement overspread,  
Bewail their flowery beauties, dead,”

the occupation will have its advantage in sometimes rewarding the searcher with a large batch of perhaps some “good” species, besides furnishing him with a knowledge of the habits of many previously unknown. A collection of eggs of Lepidoptera, preserved upon the objects on which they have been laid, would be very interesting. Insect eggs are, of course, generally laid upon, or near the food of the future larva; and therefore the localities where known species occur should be more especially chosen for the work of searching.

Although many eggs are laid late in the spring, or during the summer, soon after the imagos emerge, the eggs of several autumnal species, as well as of many which do not pair until the spring, may be found during the early months of the year, by careful searching. Unless the eyesight is very good, it is desirable for the searcher to call in optical aid in the shape of spectacles, by which he would be enabled to clearly see a minute object like the egg of a lepidopteron at a distance of one or two feet. His chances of success will be thus very much increased. Bright or sunny days should be chosen by preference for egg hunting. By exercise the eye will become rapidly accustomed to this kind of work, and proportionate success may be expected. Many species, particularly some of the bombyces, begin to lay almost immediately after they emerge. Other kinds, notably some of the butterflies,

## OVA] JANUARY

postpone the season of pairing and laying until they have well-nigh worn themselves ragged and bare. A knowledge of these facts will, of course, aid the searcher in his discovery of eggs. Much time may be saved by hitting upon the right time when, and the right place where, to look for certain species, resulting from actual observation, or reasonable deduction.

Many other species besides those named in the lists given in the Calendar, whose larvæ arrive at maturity towards the end of May, may be found during this and the next two months, by searching the twigs, shoots, &c., of trees and bushes.

- |                      |  |                        |  |
|----------------------|--|------------------------|--|
| T. quercus .....     | on oak   | H. pennaria .....      | on oak   |
| " w-album .....      | on wych elm  | F. pinetaria .....     | on bilberry  |
| " pruni .....        | on sloe  | H. aurantiaria .....   | on oak, birch, hawthorn, &c.   |
| L. Ægon .....        | on Ornithopus perpusillus; white   | " defoliaria .....     | on oak, nut, sloe, hawthorn, birch, elm, lime, &c.                       |
| H. comma .....       | on trefoil, and other Leguminosæ   | C. brumata .....       | on oak, and other trees  |
| L. dispar .....      | on trunks of sloe, hawthorn, and fruit trees; in a conical heap, covered with down                         | " boreata .....        | on birch   |
| " monacha .....      | on oak, beech, birch, fir, apple, &c.  | O. dilutata .....      | on oak, and other trees  |
| T. cratægi .....     | on hawthorn; also s. sloe, sawallow, birch, oak  | " filigrammaria .....  | on sawallow  |
| P. populi .....      | on oak, poplar, lime, ash, hawthorn  | E. subciliata .....    | on maple; at foot-stalk of leaf  |
| B. neustria .....    | on hawthorn, sloe, orchard trees; in batches spirally round twigs and branches                             | M. rubiginata .....    | on alder; large  |
| " castrensis .....   | on Artemisia maritima, Daucus maritimus, &c.   | S. vetulata .....      | on buckthorn   |
| E. vespertaria ..... | on nut   | C. immanata .....      | probably on alder, and other trees, and strawberry, bilberry, &c.; large |
| " apiciaria .....    | on poplar, willow, sawallow  | " prunata .....        | on currant, and gooseberry; upon the bark; large                         |
| C. elinguarina ..... | on oak, honeysuckle, hawthorn, sloe; also heath, bilberry, &c.; brick-shaped, large, purplish slate colour | " testata .....        | on heath, birch, sawallow, poplar, &c.; singly, large                    |
| E. alniaria .....    | on alder, birch, sawallow, beech, &c.; brick-shaped, like all the Ennomos                                  | " populata .....       | on bilberry, whortleberry; globular, large, yellow                       |
| " tiliaria .....     | on oak, sawallow, birch, alder, &c.; purplish  | " fulvata .....        | on dog rose; rose pink, large  |
| " fuscantaria .....  | on ash, privet; upon the twigs, in small batches   | " pyraliata .....      | on Galium, and hawthorn; large   |
| " erosaria .....     | on oak, birch, &c.   | " dotata .....         | black, and red currant; large  |
| " angularia .....    | on oak, birch, beech, &c.  | E. cervinaria .....    | on mallow  |
|                      |  | " lineolata .....      | on Galium  |
|                      |  | C. spartiata .....     | on broom   |
|                      |  | T. chærophyllata ..... | on Bunium flexuosum  |
|                      |  | P. Cassinea .....      | on oak   |

## OVA]

## JANUARY

- P. plumigera ...on maple, chiefly on the twigs, in hedges not shaded by trees. Often singly, but s. in clusters of two, three, or many more. Circular, smooth, brown above, whitish beneath
- G. flavago.....on marsh thistles, burdock, &c. ; in heaps
- O. lota .....on willows, & sallow
- T. subtusa.....on poplar; upon the twigs
- " retusa .....sallow, willow, poplar; upon the axils of the leaves
- P. chi .....on dock, hawthorn, sallow; and probably lettuce, sow thistle, "tea tree," &c.; purplish brown
- " flavocincta ...on dock, chickweed, groundsel, mint, &c.; in gardens on everlasting pea, plum, &c.
- H. proboscidalis on nettle; rather large, globular, (slightly oval) indented on upper side; pale yellow

## LARVÆ]

The following are among the larvæ which may be found this month :—

- L. lithargyria ...chickweed, plantain, grasses, &c.
- A. saucia .....from Nov., plantain, dock, and other low plants
- P. meticulosa ...from Nov., groundsel, and various low plants
- S. anomala .....grass, in open parts of woods
- P. farella .....Anthyllis vulneraria; may be found hibernating in balls of sand during the winter
- E. elutella .....nuts, cocoa nibs, figs, dog biscuit, &c.
- " ficella .....figs
- " artemesiella . Artemesia vulgaris, and A. absinthium; through the winter inside the r. stalks
- M. cephalonica...from Nov., dried currants, &c.
- P. gentiana .. ...teazle heads
- O. antiquana ...Stachys arvensis, r.
- E. gallicolana ...oak apple galls
- C. cosmophorana bark of spruce and Scotch fir
- R. resinana .....in twigs of Scotch fir; and it is said in the resinous exudation
- N. aurella.....bramble; may be found almost throughout the year, mining bramble leaves
- S. corollana .....shoots of aspen
- D. tanacetana (?) tansy
- A. Schreibersiana bark of elm
- " æniana ..... in r. of ragwort
- C. Dipoltana ...seeds of Achillea millefolium
- T. rusticella .....on cloth, &c.
- CE. pseudo-spretella in dried peas, &c.
- E. fenestrella ...all the year round; on waste substances in houses
- B. grandipennella furze

Besides the above there are a large number of other larvæ which have hibernated. These, however, will be found specified under the next, and following months, by which time their food-plants are beginning to be obtainable.

If the winter is a very mild one, some of the species set out under February and March may be found this month, and some portion of the work falling due in those months may now be performed.

# PUPÆ] JANUARY

Pupæ hunting this month, with the thermometer down, and "the wind's low stave" exercising its depressing effect, is likely to be rather trying work. In the list which is appended the species which are to be found in the early part of the winter are repeated, in order that the full amount of work to be done in this department may be seen, and that that which has not been sufficiently attended to before the winter set in, may be looked after as opportunity offers.

- P. Machaon .....on stems of Peucedanum palustre ; in fens  
 P. brassicæ... }  
 " rapæ..... } on palings, walls,  
 " napi..... } &c.  
 A. cardamines ...on stems of grass, &c.  
 S. ocellatus .....sub. at willows, poplars, &c.  
 " populi .....sub. at poplars, willow, &c.  
 " tiliaë .....sub. at elm, lime, beech  
 C. ligniperda ...at various trees ; spun up, under bark, &c. ; but s. buries  
 L. asellus .....spun up, on a leaf  
 A. mendica .....under moss, on trees bordering ditches  
 " lubricipeda } spun up, on trees,  
 " menthrasti } palings, &c.  
 " urticaë .....under moss, on trees  
 O. pudibunda ...in dead leaves, under moss, &c.  
 E. lanestris .....cocoon on the ground, near hawthorn, sloe, &c. ; s. remains in pupa many years  
 E. versicolora ...spun up, at birch  
 S. carpini .....cocoon amongst leaves, heath, &c.  
 E. dolobraria ...under moss, on oak, &c.  
 S. illunaria .....sub., at willow, oak, &c.  
 " lunaria .....at sloe, oak, nut, &c.  
 O. bidentata .....under moss, on various trees  
 N. zonaria .....sub., at sandhills, on the coast  
 " hispidaria ....at oak  
 B. hirtaria.....sub., at elm, linfe, ash, and fruit trees  
 A. prodromaria sub., at oak, elm, &c.  
 " betularia .....sub., at oak, elm, birch, and other trees  
 H. abruptaria ...spun up, on twigs, &c., of lilac, rose, or privet  
 T. consonaria ...under moss, at r. of beech, oak, birch  
 T. crepuscularia under moss, on alder, birch, elm, poplar, willow ; or in bark crevices  
 " biundularia ...spun up, on oak, and birch  
 " punctulata ...under moss, on birch and alder ; or in bark crevices  
 I. lactearia .....spun up, among leaves of oak, and birch  
 E. porata .....fastened to leaf of oak  
 " punctaria .....fastened to leaf of oak, or birch  
 " trilineararia ...fastened to leaf of beech  
 " pendularia ...fastened to leaf of birch  
 E. heparata .....among moss, &c., on alder  
 C. exanthemaria spun up, under leaves of willow, and alder  
 M. liturata .....at larch, rarely within 2 ft. of the tree  
 N. pulveraria ...in withered willow leaves  
 F. carbonaria ...among dead leaves of willow, and birch  
 " piniaria .....at Scotch fir, and larch ; in open places in woods, rarely within 2 ft. of the tree, at 1½ to 2 in. deep  
 H. rupicapraia in a slight web, on the ground, among hawthorn, sloe, or oak



## PUPÆ]

## JANUARY

- H. leucophearia on the ground, near oaks  
 " progemmaria sub., at oak, birch, hornbeam, &c.  
 " defoliaria.....sub., at oak, hawthorn, sloe, hornbeam, nut, elm, &c.  
 A. æscularia.....sub., at elm, oak, lime, sloe, hawthorn  
 L. multistrigaria sub., about Galium  
 E. albulata .....within the spun-up sepals of yellow rattle  
 " decolorata ...about Lychnis dioica  
 E. venosata .....about Silene, and Lychnis  
 " consignata ...probably under moss, & loose bark, in apple orchards  
 " pulchellata ...among the seeds, and dead fl. of foxglove  
 " isogrammata about Clematis vitalba  
 " fraxinata .....on ash, under moss, and loose bark  
 " vulgata.....sub., about various plants, and trees  
 " minutata .....about heath  
 " assimilata.....in crevices about currant and hop  
 " exiguata .....about oak, &c.  
 M. ocellata .....among Galium; spun up, near the ground  
 M. subtristata } sub., near Galium  
 " galiata ..... }  
 A. sinuata.....in earthen cocoon, on the ground among Galium  
 " badiata.. .....in earthen cocoon, on the ground, beneath dog rose bushes  
 " derivata .....sub., at dog rose  
 C. sagittata .....spun up, among Thalictrum, or on the ground near; in fens  
 E. lineolata .....cocoon attached to Galium verum, under the surface, on coast sandhills  
 D. bicuspis .....spun up, on birch trunks in the south; alder in the north; rarely above 2 ft. from the ground  
 " furcula .....spun up, on trunk of willow, or sallow  
 D. bifida .....spun up, on trunk of poplars  
 " vinula .....spun up, on trunk of willows, poplars, and sallow; three or four feet from the ground  
 S. fagi .....spun up, among leaves of beech, oak, birch, elm; s. at r.  
 P. bucephala ...sub., at various trees  
 C. curtula... .....spun up, between dead leaves of poplars, & sallow  
 " reclusa.....spun up, among dead leaves of sallow, poplars, willow  
 P. palpina .....at willows, and poplars, on edges of streams, or under sods near  
 N. camelina .....sub., at various trees  
 " cucullina .....sub., at maple, and sycamore  
 " carmelita .....sub., at birch  
 " dictæa .....at poplars, and willows, or under sods near  
 " dictæoides ...sub., at birch  
 " dromedarius 'sub., at birch, alder, nut  
 " ziczac .....sub., at poplars, sallow, willows  
 " trepida .....sub., at oak  
 " Chaonia .....sub., at oak  
 " Dodonea .....sub., at oak, and birch  
 T. batis.....near bramble, and wild raspberry  
 C. duplaris .....between united birch leaves  
 " fluctuosa .....among birch leaves  
 " flavicornis ...between united birch leaves  
 D. Orion .....at birch and oak, in a cocoon of gnawed bark, or rotten wood  
 A. tridens.....spun up, in crevices of bark, at hawthorn, sloe, rose, willow, sallow, mountain ash  
 " psi .....in bark crevices of various trees  
 " leporina .....in excavations in the bark of birch, poplar, alder, sallow

## PUPÆ]

## JANUARY

- A. aceris ..... spun up, among fallen leaves, and under loose bark of sycamore, horse chesnut, maple, birch, and s. oak [poplar  
 " megacephala under loose bark of  
 " strigosa .....among dead leaves of hawthorn, or rubbish, or decayed wood; s. sub.  
 " alni .....between leaves of various trées, or inside bramble sticks  
 " ligustri .....spun up, under moss, stones, &c., near ash, and privet; also sub.; also found under the topstones of walls against the tree  
 A. rumicis.....spun up, in crevices of trees, palings, walls, &c.  
 A. putris .....sub. at elm  
 D. pinastri .....in a cocoon, on the ground, among dock, sorrel, &c.  
 X. conspicillaris sub., at elm, and other trees  
 M. albicolon.....sub., near Atriplex, Chenopodium, lettuce, &c.  
 C. Morpheus .. spun up, in a leaf, or earthen cocoon attached to food-plant [feræ, grass, &c.  
 A. segetum, s. ...sub., among Cruciferæ  
 T. piniperda.....at Scotch, and other firs, in open places in fir woods, and on the margin, in crevices of bark; and under moss and fallen needles, rarely within 2 ft. of the tree, 1½ to 2 in. deep  
 T. gothica .....sub., at various trees  
 " leucographa } at r. of low plants  
 " rubricosa ... }  
 " instabilis ... } at r. of various trees  
 " stabilis ..... }  
 " opima ..... at r. of Rosa spinosissima, and dwarf willow; on sandhills in the north, below the sand  
 " populeti .....sub., at poplars, especially Populus nigra; deep  
 " gracilis .....sub., at willows, sallows, and low plants [&c.  
 " miniosa .....among fallen leaves,  
 " munda .....under moss, at base of oaks  
 T. cruda .....sub., at oak  
 D. carpophaga..sub., near Silene and Lychnis, on the coast; found by raking sandhills  
 " cæsia ... } sub., about Silene  
 " capsophila } maritima, on the coast  
 " capsincola ...sub., near Lychnis  
 H. serena .. .....sub., near Sonchus, and lettuce  
 " glauca .....sub., near willow, and birch  
 " oleracea .....sub., near elm, nettle, dock, &c.; also in kitchen gardens  
 " thalassina ...sub., near honeysuckle, willow, broom, &c.  
 X. lithoriza .....near honeysuckle, in a papery cocoon, on the ground  
 C. verbasci ... } sub., in earthen cocoon, near mullein and figwort  
 " scrophulariæ ) s. 2 years in pupa  
 " lychnitis .....in earthen cocoon, near white and black mullein; s. 2 years in pupa  
 " asteris .....near golden rod, &c.; s. 2 years in pupa  
 " gnaphalii ..... near golden rod  
 " umbratica ...sub., near Sonchus, &c.  
 H. marginata ...sub., near Ononis procurrens  
 " dipsacea .....among melilot, and probably Silene otites, and Linaria  
 A. myrtilli .....spun up, in heath  
 E. venustula.....at r. of Tormentilla reptans, and grass  
 B. argentula .....among grass, on the ground  
 B. parthenias ...at birch, in crevices of bark, or on the ground  
 A. urticæ.....spun up, among nettle leaves  
 " triplasia .....spun up, among nettle leaves, hop, &c. [garis  
 P. ænea.....among Polygala vulgaris  
 E. sambucalis ...spun up, in crevices, in palings, walls, &c., near elder  
 G. canella.....among Salsola kali

## IMAGOS]

## JANUARY

The following species emerge this month :—

- P. pilosaria ..... ♂ comes to l. ; ♀ on tree trunks, &c.      H. leucophearia... ♂ often flies by day; ♀ hides on oak trunks [round  
H. rupicaprararia on hedges at dusk      E. fenestrella ...in houses all the year

The following, with several other species, hibernate, and may be found in this and succeeding months, up to May or June :—

- G. rhamnii.....in and near woods on sunny days      A. saucia ..... this species has been taken this month and also in Mar., April, July, Aug., Sept., and Oct.  
C. Edusa .....at rest in hollow trees, outhouses, &c.      C. vaccinii .....  
" Hyale .....      " spadicea .....  
V. c-album ... } at rest in outhouses, &c., and s. flying      " erythrocephala  
" urticæ ..... }      S. satellitia .....  
" polychloros }      D. rubiginea.....  
" Antiopa ... } about on sunny days      H. croceago .....  
" Io ..... }      D. templi ... ..under stone heaps in elevated districts; one or two moths may s. be obtained by turning over a ton of stones!  
" Atalanta ... }  
" cardui ..... }  
M. stellatarum ...from Sept., s. flying in the sunshine      C. vetusta.....  
E. fasciaria ... } may be beaten from      " exoleta .....  
T. variata ..... } Scotch fir      X. conformis ...  
C. fluviata .....      " rhizolitha.....  
S. dubitata .....comes to light      " semibrunnea  
C. psitticata ... } in hollow trees, out-      " petrificata ...  
" miata ..... } houses, &c.      G. libatrix .....in cellars, and hol-  
" silaceata ... }      low trees  
A. auricoma .....      H. rostralis .....in gardens, and out-  
L. lithargyria?...      houses  
A. puta .....      E. ocella .....comes to l.  
" suffusa ..... ..

# FEBRUARY

## OVA]

Some of the bright days which sometimes occur during this month, when apparently,

“Winter storms have ceased to chide,”

will be found particularly suitable for egg searching, as it will generally be yet too early to do much with larvæ, or imagos. The eggs obtainable last month, and which still remain unhatched, are repeated under this, and succeeding months, until they hatch; so that the work to be done in this department can be clearly seen.

- |  |   |
|--|---|
| T. quercus .....on oak   | E. fuscantaria ...on ash, privet; upon the twigs, in small batches                      |
| " w-album..... on wytch elm  | " erosaria .....on oak, birch, &c.  |
| " pruni .....on sloe   | " angularia .....on oak, birch, beech, &c.  |
| L. Ægon .....on Ornithopus perpusillus; white  | H. pennaria .....on oak   |
| H. comma .....on trefoil, and other Leguminosæ   | F. pinetaria ... ..on bilberry [sloe  |
| L. dispar .....on trunks of sloe, hawthorn, and various fruit trees; in a conical heap, covered with down                    | H. rupicaprarua on oak, hawthorn, " aurantiaria... on oak, birch, hawthorn, &c.         |
| " monacha .....on oak, beech, birch, fir, apple, &c.   | " defoliaria .....on oak, nut, sloe, hawthorn, birch, elm, lime, &c.                    |
| T. cratægi .....on hawthorn; also s. sloe, sawlow, birch, oak  | C. brumata ... ..on oak, and other trees  |
| P. populi .....on oak, poplar, lime, ash, hawthorn   | " boreata .....on birch   |
| B. neustria .....on hawthorn, sloe, orchard trees; in batches spirally round twigs and branches                              | O. dilutata .....on oak, and other trees  |
| " castrensis .....on Artemesia maritima, Daucus maritimus, &c.   | " filigrammaria, on sawlow  |
| E. vespertaria ...on nut   | E. subciliata ...on maple; at foot-stalk of leaf  |
| " apiciaria .....on poplar, willow, sawlow   | M. rubiginata ...on alder; large  |
| C. elinguarua.....on oak, honeysuckle, hawthorn, sloe; also heath, bilberry, &c.; brick-shaped, large, purplish slate colour | S. vetulata .....on buckthorn   |
| E. alniaria .....on alder, birch, sawlow, beech, &c.; brick-shaped, like all the Ennomos                                     | C. immanata ...probably on alder, and other trees, and strawberry, bilberry, &c.; large |
| " tiliarua .....on oak, sawlow, birch, alder, &c.; purplish  | " prunata .....on currant, and gooseberry; upon the bark; large                         |
|  | " testata ..... on heath, birch, sawlow, poplar, &c.; singly, large                     |
|  | " populata .....on poplar, bilberry, whortleberry; globular, large, yellow              |
|  | " fulvata .....on dog rose; rose-pink, large  |

## OVA]

## FEBRUARY

- C. pyraliata .....on Galium, hawthorn ; large  
 " dotata .....on black, and red currant ; large  
 E. cervinaria.....on mallow  
 C. spartiata .....on broom  
 T. chærophyllata...on Bunium flexuosum  
 P. Cassinea .....on oak  
 P. plumigera ...on maple, chiefly on the twigs, in hedges not shaded by trees. Often singly, but s. in clusters of two, three, or many more. Circular, smooth, brown above, whitish beneath  
 G. flavago .....on stems of marsh thistles, burdock, &c. ; in heaps  
 O. lota .....on willows, & sallow  
 T. subtusa .....on poplar ; upon the twigs  
 " retusa .....on sallow, willow, poplar, ; upon the axils of the leaves  
 P. chi .....on dock, hawthorn, sallow ; and probably lettuce, sow thistle, "tea tree" &c. ; purplish brown  
 " flavocincta ...on dock, chickweed, groundsel, mint, &c. ; in gardens, on everlasting pea, plum, &c.  
 X. conformis ...on alder, birch  
 H. proboscidalis.on nettle ; rather large, globular (slightly oval) indented on upper side ; pale yellow

## LARVÆ]

If the weather is mild, many hibernating larvæ may be found in the evening, or in the day-time where the sun is shining. Those feeding on grasses, low plants, &c., are best found in the evening, with the aid of a lantern. The edges of wood-ridings, hedge banks, &c., should be examined on mild evenings, and a good supply of the herbage upon which the species is found be taken away for their sustenance.

- O. filigrammaria bilberry and sallows  
 C. munitata ...from Sept. groundsel  
 C. suffumata ...full fed in the autumn ; turns to a pupa this month or the next  
 B. glandifera ...from Sept., lichens on walls  
 " perla .....from Sept., lichens on walls  
 L. vitellina .....from Oct., grasses  
 " turca .....grasses  
 " lithargyria ...chickweed, plantain grasses &c.  
 " straminea ...common reed, and coarse grasses, in damp meadows and borders of streams  
 M. anceps ..... ?  
 A. basilinea .....from Aug., various plants  
 A. lucerneæ .....harebell, dandelion, &c.  
 N. festiva ..... from July, violet, sallows, foxglove, &c.  
 " umbrosa .....from Aug., dock and various low plants  
 E. lichenea .....from Nov., ragwort, and various low plants on the coast  
 P. empyrea .....from Nov., pilewort, &c.  
 S. anomala ..... grass, in open parts of woods  
 C. falsellus .....to May, the moss growing on walls and rocks, Grimmea pulvinata, &c.  
 C. phragmitellus from Oct., common reed  
 E. elutella .....nuts, chocolate, figs, &c.  
 P. gertianana ...teazle  
 O. antiquana ...Stachys arvensis, r.  
 E. scutulana ...in thistle stems

## LARVÆ]

## FEBRUARY

- E. gallicolana ...oak apple galls  
 C. cosmophorana bark of spruce, and Scotch fir  
 R. resinana .....in twigs of Scotch fir; and it is said in the resinous exudation  
 S. corollana .....shoots of aspen  
 D. tanacetana?...tansy  
 A. Schreibersiana bark of elm  
 C. Dipoltana ...seeds of Achillea millefolium  
 P. Birdella .....in grass stems, and probably among hay grass  
 T. rusticella .....on cloth, &c.  
 I. Oehlmanniella from Oct., in a flat case under fallen leaves  
 G. ericetella .....from Sept., Erica cinerea and on E. tetralix, and Calluna erica  
 G. luculella .....in decayed wood  
 P. Metzneriella...in heads of Centaurea nigra  
 " carlinella ...Centaurea nigra, and thistle heads  
 H. bracteella ...in decayed wood  
 C. pseudo-spretella dried peas, &c.  
 B. grandipennella furze  
 A. Gædaretella...in bark of alder, birch, &c.  
 C. farinatella ....Scotch fir  
 L. paludicolella...Epilobium  
 " atra (Hellerella) hirsutum, hawthorn berries, and shoots of apple  
 N. aurella .....in bramble; may be found all the year round

## PUPÆ]

"February fill-dyke" will oppose many obstacles to the pupa hunter. But it is hoped that the long list of species, many of them decidedly "good," which will be found set forth as possible to be obtained this month, will induce extra activity, and convert what might otherwise be only a simple ramble for health sake, into a profitable, as well as health-giving, excursion.

- P. Machaon .....on stems of Peucedanum palustre, in fens  
 P. brassicæ .. }  
 " rapæ .... } on palings, walls, &c.  
 " napi ..... }  
 A. cardamines ...on stems of grass, &c.  
 S. ocellatus ..... sub., at willows, poplars, &c.  
 " populi .....sub., at poplars, willow, &c.  
 " tilia .....sub., at elm, lime, beech  
 C. ligniperda.....at various trees; spun up, under bark, &c.; but s. buries  
 L. asellus .....spun up, on a leaf  
 A. mendica .....under moss, on trees bordering ditches  
 " lubricepeda } spun up, on trees,  
 " menthrasti } palings, &c.  
 A. urticæ .....under moss, on trees  
 O. pudibunda ...in dead leaves, under moss, &c.  
 E. versicolora ...spun up, at birch  
 S. carpini .....cocoon amongst leaves, heath, &c.  
 E. dolobraria ...under moss on oak, &c.  
 S. illunaria .....sub., at willow, oak, &c.  
 O. bidentata ...under moss on various trees  
 N. zonaria .....sub., at sandhills on the coast  
 B. hirtaria .....sub.; at elm, lime, ash, and fruit trees [ &c.  
 A. prodomaria...sub., at oak, elm,  
 " betularia .... sub., at oak, elm, birch, and other trees  
 H. abruptaria ...spun up, on twigs, &c., of lilac, rose, or privet

## PUPÆ]

## FEBRUARY

- T. consonaria ...under moss at r. of beech, oak, birch  
 " biundularia ...spun up, on oak and birch  
 " punctulata ...under moss, on birch, and alder; or in bark crevices  
 I. lactearia .....spun up, among leaves of oak, and birch  
 E. porata .....fastened to leaf of oak  
 " punctaria .....fastened to leaf of oak, or birch  
 " trilineararia ...fastened to leaf of beech  
 " pendularia ...fastened to leaf of birch  
 E. heparata .....among moss, &c., on alder  
 C. exanthemaria spun up, under leaves of willow, and alder  
 M. liturata .....at larch, rarely within 2 feet of the tree  
 N. pulveraria ...in withered willow leaves  
 F. carbonaria ...among dead leaves of willow, and birch  
 " piniaria .....at Scotch fir and larch; in open places in woods, rarely within 2 feet of the tree, at 1½ to 2 inches deep  
 A. æscularia ...sub., at elm, oak, lime, sloe, hawthorn  
 L. multistrigaria sub., about Galium  
 E. albulata ...within the spun-up sepals of yellow rattle  
 " decolorata .. about *Lychnis dioica*  
 E. venosata .....about *Silene*, and *Lychnis*  
 " consignata ...probably under moss, and loose bark, in apple orchards  
 " pulchellata ...among the seeds and dead fl., of foxglove  
 " isogrammata about *Clematis vitalba*  
 " fraxinata .....on ash, under moss, and loose bark  
 " nanata .....about heath  
 " vulgata .....sub., about various plants, and trees  
 E. minutata ..... about heath  
 " assimilata ...in crevices, about currant and hop  
 " exigua .....about oak, &c.  
 M. ocellata .....among *Galium*; spun up, near the ground  
 M. subtristata } sub., near *Galium*  
 " galiata ..... }  
 A. sinuata .....in earthen cocoon; on the ground, among *Galium*  
 " badiata .....in earthen cocoon; on the ground, beneath dog rose bushes  
 " derivata .....sub., at dog rose  
 C. sagittata .....spun up, among *Thalictrum*; or on the ground near; in fens  
 E. lineolata .....cocoon attached to *Galium verum*, under the surface, on sandhills  
 D. bicuspis .....spun up, on birch trunks in the S.; alder in the N.; rarely above 2 ft., from the ground  
 " furcula .....spun up, on trunk of willow, or willow  
 " bifida .....spun up, on trunk of poplars  
 " vinula .. ... spun up, on trunk of willows, poplars, and willows; three, or four feet from the ground  
 S. fagi .....spun up, among leaves of beech, oak, birch, elm; s. at r.  
 P. bucephala ...sub., at various trees  
 C. curtula .....spun up, between dead leaves of poplars, and willow  
 " reclusa .....spun up, among dead leaves of willows, poplars, willows  
 P. palpina .....at willows, and poplars, on edges of streams, or under sods near  
 N. camelina ...sub., at various trees  
 " cucullina .. ...sub., at maple, and sycamore  
 " carmelita .....sub., at birch  
 " dictæa .....at poplars, and willows, or under sods near

## PUPÆ]

## FEBRUARY

- N. dictæoides ...sub., at birch  
 " dromedarius...sub., at birch, alder, nut  
 " ziczac .....sub., at poplars, sallow, willows  
 " trepida .....sub., at oak  
 " Chaonia .....sub., at oak  
 " Dodonea .....sub., at oak, and birch  
 T. batis ..... near bramble, and wild raspberry [leaves  
 C. duplaris' . . . . .between united birch  
 " fluctuosa .....among birch leaves  
 " flavicornis ...between united birch leaves  
 D. Orion .. .....at birch, and oak, in a cocoon of gnawed bark, or rotten wood  
 A. tridens .....spun up, in crevices of bark, at hawthorn, sloe, rose, willow, sallow, mountain ash  
 " psi .....in bark crevices of various trees  
 " leporina .....in excavations in the bark of birch, poplar, alder, sallow  
 " aceris ... ..spun up, among fallen leaves, and under loose bark of sycamore, horse chesnut, maple, birch, and s. oak  
 " megacephala...under loose bark of poplar  
 " strigosa ..... among dead leaves of hawthorn, or rubbish or decayed wood ; s. sub.  
 " alni .. .....between leaves of various trees, or inside bramble sticks  
 " ligustri .....spun up, under moss, stones &c., near ash, and privet ; also sub. ; also found under the top stones of walls against the tree  
 " rumicis .....spun up, in crevices of trees, palings, walls, &c.  
 A. putris .....sub., at elm  
 D. pinastri.....in a cocoon on the ground among dock, sorrel, &c.  
 X. conspicillaris sub., at elm, and other trees  
 M. albicolon.....sub., near Atriplex, Chenopodium, lettuce, &c.  
 C. Morpheus ...spun up, in a leaf, or an earthen cocoon, attached to food plant  
 A. segetum, s. . . sub., among Cruciferae, grass, &c.  
 T. piniperda..... at Scotch and other firs, in open places in fir woods, and on the margin, in crevices of bark, and under moss and fallen needles  
 T. gothica .....sub., at various trees  
 " leucographa } at r. of low plants  
 " rubricosa ... }  
 " instabilis ... } at r. of various trees  
 " stabilis ..... }  
 " opima .....at r. of Rosa spinosissima, and dwarf sallow ; on sandhills in the north, below the sand  
 " populeti .....sub., at poplars, especially Populus nigra ; deep  
 " gracilis .....sub., at willows, sallows, and low plants  
 " miniosa .....among fallen leaves &c.  
 " munda .....under moss at base of oaks  
 " cruda .....sub., at oak  
 D. carpophaga sub., near Silene and Lychnis, on the coast ; found by raking sandhills  
 " capsophila .. } sub., about Silene  
 " cæsia ..... } maritima  
 " capsincola ...sub., near Lychnis  
 H. serena .....sub., near Sonchus, and lettuce  
 H. glauca .....sub., near sallow, and birch  
 " oleracea .....sub., near elm, nettle, dock, &c., also in kitchen gardens  
 " thalassina ...sub., near honeysuckle, sallow, broom, &c.  
 X lithoriza .....near honeysuckle, in a papery cocoon, on the ground  
 C. verbasci ... } sub., in earthen co-  
 " scrophulariæ } coon, near mullein and figwort, s. 2 years in pupa



## PUPÆ]

## FEBRUARY

- |   |  |
|---|--|
| C. lychnitis ..... in earthen cocoon,<br>near white and black mullein ;<br>s. 2 years in pupa | E. venustula .....at r. of Tormentilla<br>reptans, and grass                 |
| " asteris .....near golden rod, &c. ;<br>s. 2 years in pupa                                   | B. argentula .....among grass, on the<br>ground                              |
| " gnaphalii .....near golden rod  | B. parthenias ...at birch, in crevices<br>of bark, or on the ground          |
| " umbratica.....sub., near Sonchus,<br>&c.  | A. urticæ .....spun up, among nettle<br>leaves                               |
| H. marginata ...sub., near Ononis<br>procurrens   | " triplasia .....spun up, among nettle<br>leaves, hop, &c. [garis            |
| " dipsacea .....among melilot, and<br>probably Silene otites and<br>Linaria                   | P. ænea..... among Polygala vul-   |
| A. myrtilli .....spun up, in heath  | E. sambucalis ...spun up, in crevices,<br>in palings, walls, &c., near elder |
|   | G. canella .....among Salsola kali   |

## IMAGOS]

The species ordinarily due this month will be round specified below ; but it does not follow that they will be obtainable, even in a favourable locality, unless the weather is tolerably mild.

Some of the wingless ♀ of the genus *Hibernia*, especially when they hide on tree trunks, are often a puzzle to see. In searching trunks, palings, and wooden fences for moths, an operation which may with advantage be pursued at almost all seasons of the year, not much success is likely to follow unless it be done systematically. As in pupa digging, the most protected side of the tree trunk is found to be the most productive, which is generally the northern and eastern face. It is seldom of much use examining the southern side at all ; it is probably too much exposed to sunshine and the prevailing winds to be agreeable as a place of concealment. Fences in protected situations are consequently found to be better for harbouring insects than where fully exposed. Some of the larger moths thus resting are conspicuous enough, even from a distance ; others from their resemblance in colour and marking to the tree trunk or fence, or the lichen upon them, are difficult to be discerned, especially if the wood under examination is a gloomy one, or their resting place is in a "bad light." The tree to be examined should be approached carefully, or some species which are easily alarmed will flit off before the net can be brought into use. A general examination of the north-eastern aspect should be first made, from the highest point at which a moth can be seen down to the ground ; then, if small, or inconspicuous species are being sought for, the finger should be passed in lines down the trunk, the eye attentively following. To the surprise of the searcher he will sometimes thus come upon a specimen he would otherwise have missed.

- |   |  |
|---|--|
| E. lanestris ..... on tree trunks, near<br>the ground           | A. prodromaria, e. at rest on trees        |
| P. pilosaria ... .. ♂ comes to light ; ♀<br>on tree trunks, &c. | N. hispidaria ... at rest on oak<br>trunks |
|   | T. crepuscularia at rest on trees          |

## IMAGOS]

## FEBRUARY

- H. rupicaparia* } at rest on tree trunks  
 " *leucophearia* } or in hollow trees ;  
 " *progenmaria* } at dusk they frequent  
*A. æscularia, e.* } hedges, the ♀ sitting  
 on the twigs, the ♂ fluttering  
 around. Hedges favourably  
 placed may be beaten into an  
 umbrella for the ♀, which may  
 also be found on the top ledge of  
 palings, &c., running up to the  
 highest point. *H. leucophearia*  
 ♂ often flies by day
- T. instabilis* .....at the shallows in  
 mild seasons  
 " *stabilis* ..... " " "  
*T. hyemana* .....oak woods "  
*T. pellionella* ...to November  
*D. applanella* ...flies over hedges, &c.  
*N. minusculella* among pear trees

The following are among the species which have hibernated, and which have been found this month :—

- G. rhamnii* .....in and near woods  
 on sunny days  
*C. Edusa* .....at rest in hollow  
 trees, outhouses, &c.  
 " *Hyale* .....  
*V. c-album* ... }  
 " *urticæ* ..... }  
 " *polychloros* } at rest in outhouses,  
 " *Antiopa* ... } &c., and s. flying  
 " *Io* ..... } about on sunny days  
 " *Atalanta* ... }  
 " *cardui* ..... }  
*M. stellatarum, s.* from Sept., flying  
 in the sunshine  
*E. fasciaria* ... } may be beaten from  
*T. variata* ..... } Scotch fir  
*C. fluviata* ..... comes to l.  
*S. dubitata* ..... comes to l.  
*C. psitticata* ... }  
 " *miata* ..... } in hollow trees, out-  
 " *silacea* ... } houses, &c.  
*A. auricoma* .....  
*L. lithargyria* ?  
*A. puta* .....  
 " *suffusa* .....
- A. saucia* .....this species has been  
 taken this month, and also in  
 March, April, July, August,  
 Sept., and Oct.  
*C. vacinii* .....  
 " *spadicea* .....  
 " *erythrocephela*  
*S. satellitia* .....  
*D. rubiginea*.....  
*H. croceago* .....  
*D. templi* .....hides under stone  
 heaps, in elevated districts  
*C. vetusta* .....  
 " *exoleta* .....  
*X. conformis* ...  
 " *rhizolitha* .....  
 " *semibrunnea*  
 " *petrificata* ...  
*C. chamomillæ*...at rest on various  
 materials  
*G. libatrix* .....in cellars and hollow  
 trees  
*H. rostralis* .....in gardens and out-  
 houses  
*E. ocellæa* .....comes to l.

# MARCH

## OVA]

During this boisterous month,

“whose Spring is but the child  
Of churlish Winter in her froward moods,  
Discovering much the temper of her sire,”

many fine days are often available for entomologising. As many species set forth in the accompanying list will ere long cease to be found in the egg form, it is desirable the collector should clear off his arrears of work in this section as soon as possible. The remarks on egg-hunting under previous months should be re-perused. Wherever a species is known to have occurred, there is a possibility of finding the eggs in likely situations.

- |                    |  |                     |   |
|--------------------|--|---------------------|---|
| T. quercus .....   | on oak   | C. elinguaria ...   | on oak, honey-suckle, hawthorn, sloe; also heath, bilberry, &c.; brick-shaped, large, purplish slate colour |
| " w-album .....    | on wytch elm   | E. alniaria .....   | on alder, birch, sawlow, beech, &c.; brick-shaped, like all the Ennomos                                     |
| " pruni .....      | on sloe  | " tiliaria .....    | on oak, sawlow, birch, alder, &c.; purplish   |
| L. Ægon .....      | on Ornithopus perpusillus; white; generally hatch this month   | " fuscantaria ...   | on ash, privet; upon the twigs, in small batches  |
| H. comma .....     | on trefoil, and other Leguminosæ   | " erosaria .....    | on oak, birch, &c.  |
| L. dispar .....    | on the trunks of sloe, hawthorn, and various fruit trees; in a conical heap, covered with down                               | " angularia ...     | on oak, birch, beech, &c.   |
| " monacha .....    | on oak, beech, birch, fir, apple, &c.  | H. pennaria .....   | on oak  |
| T. cratægi ...     | from Oct., on hawthorn; also s. sloe, sawlow, birch, oak   | A. prodromaria...   | in bark crevices of oak, birch, elm, nut  |
| P. populi .....    | from Nov., on oak, poplar, lime, ash, hawthorn   | F. pinetaria .....  | on bilberry   |
| B. neustria .....  | from July, on sloe, hawthorn, and fruit trees; in batches spirally round twigs and branches                                  | H. leucopheararia . | on oak  |
| " castrensis ...   | from July, on Artemesia maritima, Daucus maritimus, &c.  | " aurantiaria ...   | on oak, birch, hawthorn, &c.  |
| E. vespertaria ... | on nut [sallow   | " defoliaria ...    | on oak, nut, sloe, hawthorn, birch, elm, lime, &c.  |
| " apiciaria .....  | on poplar, willow,   | C. brumata .....    | on oak, and other trees   |
| N. zonaria .....   | on sea reed, or marum (Ammophila arundinacea) and other sand-hill plants; in clusters in the interstices; long, bright-green | " boreata .....     | on birch  |
|                    |  | O. dilutata .....   | on oak, and other trees   |
|                    |  | E. subciliata ...   | on maple; at foot-stalk of leaf   |
|                    |  | M. rubiginata ...   | on alder; large   |
|                    |  | A. badiata, e. ...  | on dog rose   |

## OVA]

## MARCH

- A. derivata, e...on dog rose  
 S. vetulata .....on buckthorn  
 C. immanata ...probably on alder, and other trees, and strawberry, bilberry, &c. ; large  
 " prunata .....on currant, and gooseberry; upon the bark; large  
 " testata .....on heath, birch, sallow, poplar, &c. ; singly, large  
 " populata .....on poplar, bilberry, whortleberry; globular, large, yellow  
 " fulvata .....on dog rose; rose pink, large [thorn; large  
 " pyraliata .....on Galium, haw-dotata .....on black, and red currant; large  
 E. cervinaria ...on mallow  
 C. spartiata .....on broom  
 P. Cassinea .....on oak  
 P. plumigera ...on maple, chiefly on the twigs, in hedges not shaded by trees. Best found this month when the sun is shining, which renders them clearly visible. Often singly, but s. in clusters of two, three, or many more. Circular, smooth, brown above, whitish beneath
- C. flavicornis, e. on birch; red  
 G. flavago .....on stems of marsh thistles, burdock, &c. ; in heaps  
 S. satellitia .....on oak; upon the twigs  
 D. rubiginosa.....probably on apple, &c., and dandelion and other low plants  
 P. chi .. .....on dock, hawthorn, sallow, and probably lettuce, sowthistle, tea tree, &c. ; purplish brown  
 " flavocincta ...on dock, chickweed, groundsel, mint, &c. ; in gardens on everlasting pea, plum, &c.  
 D. templi .....on Heracleum sphondylium; upon the leaves  
 T. subtusa .....on poplar; upon the twigs  
 " retusa .....on sallow, willow, poplar; upon the axils of the leaves  
 C. vetusta .....on various meadow and marsh plants, also poplar  
 X. conformis, b. on alder, birch  
 H. proboscidalis on nettle; rather large, globular (slightly oval) indented on upper side; pale yellow

## LARVÆ]

A good harvest is sure to reward the industrious worker this month, if he persistently prosecutes his larva-searching, on mild evenings, in good localities, there being so many species which have hibernated, and only now seem to require a ramble before making a selection of their hiding place for pupation.

In the lists of larvæ, the month of origin of hibernation has been specified as far as possible. When a larva ceases to be mentioned, it may be assumed that at the last period of its mention, it was nearly if not quite full fed.

- S. Ægeria... .....from Sept., grasses  
 " Megæra .....from Sept., grasses  
 R. cratægata ...from Sept., hawthorn, sloe  
 H. auroraria ...from Aug., plantain
- A. osseata.....from Aug., dandelion, &c.  
 S. belgiana .....from Aug., heath  
 O. filigrammaria bilberry and sallows  
 E. tenuiata .....in sallow catkins

## LARVÆ]

## MARCH

- T. variata.....Scotch fir, larch, &c.  
 M. montanata, e. from Oct., primrose  
 C. munitata ...from Sept., groundsel  
 C. bilineata .....grasses, chickweed, dock  
 C. suffumata ...full fed in the autumn; turns to a pupa about this time  
 E. palumbaria ...broom, Genista, heath, clover, &c.  
 B. glandifera ...from Sept., lichens on walls  
 " perla..... ...from Sept., lichens on walls  
 L. conigera .....couch, and other grasses. This, and other species of *Leucania* may be s. found by pulling up conspicuous tufts of grass, and gently beating them  
 " turca .....grasses, in woods  
 " lithargyria ...chickweed, plantain, grasses, &c.  
 " pudorina .. grasses, common reed  
 " straminea ...reed, and coarse grasses, in damp meadows and borders of streams  
 " impura .....from Oct., *Carex*, and *Dactylis glomerata*  
 " pallens .....from Oct., *Deschampsia cespitosa*  
 S. ulvæ .....from Sept., common reed  
 X. rurea .....generally on grasses  
 " hepatica .....from Aug., grasses, chickweed, &c.  
 A. australis .. ...from Oct., *Cichorium*, *Poa annua*, and other plants  
 L. testacea .....on the lower part of grass stems  
 M. furvæ .....*Aira canescens*  
 A. basilinea .....from Aug., various plants; before hibernation on immature grains of wheat  
 " unanimis .....from Sept., grasses. Full fed in autumn; hides under bark of willows or poplars, or among the soil at their roots;  
 towards the end of this month wanders about for a few days, then changes to a pupa in a slight cocoon, at the foot of a tree, or under bark  
 M. strigilis .....grasses, and other plants  
 C. alsines .....from Sept., dock, chickweed, plantain  
 " cubicularis ...from Sept., in corn ricks, on grass, pulse, and grain  
 R. tenebrosa.....from Sept., various plants  
 A. corticea .....from Sept., *Chenopodium*, &c.  
 " cinerea .....from Sept., r. of low plants  
 " lucerne .....dandelion, harebell, &c.  
 " Ashworthii ...from Sept., fescue grass, hawkweed, sun cistus, thyme, heath, harebell  
 T. ianthina .....from Aug., broom, chickweed, &c.  
 " fimbria .....from Oct., birch, willow, oak, ash, broom, primrose, &c. [ &c.  
 " interjecta .....dock, mallow, grass, subsequa .....from Oct., low plants  
 " orbona ... .....from Aug., broom and low plants; when young on willow buds  
 " pronuba .....from Aug., dock, and various other plants  
 N. festiva ... .....from Aug., violet, willow, foxglove, &c.  
 " umbrosa .....from Sept., dock, and low plants  
 " xanthographa from Oct., grasses and low plants  
 C. xerampelina, s. from Oct., ash; hides in crevices of bark  
 E. lutulenta .....from Oct., *Lithospermum arvense*, and other low plants  
 " lichenea ..... from Nov., ragwort, and various low plants  
 P. empyrea .....from Nov., pilewort, &c.

## LARVÆ]

## MARCH

- A. advena .....from Aug., lettuce, knotgrass, and various plants  
H. adusta .....from Aug., low plants  
" rectilinea .....from Aug., willow, bramble, bilberry  
A. myrtilli, s ...from Aug., heath  
P. chrysitis .....from Sept., burdock, thistle, nettle, dead nettle, &c.  
M. typica .....from Sept., dock, low-plants, &c.  
" maura .....from Sept., dock, chickweed, ivy, &c.  
H. proboscidalis from July, nettle  
H. derivalis .....from Aug., among dead oak leaves  
" barbalis .....from Sept., birch catkins  
A. pinguinalis ...in greasy horse cloths, rubbish in houses, &c.  
P. stratiotalis .. aquatic, on Callitriche verna, Stratiotes aloides, &c.  
B. asinalis.....from Oct., madder, fl., and young seeds  
S. muralis .....the mosses Grimmea pulvinata, Dryum cappillare, &c.  
" mercurialis ...the mosses Hypnus elegans, and Jungermannia dilatata  
" cratægalis ...the mosses Hypnus elegans, and Jungermannia dilatata  
C. tristellus .....in damp moss  
" culmellus ...in damp moss  
C. phragmitellus from Oct., reed  
M. cribrella .....from Oct., in thistle stems  
P. abietella .....from Sept., Scotch fir-cones, decayed wood, and shoots  
T. adjunctana...ivy, honeysuckle, &c.  
P. gentianana ...from Nov., in teazel heads [poplar  
G. nisana .....catkins of white  
" Penkleriana...alder catkins  
E. cirsiaria .....from Sept., in thistle and knapweed stems, in woods
- E. Pfulgiana .....from Sept., in thistle and knapweed stems, in open places  
" Brunnichiana in stems of coltsfoot  
" nigricostana...Stachys, r.  
" grandævana...in r. of coltsfoot and Petasites, on the ballast heaps at S. Shields, making long tubes in the sand  
S. Woeberana ...from Oct., bark of plum, &c.  
C. strobilana ...from Oct., cones of spruce  
" Hercyniana ...from Oct., spruce  
R. turionana ...in shoots of Scotch fir  
S. coniferana ...from Oct., under bark of Scotch fir  
" Leplastrierana from Oct., in stems of cabbage  
" regiana ..... from Oct., under sycamore bark  
D. politana .....from Oct., Achillea millefolium, r.  
E. nana ..... birch catkins  
" roseana..... from Oct., seeds of téazle  
C. Francillonana from Oct., in stems of wild carrot  
T. pseudo-bombycella from Oct., lichen, on oak trunks, &c.  
S. triquetrella ...on old palings on moors, marshes, &c., in a triangular case  
" inconspicuella in a case on trees and palings  
T. ganomella ...from Oct., in birds' nests  
" biseliella .....from Oct., in bird skins, hair seating, &c.  
L. praelatella ...from Sept., in a flat case, under wild strawberry  
A. Degeerella ...from Oct., wood anemone, &c.  
D. assimilella ...broom  
G. ericetella .....from Sept., on Erica cinerea, E. tetralix, and Calluna erica  
" arundinetella..Carex riparia  
" domesticella ..in moss, on old walls

## LARVÆ]

## MARCH

- G. *luculella* .....in decayed wood  
 " *bifractella* ...from Oct., *Conyza squarrosa*, *Inula dysenterica*  
 " *cerealella* .....from Oct., in grains of wheat and barley  
 P. *Metzneriella* from Oct., *Centaurea nigra*, heads  
 " *carlinella* ...from Oct., *Centaurea nigra*, and thistle heads  
 H. *bracteella* ...in decayed wood  
 C. *minutella* ...on seeds  
 " *pseudo-spretella* from Oct., dried fruit, peas, and other seeds, also hams, &c.  
 A. *glaucinella* ...in bark of oak, horse chesnut, &c.  
 " *Gœdartella* ...in bark of alder, birch, &c.  
 " *Brochella* .....birch shoots  
 C. *farinatella* ...Scotch fir  
 " *Gysselinella* ...Scotch fir, in a web between leaves  
 O. *pinariella* .....Scotch fir  
 G. *tringipennella* in plantain  
 C. *pyrrhulipennella* from Oct., heath  
 " *discordella* from Oct., *Lotus corniculatus*  
 " *genistæcolella* from Oct., *Genista anglica*  
 C. *lineolella* .....*Ballota nigra*  
 " *juncicolella* ...from Oct., heath  
 " *laricella* .....from Sept., larch  
 " *viminetella* ...from Sept., willow, and osier  
 " *solitariella* ...from Oct., *Stellaria holostea*  
 L. *palludicolella* *Epilobium hirsutum*  
 " *atra* (*hellerella*) hawthorn berries, and shoots of apple  
 C. *flavicapitella* from Sept., in twigs of hawthorn, in which it bores  
 A. *æratella* .....from Oct., galls on knotgrass  
 E. *apicipunctella* from Oct., in *Aira*  
 " *cinereopunctella* from Sept., in *Carex glauca*  
 " *trapeziella* ...from Oct., in *Luzula pilosa*  
 " *subobscorella* *Holcus mollis*  
 T. *marginæa* (*emyella*) from Oct., in bramble  
 " *dodonæella* ...from Oct., in oak  
 P. *trigonodactylus* in coltsfoot, fl. stems  
 " *tephradactylus* from Sept., golden rod, in shady places  
 " *osteodactylus* from Sept., golden rod

## PUPÆ]

As other, and more attractive work will soon be crowding upon us, and many species are beginning to emerge, the final search for winter pupæ should, if possible, be completed this month, if it has not been done long before.

- P. *Machaon* .....on stems of *Peucedanum palustre*; in fens  
 P. *brassicæ* }  
 " *rapæ* } on palings, walls, &c.  
 " *napi* }  
 A. *cardamines* on stems of grass, &c.  
 L. *Alsus* .....among *Anthyllis vulneraria*  
 S. *ocellatus* .....sub., at willows, poplars, &c.  
 " *populi* .....sub., at poplars, willow, &c. [beech  
 " *tiliæ* .....sub., at elm, lime,  
 C. *ligniperda* ...at various trees; spun up, under bark, &c., but s. buries  
 L. *asellus* .....spun up, on a leaf  
 L. *rubricollis* ...under moss, on rotten trees, larch, &c.  
 A. *mendica* .....under moss, on trees bordering ditches  
 " *lubricepeda* } spun up, on trees,  
 " *menthrasti* } palings, &c.  
 " *urticæ* .....under moss, on trees  
 O. *pudivunda* ...in dead leaves, under moss, &c.

## PUPÆ]

## MARCH

- E. versicolora ...spun up, at birch  
 S. carpini .....cocoon amongst leaves, heath, &c.  
 E. dolobrararia ...under moss, on oak, &c.  
 S. illunaria .....sub., at willow, oak, &c.  
 O. bidentata ...under moss, on various trees  
 N. zonaria .....sub., at sandhills on the coast  
 B. hirtaria.....sub., at elm, lime, ash, and fruit trees  
 A. betularia .....sub., at oak, elm, birch, and other trees  
 H. abruptaria ...spun up, on twigs, &c., of lilac, rose, or privet  
 T. consonaria ...under moss at r. of beech, oak, birch  
 „ biundularia ...spun up, on oak, and birch  
 „ punctulata ...undermoss, on birch and alder, or in bark crevices  
 I. lactearia .....spun up, among leaves of oak, and birch  
 E. porata .....fastened to leaf of oak  
 „ punctaria.....fastened to leaf of oak, or birch  
 „ trilinearia.....fastened to leaf of beech  
 „ pendularia ...fastened to leaf of birch  
 E. heparata .....among moss, &c., on alder  
 C. exanthemaria spun up, under leaves of willow, and alder  
 M. liturata .....at larch, rarely within 2 ft. of the tree  
 N. pulveraria ...in withered willow leaves  
 F. carbonaria ...among dead leaves of willow, and birch  
 „ piniaria .....At Scotch fir, and larch; in open places in woods, rarely within 2 ft. of the tree, at 1½ to 2 in. deep  
 L. multistrigaria, sub., about Galium  
 E. albulata .....within the spun-up sepals of yellow rattle  
 E. decolorata ...about *Lychnis dioica*  
 E. venosata .....about *Silene*, and *Lychnis*  
 „ consignata ...probably under moss, and loose bark, in apple orchards  
 „ pulchellata ...among the seeds, and dead fl. of foxglove  
 „ isogrammata, about *Clematis vitalba*  
 „ fraxinata .....on ash, under moss, and loose bark  
 „ nanata .....about heath  
 „ vulgata.....sub., about various plants and trees  
 „ minutata .....about heath  
 „ assimilata ...in crevices, about currant and hop  
 „ exiguata ...about oak, &c.  
 M. ocellata .....among Galium; spun up, near the ground  
 M. subtristata } sub., near Galium  
 „ galiata }  
 A. sinuata.....in earthen cocoon; on the ground, among Galium  
 „ badiata.....in earthen cocoon, on the ground, beneath dog rose bushes  
 „ derivata .....sub., at dog rose  
 C. sagittata .....spun up, among *Thalictrum*; or on the ground near; in fens  
 „ suffumata ...changes to a pupa this month among bedstraw or ragwort  
 E. lineolata .....cocoon attached to Galium verum under the surface on coast sandhills  
 D. bicuspis .....spun up, on birch trunks in the south; alder in the north; rarely above 2 ft. from the ground  
 „ furcula .....spun up, on trunk of willow, or willow  
 „ bifida .....spun up, on trunk of poplars  
 „ vinula ... ..spun up, on trunk of willows, poplars, and willow; three or four feet from the ground



## PUPÆ]

## MARCH

- S. fagi .....spun up, among leaves of beech, oak, birch, elm; s. at r.
- P. bucephala ...sub., at various trees
- C. curtula .....spun up, between dead leaves of poplars, and willow
- „ reclusa .....spun up, among dead leaves of willows, poplars, willows
- P. palpina .....at willows, and poplars, on edges of streams, or under sods near
- N. camelina .....sub., at various trees
- „ cucullina .....sub., at maple, and sycamore
- „ carmelita .....sub., at birch
- „ dictæa .....at poplars, and willows, or under sods near
- „ dictæoides ...sub., at birch
- „ dromedarius ..sub., at birch, alder, nut
- „ zizac .....sub., at poplars, willow, willows
- „ trepida ..... sub., at oak
- „ Chaonia .....sub., at oak
- „ Dodonea .....sub., at oak, and birch
- T. batis .....near bramble, and wild raspberry
- C. duplaris .....between united birch leaves
- „ fluctuosa .....among birch leaves
- D. Orion .....at birch, and oak, in a cocoon of gnawed bark, or rotten wood
- A. tridens .....spun up, in crevices of bark, at hawthorn, sloe, rose, willow, willow, mountain ash
- „ psi .....in bark crevices of various trees
- „ leporina .....in excavations in the bark of birch, poplar, alder, willow
- „ aceris .....spun up, among fallen leaves, and under loose bark, of sycamore, horse chestnut, maple, birch, and s. oak
- „ megacephala under loose bark of poplar
- A. strigosa .....among dead leaves of hawthorn, or rubbish, or decayed wood; s. sub.
- „ alni .....between leaves of various trees, or inside bramble sticks
- „ ligustri .. .....spun up, under moss, stones, &c., near ash, and privet; also sub.; also found under the top stones of walls against the tree
- „ rumicis .....spun up, in crevices of trees, palings, walls, &c.
- A. putris ..... sub., at elm
- D. pinastri .....in a cocoon, on the ground, among dock, sorrel, &c.
- X. conspiciaris, sub. at elm, and other trees
- M. albicolon.....sub., near Atriplex, Chenopodium, lettuce, &c.
- C. Morpheus .. spun up, in a leaf, or an earthen cocoon attached to food-plant
- A. segetum, s. .. sub., among Cruciferae, grass, &c.
- T. piniperda.....at Scotch, and other firs, in open places in fir woods, and on the margin, in crevices of bark; and under moss and fallen needles, rarely within 2 ft. of the tree, 1½ to 2 in. deep
- D. carpophaga ...sub., near Silene, and Lychnis, on the coast; found by raking sandhills
- „ capsophila } sub., about Silene
- „ cæsia ..... } maritima
- „ capsincola ...sub., near Lychnis
- H. serena .....sub., near Sonchus, and lettuce
- H. glauca .....sub., near willow, and birch
- „ oleracea .....sub., near elm, nettle, dock, &c., and in kitchen gardens
- „ thalassina..... sub., near honeysuckle, willow, broom, &c.
- C. verbasci ... } sub., in earthen cocoon, near mullein, and figwort
- „ scrophulariæ } s. 2 yrs. in pupa

## PUPÆ]

## MARCH

- C. lychnitis .....in earthen cocoon,  
near white and black mullein ;  
s. 2 yrs. in pupa  
" asteris .....near golden rod, &c. ;  
s. 2 yrs. in pupa  
" gnaphalii .....near golden rod  
" umbratica ...sub., near Sonchus,  
&c.  
H. marginata ...sub., near Ononis  
procurrens  
" dipsacea .....among melilot, and  
probably Silene otites, and  
Linaria  
E. venustula .....at r. of Tormentilla  
reptans, and grass  
B. argentula .....among grass, on the  
ground
- B. parthenias ...at birch, in crevices  
of bark, or on the ground  
A. urticae .....spun up, among nettle  
leaves  
" triplasia .....spun up, among nettle  
leaves, hop, &c.  
P. ænea .....amongst Polygala  
vulgaris  
E. sambucalis ...spun up, in crevices  
in palings, walls, &c., near  
elder  
G. canella .....among Salsola kali  
H. prasinana .. under moss at base  
of oaks  
I. masculella } among dead leaves  
" Zinckenella } of birch and oak  
" Oehlmanniella }

## IMAGOS]

If the season should be a forward one, the fallows will be in bloom this month. They are found to be a great attraction to most of the moths on the wing at this period, more especially the Tæniocampæ, and the hibernating Noctuæ. These, having

“skimmed the dusk fields,”

we shall find feasting on the sparse blossoms,

“In the retired quiet of the night.”

If the fallow bushes we are in the habit of visiting are awkwardly situated for the capture of moths, branches of them may be cut before dark, and stuck into the ground at convenient places. If they should afterwards take root in these places, they may save the trouble of the process being repeated next season.

The following are the freshly-emerged species which ordinarily appear this month :—

- P. rapæ .....gardens, &c.  
E. lanestris .....at rest on hawthorn,  
&c.  
E. versicolora ...in birch woods  
S. illustraria  
P. pilosaria .... at l. ; ♀ on tree trunks  
N. hispidaria ...on oak trunks  
B. hirtaria .....  
A. prodromaria s. on oaks  
T. crepuscularia on tree trunks  
H. leucophearia } rest on tree trunks ;  
" progemmaria } fly at dusk ; s. come  
A. æscularia ... } to fallows (See last  
month)
- L. multistrigaria  
E. abbreviata ...among oak  
L. lobulata .....on Scotch fir trunks  
A. badiata .....at fallows, and fly-  
ing over hedges at dusk  
" derivata .....  
P. polygrammata damp meadows ;  
very local  
P. nubeculosa  
N. carmelita .....on birch trunks, and  
palings near. Flies in the sun-  
shine ; may be taken at fallows ;  
and is attracted by puddles  
C. flavicornis ...at rest on birch twigs

## IMAGOS]

## MARCH

- C. ridens .....at rest on oaks,  
at 1 ft. to 4 ft. from the  
ground
- L. lithargyria, s.
- X. conspicillaris, e. at rest on tree  
trunks, especially where the  
bark has been stripped; has  
also been beaten
- T. piniperda.....at sallows, and at  
rest on fir trees
- T. gothica..... } The whole of this  
" gothacina... } genus visit the sal-  
" leucographa } low blossoms at dusk  
" rubricosa ... } and remain feasting  
upon the honey they contain for  
some hours
- " instabilis ... } If the situation is  
" opima ..... } favorable the great-  
" populeti ... } est number may be  
" stabilis ..... } captured by a sheet  
" gracilis..... } being spread under  
" miniosa ... } the bushes. Where  
" munda ..... } they are difficult to  
" cruda ..... } reach, branches of  
blossoming willow may be cut  
before dark, and fixed in the  
ground
- V. oleagina
- X. lithoriza .....at sallows, and on  
trees, walls, &c.
- C. chamomillæ...has been taken at  
rest on iron bars, and various  
materials, probably h.
- B. parthenias ...birch woods; flies  
on sunny mornings over birch  
trees, and round sallows
- " notha .....rests on aspens; flies  
in the sunshine round sallows, &c.
- A. prodromana, e., on moors
- S. pauperana ...among wild rose
- P. crenana .....moors, &c.
- C. vernana, e.
- " pygmæana, e. among spruce
- H. fimbriana, e. oak woods in the  
S., at rest on the branches;  
darts to the ground when dis-  
turbed
- T. hyemana<sup>n</sup>.....oak woods, at rest  
on the branches
- D. fagella, e. ...on tree trunks and  
palings
- E. avellanella, e. among birch
- T. biselliella ...to Oct.
- D. arenella
- " cinifionella ...Rannoch
- " rhodochrella beaten from thatch
- B. incongruella on moors, &c.
- E. consortella
- N. aurella.....to August, on tree  
trunks and palings

The following hibernating species have been taken this month :—

V. C. Edusa, C. Hyale, at rest in hollow trees, outhouses, &c.; V. c-album, V. urticæ, V. polychloros, V. Antiopa, V. Io, V. Atalanta, V. cardui, at rest in outhouses, &c. and s. flying about on sunny days; M. stellatarum, hovers over fl. in the sunshine, and also flies in the evening; E. fasciaria, and T. variata, among Scotch fir; C. fluviata, and S. dubitata, at l.; C. psitticata, C. miata, and C. silacea, in hollow trees, outhouses, &c.; A. auricomâ, L. lithargyria? A. puta, A. suffusa, and A. saucia; C. vaccinii, C. spadicea, C. erythrocephala? S. satellitia, D. rubiginea, and H. croceago, at sallows; D. templi, under stones; C. vetusta, C. exoleta, X. furcifera, X. rhizolitha, X. semi-brunnea, X. petrificata; C. chamomillæ, at rest on iron and other fences; G. libatrix, in cellars and hollow trees; H. rostralis, in gardens and outhouses; E. ocella, comes to l.; P. mixtana, P. caudella, D. liturella, D. pallorella, D. umbellella, D. arenella, D. propinquella, D. subpropinquella, D. alstræmeriella, D. cinifionella, D. vaccinella, D. conterminella, D. ocella, D. applanella (flying over hedges), D. ciliella, D. albipunctella, D. chærophyllivorella, D. herachiella, A. autumnitella, Z. hepariella, Z. insignipennella, G. stigmatella, G. stramineella, G. populella, G. phasianipennella, C. cuculipennella, L. epilobiella, P. suffusella, P. pterodactylus.

# APRIL

## OVA]

This is the month when many hibernating species deposit their ova, as well as several which are freshly emerged. Owing to the scarcity of leaves upon the trees and bushes, the egg in many cases may be more readily found than when, later in the season, the branches are more covered. Some day-flyer,

“Drawn from his refuge in some lonely elm,  
That age or injury has hollowed deep,”

may sometimes be seen, when the sun shines, engaged in the interesting operation of oviposition. By carefully watching, a clue as to the plant upon which the egg is laid, as well as its situation, will be often afforded.

- |  |  |
|--|--|
| G. rhamnii .....on buckthorn; placed singly upon terminal shoots, and on the midrib; pointed   | E. angularia ...on oak, birch, beech, &c.  |
| V. urticæ .....on nettle; in batches upon underside of the leaves; barrel-shaped, fluted, green  | H. pennaria .....from Oct., on oak   |
| " Io .....on nettle  | B. hirtaria .....on lime, elm, ash, fruit trees; small, green, imbricated                                      |
| T. quercus .....on oak   | A. prodromaria in crevices of bark of oak, birch, elm, nut   |
| " w-album .....on wych elm   | " betularia .....on oak, elm, hawthorn, birch, beech, alder, mountain ash; very small for the size of the moth |
| E. lanestris .....on hawthorn, sloe, &c.; spirally round twigs, and branches   | A. æscularia .....on oak, elm, horse-chesnut, privet, &c.; round the twigs, covered with down                  |
| E. versicolora ...on birch; upon the twigs, in small batches   | L. multistrigaria on Galium  |
| E. vespertaria ...on nut   | E. subciliata ...on maple; at foot-stalk of leaf   |
| " apiciaria .....on poplar, willow, sallow   | L. lobulata .....on honeysuckle, sallow, willow  |
| R. cratægata ...to Sept., successive broods, on hawthorn and sloe; oblong, covered with hexamedal ridges; yellow, with red spots, like the imago | " polycommata on honeysuckle, ash  |
| S. illunaria .....in the fissures of the bark of willow, ash, hawthorn, plum, &c.; light pink  | M. rubiginata ...on alder; large   |
| E. alniaria .....on alder, birch, sallow, beech, &c.; brick-shaped, like all the Ennomos   | A. badiata .....on dog rose  |
| " tiliaria .....on oak, sallow, birch, alder, &c.; purplish  | " derivata .....on dog rose  |
| " fuscantaria ...on ash, privet; upon the twigs, in small batches  | S. dubitata .....on buckthorn  |
| " erosaria .....on oak, birch, &c.   | C. prunata .....on currant, goose-berry, sloe; upon the bark; large  |
|  | " testata .....on heath, birch, sallow, poplar, &c.; singly, large   |
|  | " populata .....on bilberry, whortle-berry, poplar; globular, large, yellow                                    |

## OVA]

## APRIL

- C. fulvata .....on dog rose; rose pink, large  
 „ dotata .....on black and red currant; large  
 E. cervinaria ...on mallow  
 „ lineolata ... on Galium; in clusters of eight or ten; at first pale yellow, but soon change to bright ochreous-brown  
 C. spartiata .....on broom  
 P. Cassinea .....on oak  
 „ nubeculosa ...on birch  
 C. curtula .....on poplars & sallow  
 C. ridens .....on oak; upon the twigs  
 G. flavago.....on stems of marsh thistles, burdock, &c.; in heaps  
 A. suffusa ..... on grass, lettuce, radish, &c.  
 T. gothica.....on sallow, oak, and other trees, also many low plants  
 „ leucographa...on plantain; oval, bright yellow  
 „ rubricosa .....on dock; pale yellow  
 „ opima .....on Rosa spinosissima; in large clusters, conspicuous at a distance; at first pale yellow, but soon change to pinkish brown. The eggs of this species are, however, as often deposited upon the dead seed-heads of ragwort and houndstongue; also upon marum grass (*Ammophila arundinacea*) and sallow, growing on sandy sea-shores, as upon the food-plant  
 T. populeti .....on twigs of aspen and poplar, especially *Populus nigra*; in clusters below the axils  
 „ gracilis.....on willow, sallow, and low plants; often upon seed-heads of plantain; also upon dead reed-heads  
 „ miniosa .....on oak; in clusters below the leaf-buds  
 H. croceago ... ..on oak  
 C. vetusta .....on poplar, & various meadow and marsh plants  
 „ exoleta .....on scabious campion, rest harrow  
 X. petrificata ...on oak, lime, birch; oval, greyish, thickly dotted with purple

## LARVÆ]

The indications of past hibernation become numerous in the list this month. It might be supposed that moths and butterflies have a very brief life, as they are often only visible in the winged state for a short time; but with many of the larger species the period of life extends over eleven or twelve months, of which nearly nine are passed in the larva state, though a portion of this time, during the severe cold of winter, they are in a torpid condition. In others, though the total length of life is about the same, the larval life is short, and the imago life is long, commencing at the latter part of the summer, and extending through the winter, to the commencement of the succeeding summer,—interrupted, as in the larval life, by a period of torpidity during the winter. Of course with those insects of which two, or three broods appear in the year, the life is very much briefer. Some species hibernate nearly full-fed, or feeding occasionally during mild weather, are found during this and the next month as larvæ, still unchanged. E. *Lichenea* will be found in its haunts on the coast full-fed, and about to change, from now to July. It is a species which is hard to breed away from its native habitat. The two chief modes of capturing larvæ are by beating, and by searching with a lantern in the evening. It is yet too early in the season, now that we only see

“the first

Hedge-grown primrose that hath burst,”

## LARVÆ]

## APRIL

for much profit to result from beating, but night searching will well repay the labour. Examine the underwood of one or two years' growth, and the grass at the edges of ridings, with a lantern, immediately after dark, every mild evening. Large numbers of different larvæ may be thus taken during this and the following month. Nearly all the genus *Noctua* can be thus easily found.

The rolled-up leaves and shoots of sallow contain a large number of species, chiefly tortrices. They should be put into a flower pot in a cool place, and fresh leaves added when these are becoming dried up. The following are among the species which may be thus bred, and which will appear in June:—*E. viminalis*, *T. cratægana*, *P. Lecheana*, *P. capræana*, *S. dealbana*, *H. angustana*, *G. populælla*, *A. pygmæella*. By shaking or beating wild plants and flowers into a net or other receptacle many larvæ may be obtained, particularly of the smaller species.

Grasses, rushes, and carices are now productive of sundry *Elachistidæ* and *Coleophoræ*, and several of the larger tribes. Sheltered spots in woods and lanes are the best places; and for the larger species wet evenings the best time. The mealy guelder rose, is an early tree, and will repay a search. Hawthorn trees nourish hordes of common larvæ. *P. Verhuellella* must be taken now, mining in the seed fronds of *A. Ruta muraria*, and other ferns. *L. Rubiella* is often too common in raspberry shoots. The pink larva betrays its presence by the blighted aspect of the young shoots.

- |   |  |
|---|--|
| <p>A. Niobe .....from Aug., violet &amp; heartsease; should be looked for in localities where <i>A. Aglaia</i>, and <i>A. adippe</i> abounds</p> <p>" Euphrosyne, e. from July, dog and sweet violet, feeds in the sunshine; hides beneath primrose and other leaves</p> <p>" Selene, e .....from July, dog and sweet violet</p> <p>M. Artemis .....from Aug., in wet meadows, among scabious, plantain, honeysuckle, &amp;c.; rest exposed in the sunshine</p> <p>E. Medea.....from Sept., moorland poa, and other grasses</p> <p>S. Megæra .....from Sept., grasses</p> <p>" hyperanthus from Aug., grasses; may be found at night among long grass near woods, &amp;c.</p> <p>P. Phlæas.....from Oct., sorrel, dock, ragwort</p> <p>L. agestis .....from Sept., <i>Erodium circuitarium</i> [&amp;c.</p> <p>" Alexis .. .....rest harrow, trefoil,</p> <p>" Adonis.....from Oct., <i>Hippocrepis comosa</i>, &amp;c,</p> | <p>L. Arion .....thyme; in dry and elevated districts, and hilly, thyme-covered slopes and fields</p> <p>S. alveolus .....bramble, wild raspberry</p> <p>T. tages.....from Sept., <i>Lotus corniculatus</i></p> <p>S. myopæformis in stems of apple, pear, plum, hawthorn; chiefly old or unhealthy trees</p> <p>" culiciformis ...in birch and alder</p> <p>" formicæformis from Sept., in osier stumps; the larva-hole, or the gnawings therefrom are often visible; the larva is best sawn out</p> <p>" chrysidiformis inside r. of sorrel and dock; at Folkestone and Eastbourne, and probably other places on the S. &amp; E. coasts; supposed to be 2 yrs. feeding</p> <p>" cynipiformis in the bark of unhealthy-looking oaks and old stumps</p> <p>" tipuliformis ...from Oct., in the stems of old currant bushes</p> |
|---|--|

## LARVÆ]

## APRIL

- S. scolixformis in birch; seems to prefer the stem of a tree which has been felled
- " spheniformis in young suckers of alder, where the old tree has been cut down. The larva eats a gallery up the centre of the shoot nine or ten inches, then turns aside, and eats through the bark, where it assumes the pupa state
- " asiliformis ...in r. of poplar and ash. Wait till the pupæ are bedded near the entrance of the burrow
- " apiformis .....from Sept., in stems of poplar; often 2 yrs. feeding. Wait till the pupæ are bedded near the entrance of the burrow
- M. arundinis.....in stem of common reed; often causes the plant to look unhealthy
- H. hectus .....from Aug., in roots of brake fern; two seasons feeding
- " lupulinus .....from Aug., in roots of dead nettle, &c.
- " velleda... .....from Aug., in roots of brake fern, &c.
- " humuli .. .....from Aug., in roots of burdock, nettle, dead nettles, &c.
- Z. nubigena .....from July, thyme
- L. pygmaeola ...lichens, among moss
- C. plantaginis ...from Sept., plantain, violet; best found at night
- " villica .....from Sept., chickweed, furze, and other plants
- A. fuliginosa .. from Sept., dock, nettle, plantain, borage, &c., often hides under the leaves
- L. chrysorrhæa...from Sept., sloe, hawthorn, &c.
- B. roboris .....from Sept., hawthorn, dogwood, bramble, broom, heath, &c.
- " quercus.....from Sept., bilberry, &c.; also eats dogwood
- O. potatoria .....from Sept., coarse grasses
- E. apiciaria .....nut, poplar, willow, alder
- A. prunaria .....from October, sloe, beech, broom, bramble, willow, hawthorn, plum, &c.
- E. fasciaria ...from Sept., Scotch fir
- P. syringaria ...from Sept., lilac, privet, elder, honeysuckle; may be found at night hanging from its food
- C. lichenaria.....from Sept., lichens, on oak
- B. repandata.....bramble, sloe, birch, plum, spindle, and upon almost all sorts of underwood
- " rhomboidaria from Sept., ivy, birch, oak, plum, rose, lilac, elder, &c.
- " perfumaria ...ivy, lilac, clematis, &c.
- " abietaria .....from Sept., larch, spruce, and Scotch fir
- " roboraria .....from Sept., oak
- G. obscurata.....from Sept., Potentilla reptans, Poterium sanguisorba, thyme, grass, sun cistus, &c.; s. found concealed by day among stones
- H. auroraria.....from Aug., plantain
- A. candidata ...hornbeam
- A. rubricata .....from Aug., ——? will eat knotgrass, dandelion, Lotus corniculatus, Medicago lupulina, Thalictrum minus
- " scutulata .....from August, Anthriscus sylvestris, fl. and dandelion, preferring the withered leaves
- " bisetata .....from Aug., dandelion; will also eat knotgrass and withered bramble
- " trigeminata ...from July, some low plant? will eat knotgrass
- " osseata .....from Aug., dandelion, &c.
- " interjectaria ..from Aug., dandelion, scarlet pimpernel, withered
- " ornata, s. ....from Sept., thyme
- " remutata .....from August, low plants? will eat knotgrass
- " fumata .....from Aug., heath

## LARVÆ]

## APRIL

- A. strigilata .....from Aug., *Stachys sylvatica*, &c.  
 " aversata ...from Sept., primrose, nut, gooseberry, *Geum urbanum*, &c.  
 " degeneraria ...from Aug., ——? will eat knotgrass, bramble, *Cerastium*, *Veronica*  
 S. clathrata .....from Oct., saintfoin, lucerne, &c.  
 S. belgiaria .....from Aug., heath; may be found at night on heaths, &c.  
 F. pinetaria .....bilberry, &c.  
 A. ononaria .....rest harrow  
 O. filigrammaria bilberry and sallow  
 L. didymata .. ...*Chæropophyllum temulum*, cowslip, &c.  
 " cæsiata.....from Sept., bilberry and whortleberry  
 " olivata .....from Oct., *Galium mollugo*; very sluggish  
 E. tenuiata .....in sallow catkins  
 " rectangulata apple and crab, buds and fl.  
 " debiliata ..... whortleberry; in curled-up leaves  
 T. variata .....Scotch fir, larch, &c.  
 " firmata .....larch and Scotch fir  
 M. montanata ...from Oct., primrose  
 C. quadrifasciaria hawthorn, white dead nettle, knapweed, &c.  
 C. bilineata .....grasses, chickweed, dock; hides under stones, at r. of herbage, &c., by day  
 P. lignata .....from Sept., *Galium palustre*, &c.  
 C. russata .....from Oct., strawberry, birch, hawthorn, sallow, &c.  
 " dotata .....currant  
 E. palumbaria ...from Aug., broom, &c.  
 " lineolata, s. ...*Galium verum*  
 A. plagiata .....from Oct., *Hypericum perforatum*  
 B. glandifera ...from Sept., lichens, on walls; local. Both *glandifera* and *perla* build a cocoon of silk and earth, mortar, or crum-  
 bled stone, like a blister on paint, in which they live, except when they come out to feed, in the night, or early morning, especially in wet weather, when the lichens are soft.  
 B. perla.....from Sept., lichens on walls  
 L. conigera .....couch grass, & other grasses  
 " lithargyria ...grasses, chickweed, - plantain, &c.  
 " littoralis .....from Aug., *Ammophila arundinacea*, on the coast; burrow seven or eight inches in the sand. Will also eat *Carex*  
 " pudorina .....grasses, reed  
 " comma .....grass, &c.  
 " straminea.....coarse grasses and common reed, in damp meadows, and borders of streams  
 " impura .....from Oct., *Carex*, & *Dactylis glomerata*, inside the stem  
 " pallens .....from October, *Deschampsia cespitosa*  
 S. ulvæ .....from Sept., common reed  
 N. neurica .....in stems of common reed; a small hole is visible in the stem of the plant, tenanted by a larva  
 " lutosa .....from Oct., in stems of common reed, near the r.  
 X. rurea .....generally on grasses  
 " polyodon .. ...low plants  
 " hepatica, b. ...from Aug., grasses, chickweed, &c.  
 A. australis ...from Oct., *Cichorium*, *Poa annua*, and other plants  
 H. popularis.....grasses, amongst the roots, &c.  
 P. leucophæa ...from Oct., tufts of grass on commons, and in woods  
 C. Cytherea .....from Sept., grass, in dry and stony places  
 L. cespitis.....grasses; hides at r. by day  
 A. gemina.....from Aug., grasses; hides at r. by day



## LARVÆ]

## APRIL

- A. unanimitis .....from Sept., grasses, at the base of willows, &c.; hides at r. by day  
 " fibrosa .....in fl. stems of yellow flag  
 " oculea .....grasses, principally *Dactylis glomerata*, feeding on the undeveloped fl.  
 M. strigilis .....grasses, and other plants  
 " furuncula .....in stems of *Festuca*  
 G. trilinea .....greater plantain and other plants; hides among the r. by day  
 C. alsines .....from Sept., dock, chickweed, greater plantain. In feeding be careful to give the same food as found on, as the larva is easily injured by shifting its food  
 " blanda .....chickweed, &c.  
 " cubicularis ...from Sept., in corn ricks, on grass, pulse, and grain  
 A. valligera .....from Oct., grasses, r.  
 " segetum .....from July, in r. of turnip, &c.  
 " corticea .....from Sept., *Chenopodium*, and other plants  
 " agathina .....heath  
 " porphyrea ...from Aug., heath  
 " ravidia .....thistles, dandelion, &c.  
 " lucerneae .....harebell, dandelion, &c.  
 " Ashworthii ...from Sept., fescue grass, hawkweed, sun cistus, thyme, heath, harebell, &c.  
 T. ianthina .....from Aug., broom, chickweed, and other low plants  
 " fimbria .....from Oct., primrose and other low plants; also birch, oak, sallow, broom; concealed by day; found feeding at night  
 " interjecta .....dock, mallow, grass, &c.  
 " subsequa .....from October, low plants  
 " Orbona .....from Aug., sallow buds, when young; afterwards on broom and low plants  
 T. pronuba .....from Aug., dock, & various other plants [plants  
 N. depuncta .....sorrel, and other low  
 " augur .. .....from August, low plants, hawthorn, sallow, &c.  
 " plecta .....low plants  
 " c-nigrum .....from Sept., low plants  
 " triangulum ...sallow, bramble, &c.  
 " rhomboidea...from Sept., chickweed, sallow  
 " brunnea .....sallow  
 " festiva ..... from Aug., violet, sallow, foxglove, &c.  
 " Dahlii .....from Sept., low plants; in mild winters s. feeds up without hibernating  
 " umbrosa .....from Sept., dock, and other low plants  
 " baia .....low plants  
 " xanthographa from October, plantain; hides under stones, &c.  
 O. lota .....willow, sallow  
 " macilenta.....beech, and s. birch  
 A. pistacina .....buttercup, dock, &c.  
 " lunosa .....from Oct., grasses, more especially in elevated places; concealed under stones  
 X. cerago .....sallow catkins; later on low plants  
 " silago .....sallow catkins  
 " ferruginea ...sallow and aspen buds, wyitch elm seeds  
 C. xerampelina from Dec., on ash; may be found, at dusk, crawling up ash trunks; concealed in chinks of bark, and among grass at the base of the tree, during the day; very retired and sluggish in its habits, and feeds sparingly on ash shoots and hawthorn [leaves  
 T. subtusa .....poplar; between the  
 C. trapezina .....oak, birch, hornbeam, &c.; also other caterpillars  
 " pyralina .....plum, pear, &c.  
 P. chi .....hawthorn, sallow, tea tree, dock, lettuce, hawkweed, *Sonchus*, &c.

## LARVÆ]

## APRIL

- D. templi ... ..Heracleum sphondylium, inside the stem and r.
- E. lutulenta .....from Oct., Lithospermum arvense, and other low plants
- " viminalis .....sallow
- " lichenea .....from Nov., ragwort and other low plants, on the coast
- P. meticulosa ...from Nov., groundsel, and various low plants
- " empyrea .....from Nov., pilewort, &c.
- A. herbida .....from Aug., dock, and other low plants
- " occulta .....primrose, plantain, and other low plants; can only be found in the evening
- " nebulosa .....from Sept., willow, hawthorn, birch, &c.
- " tincta .....from Sept., grass, and low plants; also birch, and other trees
- " advena .....from Aug., various plants
- C. vetusta .....poplar, and various meadow and marsh plants
- " exoleta .....scabious, campion, rest harrow, dock, Eryngium maritimum, turnip, asparagus, &c.
- X. furcifera .....alder, birch
- A. myrtili, s. ...from Aug., heath; gently clear away the bottom of the heath, and shake it into the net
- P. chrysis .....from July, burdock, thistle, nettle, dead nettle, &c.
- " iota .....nettle, dead nettle, honeysuckle, groundsel, &c.
- " gamma .....nettle, hop, and most low plants [plants
- M. typica .....from Sept., low
- " maura .....from Sept., ivy, dock, chickweed, &c.
- C. sponsa .....oak
- H. proboscidalis from July, nettle
- H. derivalis ..... from Aug., among dead oak leaves
- " barbalis ..... from Sept., birch catkins
- H. tarsipennis from Aug., raspberry? Will eat knotgrass and willow
- " cribralis .....from Aug., willow, Carex sylvatica, and Luzula pilosa
- A. flexula .....lichen
- P. farinalis .....straw, corn, &c.
- A. pinguinalis ...greasy horse cloths, rubbish in houses, &c.
- E. cingulalis .....from Sept., Salvia pratensis
- A. nemoralis ...Chrysosplenium alternifolium
- C. lemnales .....aquatic, in a case filled with air, feeding beneath the leaves (fronds) of duckweed
- P. stratiotales ...aquatic, on Callitriche verna, Stratiotes aloides, &c.
- H. nymphæalis aquatic, in a flat case, under the leaves of yellow water lily, and Potamogeton pectinatus
- " stagnalis .....aquatic, on Potamogeton
- B. terrealis .....from Aug., golden rod, fl.
- " asinalis .....from Oct., madder
- E. crocealis .....Inula dysenterica, between the leaves
- S. olivales .....ground ivy, and other low plants, in a web under the leaves
- " prunales .. ..sloe, and low plants
- S. ambiguales ...moss
- " mercurella ...the mosses Hypnum elegans and Jungermannia dilatata
- " resinæ .....the lichens on ash, Stigoneura mammillosa, and Oscillatoria autumnalis
- C. hortuellus ...moss
- C. phragmitellus...from Oct., reed
- A. lotella .....in the stem and r. of Festuca ovina, and Aira canescens, in a silken tube
- P. abietella .....from Sept., young shoots of Scotch fir, and decayed wood and cones

## LARVÆ]

## APRIL

- P. palumbella ...from Sept., polygala  
 T. Fosterana ...ivy, honeysuckle, &c.  
 P. Lecheana ...sallow, willow, honey-suckle, oak, &c.  
 P. capræana.....sallow  
 " gentiana .....from Nov., in teazle heads  
 S. roborana .....in rose shoots  
 S. conchana? ...Galium, alder, &c.  
 E. mygindana ...in shoots of Myrica and Vaccinium, on northern moors  
 " rufana .....sun cistus  
 " arbutana .....Vaccinium, twisted shoots  
 S. subjectana ...various plants  
 " virgaureana ...various plants  
 B. lanceolana ...in stems of rushes  
 P. unguicana ...heath  
 " uncana .....Myrica gale, heath  
 " lundana .....trefoils, and vetches  
 G. ramana .....buds of birch  
 P. immundana...in leaves of birch, and alder  
 " Demarniana catkins of birch  
 H. cruciana .....in willow shoots  
 P. bilunana .....catkins of birch and alder  
 E. cirsiana ... ..from Sept., in thistle and knapweed stems, in woods  
 " Pfulgiana .....from Sept., in thistle and knapweed stems, in open places  
 " Brunnichiana in stems of coltsfoot  
 " turbidana .....r. of butter burr (?)  
 " feniana .....from Oct., in r. of Artemisia  
 " grandævana...in r. of Petasites and Tussilago  
 S. Wœberana ...from Oct., under bark of fruit trees  
 C. strobilana ...in fir cones  
 " hercyniana ...spruce fir  
 " ustomaculana Vaccinium  
 R. turionana.....in shoots of Scotch fir  
 " pinivorana ...in shoots of Scotch fir  
 S. coniferana ...under bark of Scotch fir  
 S. Leplastrierana in stems of cabbage  
 D. Petiverana ...r. of Achillea millefolium  
 " simpliciana ...in r. of Artemisia vulgaris  
 " acuminatana ox eye  
 " consortana ...shoots of chrysanthemum  
 C. nimbana .....under moss, and bark of beech  
 X. Fabriciana ...nettle, pellitory, &c.  
 E. udana .....in stems of Alisma plantago  
 " rupicolana ...hemp agrimony (?)  
 " roseana .....from Oct., in seeds of teazle  
 X. Zoegana .....in r. of Scabiosa calumbaria, Centaurea nigra, &c.  
 C. tesserana .....from Sept., in r. of Picris hieracioides  
 T. pseudo-bombycella from October, lichen on oak, beech, &c., in a long, slender case  
 P. opacella .....in a case on fallen fir logs, probably feeds on lichen, grass, heath, furze, &c.  
 S. triquetrella ...on old palings, on moors, marshes, &c., in a triangular case  
 P. Verhuellella in the indusia of Asplenium ruta-mutaria and hartstongue  
 D. marginepunctella in a case on trees, &c.  
 X. melanella ...on lichens, in a case on trees, and palings  
 S. carpinetella ...fungi on rotten wood  
 " cloacella .....rotten wood  
 T. tapetzella.....woollen cloth, &c.  
 " albipunctella...rotten sticks  
 " pellationella ...in carpets, cloth, feathers, &c.  
 " ganomella ...from Oct., in birds' nests  
 " biselliella .....from Oct., in bird skins, hair seating, &c.  
 " perochraceella...ants' nests  
 L. praelatella ...from Sept., in a flat case on underside of wild strawberry

## LARVÆ]

## APRIL

- L. rubiella .....in shoots of rasp-  
berry
- I. masculella ...from June, rose, &c.  
" capitella .....in the shoots of cur-  
rant bushes
- M. Allionella ...honeysuckle  
" fastuosella ...nut
- A. viridella (?)...oak
- N. scabiosellus...from July, various  
low plants  
" cupriacella .. from July, Sedum  
reflexum, S. album, &c.
- E. Messingiella Cardamine amara
- P. porrectella ...Barbara vulgaris,  
Hesperis matronalis, in a web  
on the underside of the leaves
- H. harpella .....honeysuckle
- D. assimilella ...broom, between  
united twigs
- G. velocella ... Rumex acetosella,  
towards the r.  
" diffinella .....Rumex acetosella,  
towards the r.  
" arundinetella Carex riparia  
" affinella .....under moss on old  
walls  
" domesticella in moss on old walls  
" vulgella .....hawthorn, between  
united leaves  
" tricolorella ...in seeds and shoots  
of Stellaria  
" instabilella ...Plantago maritima  
" Mouffetella ...in shoots of honey-  
suckle  
" tenebrella ...from Sept., in r. and  
lower stem of Rumex acetosella  
" anthyllidella shoots of Anthyllis
- P. neuropterella from Oct., in heads  
of Cirsium acaule
- M. ustulella .....from August, nut,  
birch, lime, maple, hornbeam,  
&c.
- P. bicostella .....from Nov., Erica  
cinerea
- H. bracteella ...in decayed wood
- D. sulphurella ...in rotten wood
- Ce. fusco-aurella in dead sticks  
" pseudo-spretella from Oct., various  
kinds of dried fruit, dried peas,  
and other seeds; also hams
- Ce. flavifrontella...from Sept., in a  
case on beech
- B. grandipennella...furze  
" fusco-æneella...among sun cistus  
" chenopodiella...Chenopodium and  
Atriplex
- R. Erxlebenella Tilia
- G. Haworthella Eriophorum, seeds  
" schænicolella in seed-heads of  
Schænus nigricans
- D. ocnerosomella in dried stems of  
Echium vulgare
- A. ephippella ...in shoots of wild  
cherry  
" glaucinella ...in bark of oak, horse  
chesnut, &c.  
" abdominella...in needles of juniper  
" pygmæella ...in willow catkins  
" Gædartaella ...in bark of alder,  
birch, &c.  
" Brochella.....birch shoots  
" arceuthinella in shoots of juniper  
" aurulentella...juniper, in the leaves  
C. farinatella ...in leaves of Scotch  
fir  
O. pinariella.....Scotch fir, in the  
leaves  
G. tringipennella in plantain  
" auroguttella.. willow herb, and  
hypericum  
" ononiella .....rest harrow, and  
clover  
C. lixella .....grasses  
" pyrrhulipennella from Oct., heath  
" discordella ...from Oct., Lotus  
corniculatus  
" genistæcolella from Oct., Genista  
anglica  
" lineolella .....Ballota nigra  
" juncicolella ...from Oct., heath  
" cæspitiella...from Sept., rushes,  
seeds  
" laricella .....from Sept., larch  
" albitarsella ...from Nov., Origa-  
num and Glechoma  
" gryphipennella from Sept., rose  
" vitisella .....from Nov., whortle-  
berry  
" viminetella ...from Sept., willow  
and osier

## LARVÆ]

## APRIL

- C. solitariella ...from Oct., *Stellaria holostea*  
 L. paludicolella *Epilobium hirsutum*  
 " miscella .....sun cistus  
 C. Linneella.....from Nov., under bark of lime trees  
 " Schrankella...*Epilobium alsinifolium*  
 A. æratella . . . from Oct., in galls on knotgrass  
 S. Brünnichella *Melissa clinopodium*  
 E. Gleichenella in *Luzula* and *Carex*  
 " magnificella...*Luzula pilosa*  
 " apicipunctella from Oct., in *Aira*  
 " albifrontella...in many grasses  
 " luticomella ...in stems of *Dactylis glomerata*  
 " poella . . . . .*Poa aquatica*  
 " kilmunella ..*Carex*  
 " cinereopunctella from Sept., in *Carex glauca* [pilosa  
 " trapeziella ...from Oct., in *Luzula*  
 " Gregsonella ...in a *Poa*  
 " nigrella .....*Poa trivialis*, &c.  
 " subnigrella ...*Bromus erectus*  
 " perplexella ...in *Aira cespitosa*  
 " Bedellella ...*Avena pratensis*  
 " zonariella ..... in *Aira cespitosa*  
 " gangabella ...from Nov., *Dactylis glomerata*  
 " tæniatella.....from Sept., in *Brachypodium sylvaticum*  
 " Megerlella ...from Sept., in *Brachypodium*, *Bromus*, *Aira*, &c.  
 E. cerussella .....in reed  
 " biatomella ...in *Carex glauca*  
 " rufocinerella in *Holcus mollis*  
 " cygnipennella *Dactylis glomerata*, and other grasses  
 " paludum, e....*Carex intermedia*, *C. paniculata*, and *C. paludosa*  
 " serricornella...*Carex*  
 T. dodonæella .. from Oct., in oak  
 L. lantanella ...from Sept., *Viburnum lantana*  
 " vacciniella ...in whortleberry  
 " Messaniella ...in oak, evergreen oak, chestnut, hornbeam  
 " trifasciella ...in honeysuckle  
 " scabiosæcolella in r. leaves of *Scabiosa calumbaria*  
 C. Spartioliella under bark of broom  
 B. aurimaculella on *Chrysanthemum* and ox eye  
 " cristatella ...from Sept., on yarrow  
 " artemisiella ...*Artemisia campestris*, and yarrow  
 N. Weaverella...from Oct., in whortleberry  
 T. immudella...beneath bark of broom  
 P. trigonodactylus in coltsfoot stems  
 " plagiodactylus...*Scabiosa*, and *Veronica chamædrys*  
 " osteodactylus from Sept., golden rod  
 " aridus .....on the Continent, on fl.-buds of *Coris monspeliensis*

## PUPÆ]

A new "spurt" will be given to the operations of the pupæ hunter, now that he begins to find species which have only just changed. A glance down the list will show that he may, by diligent searching, find the chrysalids of some of the early summer butterflies, enabling him to secure them in all their glory, ere they

"hover on the flowers—aerial things,  
 With little rainbows flickering in their wings."

- P. Machaon .....on stems of *Peucedanum palustre*; in fens  
 L. sinapis .....from Oct., on stems of *Vicia cracca*, and *Orobus tuberosus*; in woods  
 P. brassicæ ... }  
 " rapæ ..... } on palings, walls, &c.  
 " napi ..... }  
 A. cardamines ...on stems of grass, &c.

## PUPÆ]

## APRIL

- A. Euprosyne...suspended by the tail among dog violet, &c.
- M. Artemis .....suspended under a leaf, among scabious, plantain, &c., in damp meadows
- " Cinxia, e. ....suspended among plantain, &c.
- S. Ægeria, b. ...on grass stems, &c.
- L. Alsus .....among Anthyllis vulneraria
- S. ocellatus .....sub., at willows, poplars, &c.
- " populi .....sub., at poplars, willow, &c. [beech
- " tilia .....sub., at elm, lime,
- C. ligniperda ...at various trees, spun up, under bark; s. sub.
- L. asellus .....spun up, on a leaf
- A. mendica ..... under moss on trees bordering ditches
- " lubricepeda } spun up, on trees,
- " menthrasti } palings, &c.
- " urtica ..... under moss on trees
- O. pudibunda ...in dead leaves, under moss, &c.
- B. rubi .. .....along cocoon, among coarse grass, &c.; s. 2 years in pupa
- S. carpini .....cocoon among leaves, heath, grass, &c.; s. 2 years in pupa
- S. lunaria .....from Aug., at sloe, oak, nut, &c.
- O. bidentata .....from Sept., under moss, on various trees
- A. betularia .....from Oct., sub., at oak, elm, birch, &c.
- H. abruptaria .. from Sept., spun up, on twigs, or branches
- T. consonaria ...from Oct., under moss, at r. of beech, &c.
- " punctulata ...from Oct., under moss, on birch and alder, or in bark crevices
- I. lactearia .....spun up, among leaves of oak, and birch
- N. viridata .....between united leaves of hawthorn and bramble
- E. porata .....fastened to leaf of oak
- E. punctaria ..... fastened to leaf of oak, or birch
- " trilinearia .....from Sept., fastened to leaf of beech
- " pendularia ...from Aug., fastened to leaf of birch
- E. heparata .....from Oct., among moss, &c., on alder
- C. exanthemaria .spun up, under leaves of willow and alder
- C. temerata .....from Sept., woods, &c., near sloe, wild cherry, and probably buckthorn
- M. liturata .....from Oct., in open places, and on the margins of fir woods, at 1 in. to 2 in. deep, rarely within 2 ft. of the tree
- N. pulveraria ...from September, in withered willow leaves, &c.
- F. carbonaria ...from Aug., among dead leaves of willow, and birch
- L. adustata .....from Sept., in a slight cocoon just beneath the surface, among spindle
- E. albulata .....from Oct., within the spun-up sepals of yellow rattle
- " decolorata ...from July, about *Lychnis dioica*
- E. venosata .....from July, about *Silene*, and *Lychnis*
- " consignata ...from Sept., probably under moss, and loose bark, in apple orchards
- " pulchellata ...from Sept., among the dead fl. of foxglove
- " isogrammata about *Clematis vitalba*
- " fraxinata ..... from end of Aug., on ash, under moss, and loose bark
- " nanata .....about heath
- " campanulata from Sept., sub., about *Campanuleæ*
- " minutata ..... about heath
- " assimilata .....from September, in crevices about currant, and hop
- " exigua .....from Aug., about oak, &c.

## LARVÆ]

## APRIL

- Y. ruberata .....under loose bark of  
sallow, alder, &c.
- M. ocellata .....among Galium; spun  
up, near the ground
- " subtristata ...from Sept., sub.,  
near Galium
- " galiata .....sub., near Galium
- A. sinuata.....in earthen cocoon;  
on the ground, among Galium
- C. munitata .....spun up, on moss,  
on tree trunks
- " unidentaria ...among bedstraw, &  
sweet woodruff, in a slight web,  
on the surface of the ground
- " sagittata .....spun up, about Tha-  
lictrum, or on the ground near;  
in fens
- " suffumata.....among Galium and  
ragwort
- E. lineolata ...cocoon attached to  
Galium verum, on coast sand-  
hills, below the surface
- C. obliquaria ...from Aug., among  
broom
- P. hamula.....oak, birch; between  
united leaves
- D. bicuspis .....spun up, on birch  
trunks in the S., alder in the N.
- " furcula .....spun up, on trunk of  
willow or sallow
- " bifida .....spun up, on trunk of  
poplars
- " vinula .....spun up, on trunk of  
willows, poplars, and sallow,  
three or four feet from the ground
- S. fagi .....spun up, among leaves  
of beach, oak, elm, birch; s. at r.
- P. bucephala ...sub., at various trees
- C. reclusa .....spun up, among dead  
leaves of sallows, poplars,  
willows
- P. palpina..... at willows, and pop-  
lars, on edges of streams, or  
under sods near
- N. camelina .....sub., at various trees
- " cucullina .....sub., at maple and  
sycamore
- " carmelita .....sub., at birch
- " dictæa .....at poplars and wil-  
lows, or under sods near
- N. dictæoides ...sub., at birch
- " dromedarius sub., at birch, alder,  
nut
- " ziczac .....sub., at poplars,  
sallow, willows
- " trepida .....sub., at oak, in a  
tough cocoon
- " Chaonia .....sub., at oak
- " Dodonea .....sub., at oak and  
birch
- T. batis.....near bramble and  
wild raspberry
- C. duplaris .....between united birch  
leaves
- " fluctuosa .....among birch leaves
- D. Orion .....at birch, and oak,  
in a cocoon of gnawed bark,  
or rotten wood
- A. tridens .....spun up, in crevices  
of bark, at hawthorn, sloe, rose,  
willow, sallow, mountain ash
- " psi.....in bark crevices of  
various trees
- " leporina .....in excavations in the  
bark of birch, poplar, alder,  
sallow
- " aceris .....spun up, among  
fallen leaves, and under loose  
bark of sycamore, horse-chest-  
nut, maple, birch, and s. oak
- " megacephala under loose bark of  
poplar
- " strigosa.....among dead leaves  
of hawthorn, or rubbish, or de-  
cayed wood; s. sub.
- "alni .. .....between leaves of  
various trees, or inside bramble  
sticks
- " ligustri.....spun up, under moss,  
stones, &c., near ash and privet;  
also sub.; also found under the  
top stones of walls against the  
tree
- " rumicis .....spun up, in crevices  
of trees, palings, walls, &c.
- " menyanthis spun up, near bil-  
berry, heath, sweet gale, &c.
- A. putris .....sub., at elm
- D. pinastri .....in a cocoon on the  
ground, among dock, sorrel, &c.

## PUPÆ]

## APRIL

- M. albicolon .....sub., near *Atriplex*,  
Chenopodium, lettuce, &c.
- A. segetum, s. ....sub., among *Cru-*  
*ciferæ*, grass, &c.
- X. rurea .....under moss, on  
stumps
- A. unanimis .....under bark of wil-  
lows, in damp places, and  
among decayed willow wood
- C. Morpheus ...spun up, in a leaf, or  
an earthen cocoon, attached to  
food plant
- R. tenebrosa .....among violets, and  
other low plants; a little be-  
neath the surface
- A. Puta .....from Jan., near r. of  
dandelion, lettuce, carrots
- D. carpophaga ....sub., near *Silene*,  
and *Lychnis*, on the coast;  
found by raking sandhills
- " capsophila ...from June, a con-  
stant succession, sub., about  
*Silene maritima*, on the coast
- " capsincola ...from August, sub.,  
near *Lychnis*
- " cæsia .....from August, about  
*Silene maritima*, on the coast
- H. serena .....sub., near *Sonchus*,  
and lettuce
- " adusta .....sub., near *sallow*
- " glauca .....sub., near *sallow*,  
and *birch*
- " oleracea .....sub., near *elm*, *net-*  
*tle*, *dock*, &c., also in kitchen  
gardens
- H. thalassina ...sub., near *honey-*  
*suckle*, *sallow*, *broom*, &c.
- C. verbasci } sub., in earthen  
cocoon, near *mullein*  
and *figwort*
- " scrophulariæ } s. 2 yrs. in pupa
- " lychnitis .....in earthen cocoon,  
near *white and black mullein* ;  
s. 2 yrs. in pupa
- " asteris .....near *golden rod*, &c. ;  
s. 2 yrs. in pupa
- " gnaphalii .....near *golden rod*
- " absynthii .....near *wormwood*
- " umbratica ...sub., near *Sonchus*,  
&c.
- H. marginata ...sub., near *Ononis*  
*procurrens*
- " dipsacea .....among *melilot*, and  
probably *Silene otites*, and  
*Linaria*
- A. myrtili .....spun up, in *heath*
- E. venustula .....at r. of *Tormentilla*  
*reptans*, and *grass* [ground
- B. argentula .....among *grass*, on the
- A. urticae .....spun up, among  
*nettle leaves*
- " triplasia .....spun up, among  
*nettle leaves*, *hop*, &c.
- P. ænea .....among *Polygala*  
*vulgaris*
- H. barbalis, e. ....in a loose cocoon,  
among *oak*, and *birch*
- E. sambucalis ...spun up, in *crevices*,  
in *palings*, *walls*, &c., near *elder*
- G. canella .....among *Salsola kali*

## IMAGOS]

With the lengthening days, and warmer sunshine, the number of insects on the wing continues to increase; and amongst those which are due this month are several somewhat rare species. The *sallows* constitute an irresistible attraction on mild evenings, when we are sure to find that many moths have

" from far and nigh  
Sped to the lure."

The hibernating butterflies, as well as some which have freshly emerged, are also occasionally attracted to these blossoms in the daytime, when we are cheered by

" amber sunbeams slanting down the vale."



## IMAGOS]

## APRIL

But the only rare species is *V. Antiopa*, which, however, is but seldom seen in the spring. Eggs may sometimes be obtained from the captured ♀ at this and other periods of the year. The freshly emerged ♀ of many species, particularly the *Bombyces*, can be used to attract the ♂, and large numbers are sometimes thereby taken. Beating thatch is a mode of capture often resorted to, and at this season many moths may be beaten out, particularly hibernating *Geometræ*. As the season advances,

“and vernal airs breathe mild,”

large numbers of *Tineæ* may be thus captured. *Depressariæ*, and some other species, seem much commoner now than before hibernation.

In the following list is given the species ordinarily to be found this month, including those which have hibernated, but which have not generally before put in an earlier appearance in the new year.

- L. sinapis*, e. ...woods; does not travel quietly if boxed  
*P. brassicæ*, e. ...gardens, &c.  
 " *rapæ*.....gardens, &c.  
 " *napi* .....gardens, &c.  
*A. cardamines* ...fields, &c.  
*S. Ægeria*, e. ...woods and shady lanes  
*T. rubi*, m. ....woods, &c.  
*P. Phlæas* .....fields and lanes, coast sandhills, &c.  
*L. argiolus*, m....amongst holly, and at fl.  
*A. mendica*, e....  
*D. coryli* .....beech woods; may be beaten  
*E. lanestris*, b. ...at rest on hawthorn, &c.  
*L. ilicifolia* .....at rest on moors?  
*E. versicolora* ...♂ flies by day; ♀ generally not till evening. A bred ♀ in a roomy box is useful for attracting the ♂ of most *bombyces*  
*S. carpini* .....heaths and open places; fly in the sunshine  
*R. cratægata* ...in hedges, &c.  
*S. illunaria*, b....  
 " *lunaria* .....woods; comes to l.  
 " *illustraria*, e....woods  
*O. bidentata* ...rests on tree trunks  
*B. hirtaria*.....in the squares of London  
*A. prodromaria*, b. at rest on trees, &c.  
*H. abruptaria*, e. on palings, trees, &c., and in gardens; comes to l.  
*T. crepuscularia*...on trees  
 " *biundularia* ...on trees and palings  
*E. pendularia* .. beaten from trees  
*C. femerata*, e. ...amongst sloe, &c.  
*A. pictaria* .....at sloe fl.  
*N. pulveraria*, e.  
*F. carbonaria*, e.  
*A. æscularia*.....on trees, &c.  
*L. multistrigaria*, may be found towards the bottom of palings, on the grass, &c., being turned away  
*E. helveticata* ...this species s. appears much earlier. Most of the genus fly just before dusk  
 " *irriguata* .....on birch trunks  
 " *pimpinellata*  
 " *vulgata*.....  
 " *dodoneata* ...flies in the early morning sunshine  
 " *abbreviata* ...  
 " *pumilata* .....  
 " *coronata* .....on trees and palings  
*L. hexapterata*...woods  
 " *lobulata* .....on Scotch fir trunks, and gate posts, &c.  
 " *polycommata*  
*T. simulata* .....  
*M. fluctuata* .....on walls, palings, and in gardens  
*A. badiata* .....at sallows, and flying over hedges at dusk

## IMAGOS]

## APRIL

- A. *derivata* .....  
 P. *polygrammata*, b. damp meadows; very local  
 " *suffumata* ...flies at dusk  
 P. *lacertula* .....beaten from birch  
 D. *unguicula*, e...among beech; flies in the day time  
 D. *bicuspis* ...at rest on tree trunks  
 P. *nubeculosa* ...birch woods in Perthshire  
 C. *curtula*.....  
 N. *carmelita*.....on birch trunks, and palings near. Flies in the sunshine; may be taken at sallows; and is attracted by puddles  
 " *trepida*, e. ...on oaks  
 " *Chaonia*, e. ...  
 C. *ridens* .....at l., at sugar, and at rest on tree trunks  
 X. *conspicillaris*, at rest on trees; also beaten, and has been taken at sugar  
 T. *piniperda*.....at sallows, and at rest on fir trees  
 T. *gothica* .....at sallows. The notes under March in reference to this genus also apply to April. Laburnum, and other early fl. also attract the genus  
 " *gothacina*.....a var. of *gothica*, which is found in Finland and Lapland, and has been taken in: Morayshire, &c.  
 " *leucographa*...  
 " *rubricosa* .....  
 " *instabilis* .....remarkable vars. of this species, and also of *stabilis* often appear  
 " *opima* .....  
 " *populeti* .....  
 " *stabilis*.....  
 " *gracilis*.....  
 " *miniosa* .....  
 " *munda* .....  
 " *cruda* .....  
 V. *oleagina* .....  
 P. *meticulosa*. This species occurs all the summer, there appearing to be, as is the case with several other common species, a suc-  
 cession of broods, but it is most abundant in Sept. and Oct.  
 X. *lithoriza* .....at sallows, and on trees, walls, &c.  
 C. *verbasci* .....  
 " *chamomillæ*, s. at rest, on rails, &c.  
 B. *parthenias* ...in and near birch woods; flies on sunny mornings round sallows, &c.  
 " *notha* .....on aspens, flies in the sunshine round sallows, &c.  
 P. *gamma*, to Oct. } fly in the sun-  
 P. *ænea*, e. .... } shine, & hover over fl.  
 S. *augustea* .....from Aug.  
 S. *Revayana* ...from Sept., woods  
 L. *literana* .....on oak trunks  
 " *niveana* .....at sallows  
 P. *mixtana* .....from July, moors  
 S. *pauperana* ...among wild rose  
 C. *musculana* ...hedges  
 O. *rusticana* .....moors, fens, mosses  
 P. *comptana*.....chalk downs, &c.  
 P. *tetraquetrana*, among birch  
 " *immundana*...among birch and alder  
 " *crenana* .....from Sept.; most heaths in the N.  
 C. *splendidulana*, on oak trunks  
 " *pygmæana*, b. among spruce  
 " *vaccinina* ...  
 H. *fimbriana* ...oak woods, in the S.  
 T. *hyemana* .....oak woods  
 L. *salicella* .....among dog rose?  
 D. *fagella* .....on trees  
 E. *avellanella* ...  
 " *Steinkellneriella*  
 S. *triquetrella* ...moors in the N.  
 " *inconspicuella*, b. at rest on palings, &c.  
 I. *Zinckenella*, e. among birch.  
 M. *purpurella* ...among birch and Scotch fir; may be obtained by sweeping the twigs; most of the genus fly on sunny afternoons, and at other times may be shaken from trees  
 " *salopiella* ...among birch  
 " *semipurpurella*, among birch

## IMAGOS]

## APRIL

- M. unimaculella among birch, and Scotch fir  
 " Sparmannella, among birch  
 " subpurpurella, among oak  
 " fastuosella ...among nut  
 A. cuprella, e. ...at shallows, flying in the sunshine  
 S. comptella, e. on hedges  
 " pyrella .....among hawthorn hedges  
 Y. vigintipunctella, e. among Sedum telephium  
 P. xylostella .....among Cruciferæ  
 " Dalella .....on moors  
 H. radiatella .....from Aug.  
 P. caudella .....from Sept., on parrings, &c., flies over spindle bushes after dark  
 D. arenella .....from Aug.  
 " Alstræmeriella, from Aug.  
 " ciniflonella ...Rannoch  
 " capreolella ...from Aug.  
 " conterminella, from Aug.  
 " applanella ...from July, flying over hedges  
 " chærophyllivorella, from Aug.  
 G. velocella, e....  
 " ericetella, e....moors and heaths  
 " junctella .....  
 D. sulphurella ...  
 B. incongruella ..on heaths and moors, hides among withered sprigs of heath when disturbed  
 A. autumnitella, from Aug.  
 G. fuscoviridella  
 T. sericiella .....  
 O. pinariella, h.? among Scotch fir  
 Z. hepariella ...from Aug.  
 G. stigmatella ...from Aug.  
 " straminella...from Aug.  
 " populella ...from Sept.  
 " phasianipennella, from Sept.  
 C. cuculipennella, from Sept.  
 " citrinella .....from Oct.  
 O. anglicella, e. among hawthorn and sloe  
 C. chærophyllella, from Oct.  
 L. decorella .....from Oct.  
 C. flavicapitella..among hawthorn  
 E. rufocinerella..among grass  
 L. Bremiella.....  
 " alnifoliella ...

The following hibernated species may also be met with this month, but their condition is often so "seedy" that they are of little value as specimens, unless eggs are desired:—

C. Edusa, C. Hyale, V. c-album, V. urticæ, V. polychloros, V. Antiopa, V. Io, V. Atalanta, V. cardui, M. stellatarum, E. fasciaria, T. variata, C. fluviata, S. dubitata, C. psitticata, C. miata, C. silaceata, A. auricoma, L. lithargyria? A. puta, A. suffusa, A. saucia, C. vaccinii, C. spadicea, C. erythrocephala? S. satellitia, D. rubiginea, H. croceago, D. templi, C. vetusta, C. exoleta, X. conformis, X. rhizolitha, X. semibrunnea, X. petrificata, G. libatrix, H. rostralis, E. coarctalis (angustea) E. ocella, P. crenana, P. caudella, D. pallorella, D. propinquella, D. subpropinquella, D. alstræmeriella, D. vaccinella, L. epilobiella, L. clerckella, P. suffusella, P. salignella, P. pterodactylus, A. polydactyla.

# MAY

## OVA]

As the geologist, to be successful at his favourite pursuit,

“Must dig out buried monsters, and explore  
The green earth's fruitful crust,”

so the entomologist ought to be willing to devote himself, it may be, to the somewhat “dry” work of studying the earlier stages of the insects he collects, and not allow the more engrossing attractions of merely catching the imagos to solely occupy his attention. This is the more necessary to bear in mind now that the work of the season is beginning to crowd upon the collector. He should not “shut his apprehension up,” and drop, it may be, into his old habit of merely amassing numbers of species, without making a corresponding addition to his knowledge regarding them. As he pursues his way

“through matted fern, and hazels thick,”

the eggs of many species may be found by critically examining the food-plant at the time they are due; but a more certain method of obtaining eggs is to induce the female imago to deposit on a sprig of the food-plant. With this view, all female specimens from which eggs are desired should be isolated, and placed under the most favourable conditions for oviposition. Many species readily deposit their eggs in a chip, or other box; others prefer the gauze, or cheese-cloth cover of a breeding-cage, or a spray of the larval food-plant; some can be induced to lay when placed in a glass tube or a glass shade, with a sprig of the food-plant, or of blooming heather, or a small piece of jam; and others, especially the butterflies, love the stimulus of air and sunshine.

One of the difficulties the breeder from the egg encounters is a prompt supply of the proper food-plant. Valuable species are often lost from neglect or mistake on this point. The most successful mode of meeting this difficulty is doubtless by having a growing plant ready, with the eggs placed upon, or near it; and this must be supplemented by other growing plants as the first one becomes demolished. Sometimes, however, the greater difficulty meets us of not knowing what is the food-plant in a state of nature. Every effort should be made to discover this, as we cannot be said to have worked out the life-history of an insect, though we may succeed in feeding it up from the egg, unless we have ascertained the natural food-plant, and thus accomplished it. Watching the female imago deposit her eggs is one of the surest and most satisfactory methods of solving this problem, and should always be carefully looked for, whenever opportunity offers, in all cases of imperfectly known species. Pieces of the various kinds of herbage among which the species is most frequently found should be in readiness to be first offered to the newly emerged larvæ; and if these are refused, we must then resort to substitute-food-plants. Happily we have many available. For the *Geometrina* the common knotgrass (*Polygonum aviculare*) occupies

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the first place, and it is often eaten by species in confinement in preference to the natural food-plant. Hawthorn, Lotus (trefoil), and Glechoma (ground ivy), sallow, and sloe are also useful. For the Noctuæ the following plants have been found acceptable—sallow, birch, plum, hawthorn, plantain, dock, dandelion, lettuce, clover, borage, goosefoot. When the food-plant is known, but cannot be procured, plants of the same natural order may be pretty safely substituted, and many will eat hawthorn or knotgrass when their natural food is not within reach. It is here, as in working out other branches of entomology, that a knowledge of botany is desirable; and the collector should not fail to make it his business to learn "all about" plants, as well as his favourite insects. If he does not, he will constantly find his progress impeded, and his ignorance upbraiding him. He should do this not by merely going through a cramming course at a Science School, however useful that may be as a groundwork for technical knowledge, but by super-adding to it the work of field botany, and mastering the mysteries of classification, and the best systems of natural arrangement.

- L. sinapis .. .....on Vicia cracca, and Orobusterosus; long, standing on one end, yellow-white
- P. brassicæ .....on cabbage, &c.; in groups; conical, ridged, yellow
- " rapæ .....on Cruciferæ, mignonette, and other garden plants; singly on the underside of a leaf
- " napi .....on Cruciferæ
- " Daplidice.....on wild mignonette, and weld
- A. cardamines, e. on Cardamine, Erysimum, &c., upon the fl.-stalks, and base of the fl.; bright orange
- C. Edusa .....on white clover, lucerne, &c. This species also oviposits in June, and s. in July and August, and even in September
- " Hyale .....on clover, melilot
- V. c-album .....on nettle, hop, elm, sloe, currant
- " urticæ .. ..on nettle; in batches upon underside of leaf; barrel-shaped, fluted, green
- " polychloros ...on elm, s. willow and poplar; in regular batches; globular, glassy, brownish
- " Antiopa .....on willow, birch, poplar, nettle
- " Io ... .....on nettle; green
- " Atalanta .....on nettle, singly; green
- S. Aegeria .....on grasses; singly
- " Megæra, e. ...on grasses
- C. Pamphilus ...on Nardus stricta, and probably other grasses
- T. rubi .....on bramble, broom, Genista
- L. Alexis, e.....on rest-harrow, trefoil, &c.
- " Argiolus, b....on holly, and probably buckthorn, upon the fl.-stalks, rather close to the fl.; at first green, changing to white
- S. alveolus .....on bramble and wild raspberry; singly, pale green
- T. Tages .....on Lotus corniculatus
- M. stellatarum...on Galium mollugo; upon underside of leaf of plants growing on old walls
- S. populi .....on poplar, sallow, willow; laid singly upon the leaves; oval, green
- A. fuliginosa ...on dock, nettle, plantain, &c.; in regular batches upon the leaves, as do the three following species
- " mendica .....on sloe, plantain, &c.
- " lubricipeda ...on various low plants; s. elder and other trees
- " menthrasti ...on various low plants
- Ö. pudibunda ...on hop, oak, &c.; in regular batches

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- S. carpini, b. .. on heath, bramble, sloe, willow, &c., spirally round the twigs; round, pale green
- E. advenaria.....on dogwood, and probably wild rose, and bilberry
- O. bidentata .....on oak, willow, nut, sloe, &c.; in regular batches, upon the leaves; dark green
- E. alniaria .....on alder, birch, willow, beech &c.; brick-shaped, like all the Ennomos
- " tiliaria .....on oak, willow, birch, alder, &c.; purplish
- " fuscantaria ...on ash, privet; upon the twigs, in small batches
- " erosaria .....on oak, birch, &c.
- " angularia .....on oak, birch, beech, &c.
- A. prodromaria in bark crevices of oak, birch, elm, nut
- T. consonaria ...on beech, oak, birch; oval, dull reddish purple
- " biundularia ...on oak, birch, &c.; slightly oval, bright green
- P. petraria .....on brake fern
- F. carbonaria ...on willow, birch
- " piniaria .....on needles of Scotch fir and larch; in a row on the higher branches
- A. citraria.....on wild carrot, trefoil, &c.; on the coast
- L. polycommata on honeysuckle, ash
- M. albicillata ...on bramble, raspberry; large
- C. ferrugata .....on ground ivy, Galium, chickweed
- C. russata, e. ...on strawberry, birch, hawthorn, willow, &c.; singly, large, flattish; dingy yellow
- E. lineolata, e. ...on Galium verum, on the coast; in clusters; oval, standing on the smaller end; yellow, changing to pale brown
- N. trepida.....on oak; white, with faint blue tinge; large
- T. gracilis .. .....on willow, &c., and low plants; often upon seed-heads of plantain, also dead reed-heads
- M. brassicæ .....on cabbage, dock, Chenopodium, &c.; in regular batches, upon the underside of the leaves
- A. saucia .....on plantain, grass, clover, and other low plants; hatch in about a fortnight after being laid. The eggs are, however, s. laid in Oct., hatch early in November, turn to pupæ about Christmas, and the imagos emerge in April
- D. capsophila ...on fl.-heads of Silene maritima
- " capsincola, e. on fl.-heads of Lychnis and Silene
- X. petrificata ...on oak, lime, birch; oval, greyish, thickly dotted with purple
- A. urticæ .....on nettle
- " triplasia .....on hop, and nettle; globular, singly

## LARVÆ]

The "merry month of May" is the great month for larva beating. Now is the time when most of the species which have hibernated are nearly, if not quite, full-fed. These, therefore, are gladly seized upon, as they require but little attention to bring them into healthy pupæ. Of course in all these cases it is desirable, if possible, to identify the species, and give it its proper pabulum, and as nearly natural conditions as possible, to enable it to easily pass into the next stage. Quiet and cleanliness are essential conditions of healthy larval and pupal life. Breeding cages should, therefore, never be crowded either with species or with the food-plant; and should, if possible, have some quiet crannies, with the requisite material, and space for each particular species to effect its last and most important transformations. In

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carrying out these arrangements, not only should every means be afforded the larva to make its cocoon, or to otherwise pass into the pupal state, but it should be remembered that in a few weeks the perfect insect will emerge, and provision must be made for its successful advent in the winged state.

Besides the hibernated larvæ, many will be found in various stages of growth which have only emerged from the egg state in the earlier spring months. Some of these may be rather small, especially if the season has been backward; but their careful feeding up will have its reward in their being found to be seldom infected with parasites, to which older larvæ are more liable. In carrying out these breeding arrangements our object should not only be to carry the operation successfully through, but to learn the habits of the various species as they would behave in a state of nature.

Many larvæ vary in appearance according to their age. In some species, when one of the regular changes of skin takes place, the appearance of the insect is completely altered. Many young larvæ are thus unknown, which, when mature, are recognised as old friends. Many noctuæ are more gaily dressed in youth than in maturity. Among the other kinds which are sober in colour in the earlier stage, but array themselves gorgeously in their last moult, are *L. Ægon*, *C. flavicornis*, *A. australis*, *T. rubricosa*, *E. nigra*, *C. exoleta*.

The cannibal larvæ should be carefully looked for when beating, and be "left out in the cold" if not wanted, or boxed separately if they are, or they will make short work of any larva that happens to come in their way.

A useful article to the larva collector is a bag, made of canvas or linen, about two feet deep by one foot wide. This would hold a large number of larvæ, with sprays of their food-plants, and when the mouth is tied the whole may easily be carried. If time presses on reaching home, the larvæ may be left hung up in their bag for a day or two, in a cool place, without injury. If the whole of the larvæ are turned out into a pan on reaching home, and covered with muslin, the case bearers will crawl up and attach themselves thereto.

The reader may again be reminded that night searching for larvæ, especially on low plants, often yields many species. They are sometimes found crawling up or down trees. Just before sunset is the best time for beating, or sweeping, especially on warm evenings in the early summer. On favourable evenings towards the end of May upon a heath, or moor, many species may be sometimes met with in abundance. Lettuce leaves have been recommended as a bait to catch larvæ, scattering the leaves over the ground some time before searching.

The long list of larvæ which comes under this month will furnish the collector with ample choice of material upon which to work.

*P. cratægi*.....from August, hawthorn, sloe, and orchard trees

*A. Paphia*.....from August, dog, and sweet violet, in woods, &c.

*A. Aglaia*.....from August, dog, and sweet violet, and wild heartsease; on hill-sides, and sea-side sandhills

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- A. Niobe .....from August, dog, and sweet violet
- " Adippe.....from August, dog, and sweet violet; in woods, &c.
- " Latona .....from August, dog, and sweet violet, and wild heartsease
- " Euphrosyne, b. from July, dog, and sweet violet; feeds in the sunshine; hides on the underside of primrose, and other leaves
- " Selene, b. ...from July, dog, and sweet violet
- M. Cinxia .....from July, *Plantago lanceolata*
- " *Athalia* .....from August, *Plantago lanceolata*, foxglove, wild germander
- V. c-album, e. ...nettle, hop, elm, sloe, currant
- " polychloros ...elm, *Salix vitelina*, *S. viminalis*, *S. caprea*, *Populus tremula*, *Pyrus aria*, and fruit trees
- L. sibylla .....from August, honey-suckle; prefers the plants which climb over bushes, and up the trunks of oaks
- A. Iris .....from August, sallow, and poplar. Gripstoot tightly to shake off. Often hides in crevices of bark of trees, or under loose pieces
- A. Galatea, b. ...from August, timothy, and other grasses; may be obtained by sweeping. Some of the larvæ are green, and some are pale drab
- E. Epiphron.....from August, grasses in mountain bogs
- " Medea .....from Sept., moorland poa, and other grasses
- H. Semele.....from Aug., quaking grass, couch grass, &c., on dry hill-sides, and sea-side sand-hills
- " Ianira, e. ....from Aug., meadow grasses
- H. hyperanthus...from Aug., annual meadow, millet, and other grasses; in and near woods; may be found at dusk, or at night, feeding on the blades of grass, in wood ridings
- C. Davus .....from Aug., *Rhynchospira alba*; lives exposed
- " Pamphilus ...grasses
- T. quercus .....oak; most abundant in the upper branches. In confinement s. eats the changing pupa
- " w-album .....wytch elm
- " pruni .....sloe
- " betulæ .....sloe, birch
- P. Phlæas .....from Oct., sorrel, dock, ragwort
- L. Ægon .....*Ornithopus perpusillus*
- " *Artaxerxes* (var.) b., sun cistus; hides on the underside of the leaves
- " Adonis, b. ...from Oct., *Hippocrepis comosa*, &c.
- " *Corydon* .... from Oct., *Hippocrepis comosa*, &c.
- P. sylvanus, b. ...grasses, in rolled-up blades
- S. myopæformis in stems of apple, pear, plum, hawthorn; in old gardens
- " *formicæformis* from Sept., in withy stems; may be found in the old stumps
- " *chrysidiformis* inside r. of sorrel and dock; at Folkestone and Eastbourne, and probably other places on the S. and E. coasts; supposed to be 2 years feeding
- " *cynipiformis*...in the bark of unhealthy-looking oaks, and in old stumps
- " *ichneumoniformis* in the stems of stinking hellebore, growing on cliffs, under-cliffs, and land-slips, on the coast
- " *bembeciformis* from Sept., in the stems of poplar, and willow, and s. in the stumps of osiers



## LARVÆ]

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- M. arundinis, b. in stems of common reed
- Z. æsculi .....from Aug., in the wood of ash, elm, or pear trees; s. in hawthorn, lime, or box. The larvæ feed in the interior of the smaller branches, and are generally found in the upper branches of the highest trees. Their presence is indicated by the pellets of pink frass lying about, under the infected trees. They may be reared if the infected branch is sawn off, and kept damp. If the infected tree is marked, or known, it may be visited when the imago is due, and large numbers be s. taken at rest upon it
- H. hectus .....from Aug., in r. of brake fern; two seasons feeding
- " lupulinus .....from Aug., in r. of dead nettle, &c.
- " velleda .....from Aug., in r. of brake fern
- P. statices .....sorrel, Cardamine impatiens, &c.; mine in the leaves while young
- " geryon .....sun cistus; mine in the leaves while young
- " globulariæ ...—?
- Z. minos .....trefoil, vetch
- " trifolii .....from July, trefoil, vetch
- " lonicera .....from July, clover, grasses
- " filipendulæ ...from July, crowfoot, trefoil, &c.
- S. phegea .....from Sept., dandelion, scabious, plantain, &c.
- N. cucullatella ...sloe, apple, hawthorn, &c.
- " confusalis .....oak
- " strigula ..... oak
- " albulalis? .....bramble? ash?
- N. senex .....lichens, in fens and bogs
- " mundana .....lichens, on or under the top stones of old loose stone walls
- S. irrorella .....ground lichens on the coast, just above the tide. The larvæ will feed equally well on tree lichens if sprinkled with salt water every morning, and the pan in which they may be kept is placed in the sun
- C. miniata .....from Aug., lichen on oaks (Lichen caninus); also withered willow, oak, alder
- L. mesomella ...from Aug., lichens; will also eat willow and heath; has been taken among r. of heath
- " muscerda .....lichens, on willow, in fens
- " aureola, e. ...from Sept., lichens, on larch, oak, &c.
- " pygmæola ...lichens, among moss
- " lurideola .....from Aug., lichens; will also eat crab
- " molybdeola ...from July, lichens
- " complana .....from Aug., lichens, on sloe and fir
- " griseola.....from Aug., lichens, on poplar; Lichen caninus the supposed proper food, will also eat withered willow, &c.
- " quadra ..... lichens, on oak, beech, apple &c., mostly old trees [mugwort
- E. grammica.....fescue grass, heath,
- " cribrum .....from Aug., heath, bilberry
- D. pulchella .....Myosotis arvensis
- E. jacobææ .. ragwort, and groundsel
- C. hera .....from Sept., bugloss, and low plants
- " dominula .....from Aug., Cynoglossum officinale, &c., on hilly places, gravel pits, &c.
- E. russula .....from Sept., plantain, Erica cinerea, Hieracium, dandelion &c. Feeds well on lettuce in confinement
- C. plantaginis ...from Sept., violets, plantain, &c.
- " caia .....from Sept., nettle, and various other plants. Dark varieties may be s. got by feeding on coltsfoot or lettuce

## LARVÆ]

## MAY

- C. villica* .....from Sept., chickweed, furze, and other plants. The hairy bombyces prefer feeding in the morning sunshine
- A. fuliginosa*, b. from Sept., plantain, dock, grasses, &c.
- L. chrysorrhæa* ...from Sept., sloe, hawthorn, &c. "Painfully undesirable to handle"
- " *auriflua*.....from Sept., sloe, hawthorn, oak, sallow, &c.
- " *salicis* .....from Aug., poplar, willow, oak, &c. Often sun themselves on tree trunks when not feeding
- " *dispar* .....*Myricagale*, willow, sloe, hawthorn, and various fruit trees. Formerly found at large; now bred artificially
- " *monacha* .....oak, beech, birch, fir, apple, &c.; hides in the crevices of the bark
- O. fascelina* .. ...from September, on hedges, dwarf sallows, furze fl., broom, heath, and various trees and plants
- " *gonostigma* ...from Sept., oak, nut, willow, sallow, bramble, sloe, hawthorn, beech, &c. If fed on willow there is a tendency to become double-brooded. Hibernates in a loose web
- T. cratægi*.....hawthorn, sloe, sallow, birch, oak. May be found on dense and closely-cropped hawthorn hedges bordering roads
- P. populi* .....oak, poplar, lime, ash, hawthorn. In repose it lies closely pressed on a branch or twig
- E. lanæstris* .....hawthorn, sloe, &c., in hedges; generally a large number in a web; s. remains in pupa several years
- B. neustria* .....sloe, hawthorn, and fruit trees; generally in a batch in a web
- " *rubi* .....from Sept., bramble, heath, &c.; often found wandering about in the sunshine
- B. roboris* .....from Sept., hawthorn, dogwood, bramble, sallow, broom, heath, &c.
- " *quercus*(*callunæ*) from Sept., bilberry, &c.; dogwood preferred
- " *trifolii* .....from Sept., trefoil, clover, broom, grass, furze, raspberry, &c.; attached to the coast
- O. potatoria* .....from Sept., coarse grasses
- L. quercifolia* ...from Sept., bramble, sloe, sallow, willow, plum, &c. Rests along a twig or branch, which it greatly resembles
- O. sambucata* ...from Sept., ivy, elder, holly, bramble, and other trees and plants
- E. vespertaria* ..nut
- " *apiciaria* .....nut, poplar, willow, sallow, alder
- A. prunaria*, b....from Oct., broom, sloe, beech, bramble, sallow, hawthorn, plum, &c.
- M. margaritata*...from Sept., oak, beech, birch, hornbeam, &c.
- P. syringaria* .....from Sept., lilac, privet, elder, honeysuckle. May be found at night, hanging from its food
- C. elinguarina*.... hawthorn, sloe, oak, honeysuckle, &c., also, heath, bilberry, &c.
- H. pennaria* .... oak, hawthorn
- P. pilosaria* .....oak, elm
- N. zonaria* .....*Ammophila arundinacea*, and other sand-hill plants
- " *hispidaria* .....oak
- C. glabraria* .....lichens, on fir
- " *lichenaria* ..... from Sept., lichens, on oak, park palings, &c.; rests among the lichens, which it greatly resembles
- B. repandata* ....bramble, sloe, birch, plum, spindle
- " *perfumaria* ..ivy, lilac, clematis, &c.
- " *abietaria* .....from Sept., larch, spruce, and Scotch fir; has been found on whortleberry; will also eat birch, and oak

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- B. roboraria .....from Sept., oak  
 G. obscurata.....from Sept., thyme, sun cistus, Potentilla reptans, Poterian sanguisorba. &c.; hides under r. &c., by day  
 D. obfuscata .....from Sept., heath, vetch, &c.  
 M. cineraria .....lichens, on walls  
 P. cytisaria .....broom, and Genista anglica, on heaths, forests, and waste places on the coast; may be found at rest, stuck up like twigs on broom plants  
 G. papilionaria ..from Oct., nut, birch, beech, &c.  
 " smaragdaria.. —? on the S. E. coast; covers itself with fragments of leaves, &c.  
 I. vernaria..... from Sept., Clematis vitalba  
 P. baiularia, b. from Aug., oak; covers itself with fragments of leaves, &c., after every moult, until nearly full-fed  
 H. thymiaria.....hawthorn, oak  
 H. auroraria.....from Aug., plantain  
 A. rubricata .....from Aug., —? will eat knotgrass, Lotus corniculatus, Medicago lupulina, Thalictrum minus, and the smaller trifoliums  
 " scutulata .....from Aug., fl. of Anthriscus sylvestris, and dandelion, preferring the withered leaves  
 " contiguaria ...from Aug., Empetrum nigrum; will also eat hawthorn buds, and knotgrass  
 " herbariata .....from Oct., dried plants in herbaria, & herbalist's shops, &c. Tansy found to be eaten where it occurred  
 " rusticata .....from Aug., hawthorn; will also eat ivy, lilac, and withered bramble. Very local  
 " interjectaria...from Aug., dandelion, scarlet pimpernel, withered  
 " holosericata ...from Aug., sun cistus, withered  
 A. promutata ...from Aug., Achillea millefolium, Artemesia vulgaris, Potentilla reptans  
 " straminata .. from July, —? will eat knotgrass  
 " immutata .....from Aug., some marsh plant; common in fens; will also eat knotgrass  
 " fumata .....from Aug., heath  
 " strigilata .... from Aug., clematis, Stachys, &c.; on the coast  
 " emutaria .....from Aug., Triticum repens; in salt marshes on the coast; will also eat Medicago Lupulina, mint, Chenopodium, Lotus corniculatus, knotgrass, &c.  
 " aversata.....from Sept., primrose, gooseberry, nut, Geum urbanum, &c.  
 " inornata .....various plants  
 T. amataria .....from Oct., dock, knotgrass, and other plants  
 H. vauaria .....gooseberry, &c., in gardens  
 S. belgiaria .....from Aug., heath  
 S. plumaria .....heath  
 F. atomaria ...from July, Centaurea, trefoils, &c.  
 " pinetaria .....bilberry  
 S. dealbata ... from Sept., grasses  
 A. strigillaria ...from Aug., heath, broom; found at night on heaths, &c.  
 " gilvaria .....from Sept., Achillea millefolium, &c.  
 A. grossulariata...gooseberry, currant, sloe, &c.  
 P. hippocastanaria from Sept., heath  
 H. rupicaprararia .. oak, hawthorn, sloe  
 " leucopheararia...oak, maple. Vary very much  
 " progemmaria oak, birch, hornbeam, nut  
 " defoliaria .....oak, nut, sloe, hawthorn, birch, elm, lime, &c.  
 A. æscularia .....oak, elm, lime, sloe, hawthorn, horse chestnut, apple, privet, &c.  
 C. brumata .....oak, and other trees

## LARVÆ]

## MAY

- O. dilutata .....oak, and other trees  
 L. didymata .....Chærophyllum tem-  
 ulum, cowslip, &c.  
 " cæsiata, b. ...from Sept., bilberry,  
 whortleberry, heath; prefers the  
 fl.  
 " ruficinctata ...Saxifraga granulata,  
 and S. hypnoides; has been  
 also found on fruit trees, pepper-  
 mint, and sage  
 E. nanata.....from Aug., heath, fl.  
 " minutata .....from Aug., heath, fl.,  
 scabious; s. a cannibal  
 " subciliata, b. maple  
 " sobrinata .....juniper  
 " rectangulata...apple, and crab,  
 buds, and fl.  
 " debiliata .....whortleberry, in  
 curled-up leaves  
 T. variata .....Scotch fir, larch, &c.  
 " firmata .....larch, and Scotch fir  
 Y. elutata, e. ....from Oct., nut, sal-  
 low, bilberry, alder; hides  
 among the seed-down of saw  
 M. rubiginata ...alder  
 C. quadrifasciaria hawthorn, white  
 dead nettle, knapweed, and low  
 plants  
 P. lapidata .....—? will eat cle-  
 matis  
 S. vetulata .....buckthorn; between  
 the leaves  
 " rhamnata .....buckthorn, birch;  
 between united leaves  
 C. immanata ...strawberry, bilberry,  
 alder, birch, &c.  
 " prunata.....currant, gooseberry,  
 sloe, &c.  
 " testata .....birch, saw, poplar  
 " populata .....bilberry, whortle-  
 berry, poplar, saw  
 " fulvata... .....dog rose  
 " pyraliata .....Galium, and haw-  
 thorn  
 " dotata .. .....black, & red currant  
 E. mæniaria .....broom  
 " palumbaria ...Genista, broom,  
 heath, clover  
 " bipunctaria ...from Oct., trefoil,  
 clover, &c.  
 E. lineolata, s. ...Galium verum  
 C. spartiata, e...broom; feeds soli-  
 tarily under the leaves, in which  
 it makes holes. Is a cannibal  
 in confinement  
 T. chærophyllata Anthriscus sylves-  
 tris, and Bunium flexuosum fl.  
 D. sicula ... .....oak, birch, lime  
 C. spinula .....hawthorn, sloe,  
 mountain ash  
 P. Cassinea .....oak; s. saw, lime,  
 elm; grips its food-plant tightly  
 " nubeculosa ...birch; is difficult to  
 rear in confinement; stale, dryish  
 food is stated to afford the best  
 chance of success  
 C. curtula ..... poplars, saw;  
 webbed in the leaves  
 P. plumigera, e. maple; will also eat  
 sycamore [apple  
 D. cæruleocephala hawthorn, sloe,  
 C. diluta .....oak, birch; between  
 leaves  
 B. glandifera ...from Sept., lichens,  
 on walls. (See last month.)  
 Towards the end of this month  
 glandifera and perla are full-  
 fed, and spin up in a crevice,  
 or in the larva cocoon  
 " perla .....from Sept., lichens,  
 on walls  
 L. conigera .....couch, and other  
 grasses  
 " lithargyria ...grasses, chickweed,  
 plantain, &c.; may be found  
 feeding at night  
 " littoralis, b. ...from Aug., Ammo-  
 phila arundinacea, on the coast.  
 Burrows 6in. or 7in. in the sand.  
 Will also eat Carex  
 " impura .....from Oct., Dactylis  
 glomerata; may be found at  
 night, feeding on the grass-  
 blades  
 " phragmitidis from Aug., in the  
 young stems of common reed;  
 in marshes and fens  
 T. elymi, m.....Elymus arenarius,  
 on the coast; may be shaken  
 out of the plant

## LARVÆ]

## MAY

- N. fulva ..... *Poa aquatica*, and *Carex*, in the stems; in damp woods and fens
- " neurica .. ..... common reed, in the stems; a small hole is visible in the stem of the plant tenanted by a larva
- " geminipuncta common reed, in the stems. Holes covered with silk from within are visible on stems containing larvæ
- " cannæ ..... on *Typha latifolia*
- " lutosa ..... from Oct., in stems of common reed, below the ground
- G. flavago ..... marsh, and other thistles, burdock, alder, fox-glove, &c.
- H. nictitans ..... at r. of *Tussilago*, *Cyperaceæ*, &c.
- " micacea ..... at base of leaves of *Carex*, and inside stems and r. of *Equisetum*, dock, &c.
- X. lithoxylea ..... at r. of grass, and other plants
- " polyodon ..... low plants
- " scolopacina .. wood rushes, and grasses
- H. popularis. .... at r. of grasses
- L. cespitis ..... grasses. Hides among the r. by day
- M. abjecta ..... at r. of couch grass; the species generally occurs on the coast, and in confinement the food-plant should be sprinkled with salt water
- " brassicæ ..... cabbage, dock, *Chenopodium*, and *chrysanthemum*; eats into the heart of cabbages
- A. gemina ..... from Aug., grasses; hides at r. by day
- " fibrosa ..... in fl.-stems of yellow flag
- " oculæa ..... in stems of *Dactylis glomerata*, and other grass
- M. literosa ..... slender foxtail grass
- " furuncula .. ... in stems of *Festuca*, and slender foxtail grass
- " arcuosa ..... *Aira cespitosa*, at the crown of the root
- C. Haworthii ... *Eriphorum vaginatum*
- G. trilinea ..... greater plantain, and other plants; hides among the r. by day
- A. valligera ..... from Oct., at r. of grasses, mostly on the coast
- " suffusa .. ..... at r. of grass, lettuce, radish, spinach, &c.
- " saucia ..... low plants
- " exclamationis from Sept., at r. of cabbage, turnips, &c.
- " corticea, b. ... from Sept., *Chenopodium album*, and other plants
- " cinerea ..... from Sept., at r. of low plants
- " cursoria ..... *Euphorbia esula*, sandwort, sea violet, &c.
- " nigricans ..... plantain, clover, &c.
- " aquilina ..... plantain, chickweed, cabbage, poppy, bedstraw, clover, &c.
- " obelisca ..... *Galium verum*, and low plants
- " agathina ... } heath, found at night
- " porphyrea } on heaths, or moors
- " præcox ..... sea-side sandwort, sea violet, chickweed, and other low plants on the coast; also *Salix repens*, and other dwarf willows. May be traced, and dug up in the sand, in which it burrows 7 or 8 in.
- " ravida ..... at roots of thistle, dandelion, &c.
- " Ashworthii ... from Oct., fescue grass, hawkweed, sun cistus, thyme, heath, harebell, &c.
- T. ianthina ..... from Aug., broom, chickweed, and other low plants
- " fimbria ..... from Oct., birch, oak, willow, broom, primrose; may be found at night feeding on primrose fl.
- " orbona ..... from Aug., broom, and low plants
- " pronuba ..... from Aug., dock, and other plants
- N. depuncta ..... sorrel, and other low plants

## LARVÆ]

## MAY

- N. augur .....from August, low plants, hawthorn, willow, &c.  
 " ditrapezium...low plants &c.]  
 " triangulum, b. willow, bramble,  
 " rhomboidea...from Sept., chick-weed, when young, afterwards on willow, hawthorn  
 " brunnea .....willow  
 " festiva .....from Aug., violet, willow, foxglove, &c.  
 " conflua.....from Aug., *Silene acaulis*, and many other plants  
 " Dahlii .....from Sept., low plants; found at night on heaths, &c.  
 " subrosea .....*Myrica gale*, willow  
 " umbrosa .....from Sept., dock, and other low plants  
 " baia .....low plants  
 " neglecta .....from Oct., heath, birch, willow, and low plants; found at night on heaths, &c.  
 " xanthographa from Oct., plantain, &c.; hides under stones, &c.  
 T. gothica..... willow, hawthorn, oak, &c., also dock, nettle, laurel, broom, lilac, &c.  
 " rubricosa .....dock  
 " instabilis .....sloe, willow, oak, dock, and other low plants  
 " opima .....willow, willow, rose  
 " populeti .....poplars, especially *Populus nigra*; between united leaves [ &c.  
 " stabilis .....oak, elm, hawthorn,  
 " gracilis.....willow, willow, low plants  
 " miniosa .....oak, and birch, when young, then hawthorn, and low plants  
 " munda .....oak, elm, poplar; hides in the bark crevices, and under detached pieces  
 " cruda .....oak, nut, willow; also other caterpillars  
 O. suspecta .....birch, poplar  
 " upsilon.....willow, poplar; hides under loose bark, or grass at the r.  
 " lota .....willow, willow; hides in the bark crevices  
 O. macilentata.....beech, birch  
 A. rufina .....oak  
 " pistacina .....buttercups, dock, &c. Spins a tight, neat earthen cocoon, in which it remains some weeks before pupation  
 " litura .....meadow sweet, and other low plants; also oak, willow, alder  
 " lunosa, b.....from Oct., grasses in elevated places; concealed under stones  
 C. spadicea .....sloe, hawthorn, and honeysuckle, when young; later on various low plants  
 " erythrocephala low plants  
 S. satellitia .....oak, &c., between the leaves; also other caterpillars  
 D. rubiginosa.....apple, plum, dandelion, and other low plants  
 H. croceago.....oak  
 X. citrigo.....lime  
 " cerago .....willows, when young; later on low plants. Larvæ feeding on *Salix caprea* and *S. aurita*, Mr. Gregson says, almost always produce the typical species; while those which feed upon the catkins and leaves of *S. viminalis* often produce the lemon-coloured variety and its variations  
 " aurago .....beech; hides in the chinks of the bark  
 " gilvago.....wych elm (seeds)  
 " ferruginea ...willow, *Populus tremula* (buds), wych elm (seeds)  
 C. xerampelina, b. from Dec., on ash; may be found at dusk, crawling up ash trunks; concealed in chinks of bark, and among grass at the base of the tree, during the day. Towards the middle or end of the month, having become full-fed, the larva spins under ground a very neat and compact boat-like cocoon, in which it remains some time before changing to a pupa

## LARVÆ]

## MAY

- T. subtusa.....poplar, between the leaves  
 " retusa, e. ....sallow, poplar, willow; between the leaves. The skin is very delicate, so that the lines look as if raised; head small, yellowish green, or blackish brown. These characters distinguish it from E. viminalis, which it otherwise resembles  
 D. oo.....oak; between united leaves  
 C. trapezina .....oak, birch, hornbeam, &c.; also other caterpillars  
 " pyralina .....pear, plum, &c.; between united leaves  
 " diffinis ..... } elm; between united  
 " affinis ..... } leaves  
 E. ochroleuca ...Dactylis glomerata  
 D. capsophila ...Silene maritima, & S. inflata (seeds)  
 P. chi .....hawthorn, willow, hawkweed, dock, Sonchus, lettuce, tea tree, &c.  
 D. templi .....Heracleum sphondylium, inside the stem and root  
 E. nigra .....Galium mollugo, plantain, grass  
 " viminalis .....sallow. Occurs with T. retusa, which it resembles, but the head is pale grey, with the lobes outlined in black; the lines more sharply defined, and two pairs of whitish dots on the back of each segment  
 " lichenea .....from Nov., ragwort, and various low plants, on the coast  
 V. oleagina .....sloe, in shady places, and skirts of woods  
 M. bimaculosa ...elm  
 " oxyacanthæ...hawthorn, sloe  
 A. Aprilina ..... oak  
 P. empyrea .....from Nov., pilewort, &c.  
 A. occulta .....primrose, plantain, and other low plants  
 " nebulosa .....from Oct., willow, hawthorn, birch, &c.  
 A. tinctoria .....from Sept., birch, grass, and low plants  
 H. protea .....oak  
 " dentina..... ..roots of dandelion  
 " peregrina..... Chenopodium, and Salsola kali  
 C. solidaginis ...bilberry; will also eat hawthorn  
 C. vetusta .....poplar, and various meadow and marsh plants  
 " exoleta .. .... scabious, campion, rest harrow, dock, Eryngium maritimum, turnip, asparagus, &c.  
 X. Lambda (Zinckenii) Myrica gale; on moors  
 " furcifera .....alder, birch  
 " rhizolitha ..... oak  
 " petrificata, e. oak, lime, birch  
 C. chamomillæ...chamomile, fl., Pyrethrum inodorum, and P. maritimum  
 A. myrtilli, s. ...from Oct., heath  
 A. luctuosa .....small convolvulus; feeds by night, chiefly on the fl.-buds  
 P. bractea .....Eupatorium cannabinum  
 " festucæ.....Carex, reeds, and grasses, near the sea  
 " iota .....nettle, dead nettle, honeysuckle, groundsel, &c.; may be easily found at night  
 " v-aureum .....nettle, &c.  
 " interrogationis nettle  
 A. pyramidea ...oak, elm, birch, willow  
 " tragopogonis hawthorn, larkspur, and low plants  
 M. maura .. ....from Sept., dock, chickweed, ivy, &c.  
 T. pastinum .....Vicia cracca  
 C. nupta .....Salix fragilis, and poplar; hides under bark during the day; may be found at night crawling up the tree trunks to feed  
 " promissa .....oak  
 " sponsa .....oak  
 E. mi.....Melilotus

## LARVÆ]

## MAY

- E. glyphica .....Dutch, or white clover
- R. sericealis .....on —? Probably various low plants
- H. derivalis .....from Aug., *Carex sylvatica*, and *Luzula pilosa*
- A. flexula .....lichen, in hedges, &c.
- O. dentalis .....in stems of *Echium vulgare*, on the coast; the plants look sickly when infested
- P. glaucinalis .. in nest-like formations on the end of birch twigs
- A. cuprealis .....on —?
- C. angustalis.....moss, on sea shores
- E. flammealis ...heath
- C. lemnales .....aquatic, in a case filled with air, feeding beneath the fronds of duckweed; if bred must be kept in water
- H. nymphæalis ..aquatic, in a flat case, under the leaves of yellow water-lily, and *Potamogeton pectinatus*
- „ stagnalis .....aquatic, on *Potamogeton*
- B. flavalis? .....*Galium verum*?
- „ verticalis .....nettle, between the leaves
- „ terrealis .....from July, golden rod, fl., &c.
- E. crocealis .....*Inula dysenterica*, between the leaves
- M. unionalis? .. privet? successive broods
- S. lutealis .....coltsfoot, &c.
- „ olivalis ..... ground ivy, and other low plants, in a web under the leaves
- „ prunalis .....sloe, and low plants
- S. ambigualis ...moss
- „ cembræ .....the mosses *Hypnum elegans*, and *Jungermannia dilatata*
- „ murana.....the mosses *Grimmia pulvinata*, *Dryum capillare*, &c.
- C. verellus? .....moss on trees, &c.
- „ falsellus .....the moss growing on walls and rocks, *Grimmia pulvinata*, &c.
- „ myellus? .....moss, on stones
- C. inquinatellus moss (*Barbula muralis* on the Continent)
- „ chrisonuchellus? *Festuca ovina*
- „ hortuellus.....moss
- „ paludellus ...*Typha latifolia*
- C. cicatricellus ..bullrush
- „ phragmitellus from Oct., reed
- S. forficellus .....*Poa aquatica*
- „ gigantellus ...common reed
- A. lotella .....in the stem and r. of *Festuca ovina*, and *Aira canescens*, in a silken tube
- I. carnella.....*Lotus corniculatus*, fl.
- H. binævella, e. in heads of this?les
- E. pinguis .....under bark of ash
- „ cinerosella? .. *Artemisia campestris*, and *A. vulgaris*?
- P. betulella .... birch
- „ dilutella .....thyme
- „ subornatella...thyme (*Zeller*), *Globularia vulgaris* (*Herr Mann*); between the leaves
- „ obductella ...in spun-up leaves of *Origanum vulgare*, *Mentha arvensis*, *Melissa acinos*
- „ roborella .....oak
- R. consociella ...oak
- „ advenella .....hawthorn
- „ marmorea ...on stunted sloe bushes
- „ suavella .....sloe
- „ tumidella..... oak
- G. cerella .....wax in beehives
- O. ahenella .....under the radical leaves of *Helianthemum vulgare*
- M. alveariella .. from Oct., wax in beehives
- H. quercana .....oak
- S. Revayana ...sallow (?)
- T. podana..... rose, fruit trees, oak, &c.
- „ piceana.....fir
- „ cratægana ...oak (?)
- „ xylostæana ...fruit trees, oak, honeysuckle, &c.
- „ sorbiana .....birch, alder, nut, oak
- „ rosana .....almost any plant
- „ dumetana..... low plants
- „ diversana .....polyphagous on trees



## LARVÆ]

## MAY

- T. cinnamomeana beech, larch, &c.  
 " heparana .....hawthorn, &c.  
 " ribeana.....hawthorn, and al-  
 most any tree  
 " corylana .....nut, plane, dogwood,  
 &c.  
 " unifasciana ...hawthorn, &c.  
 " semialbana ...Iris germanica,  
 honeysuckle, beech, &c.  
 " costana.....figwort, willow  
 herbs, and other marsh plants  
 " viburnana...Myrica gale, and  
 Vaccinium  
 " icterana .....knapweed, plantain,  
 and almost any low plant  
 " viridana .....oak, birch, &c.  
 " Branderiana...aspens, poplar  
 " gnomana .....polyphagous on trees  
 D. Grotiana? ...oak?  
 A. Gerningiana sea pink, asphodel,  
 &c.  
 L. Boscana .....elm  
 P. permutana?...Rosa spinosissima  
 " maccana ...Myrica gale  
 " ferrugana.....birch, oak  
 " aspersana.....Potentilla, meadow  
 sweet  
 " Shepherdana hemp agrimony, and  
 meadow sweet  
 " comariana ...Comarum, Fragaria,  
 &c., in boggy heaths and  
 fens  
 T. caudana .....willow, sallow, pop-  
 lars  
 " contaminana sloe, hawthorn, &c.  
 D. lorquiniana...Lythrum, in fens,  
 &c.  
 " Loefflingiana...oak  
 " Holmiana ...hawthorn, rose, &c.;  
 folded leaves  
 " Bergmanniana rose; folded leaves  
 " Foskaleana ...maple, lime  
 P. Lecheana.....sallow, willow, elm,  
 honeysuckle, oak, &c.  
 D. Hartmanniana willow, &c.  
 " semifasciana sallows  
 P. picana, e. ...birch, sallow shoots  
 " sororculana ...birch  
 " capræana .....sallow  
 " pruniana .....sloe  
 P. ochroleucana rose  
 " cynosbana ...sloe, rose, hawthorn,  
 and fruit trees  
 " gentianana ...from Nov., in teazle  
 heads  
 " carbonana ... (fuligana) Stachys  
 A. salicana . ...sallow, willow, pop-  
 lar; in folded leaves  
 S. laricana .....larch  
 " ocellana .....alder  
 " aceriana .....poplar; in the young  
 shoots and bark  
 " dealbana .....poplar, sallow  
 " neglectana ...bark of willow, and  
 poplar  
 " simplicana .....aspens  
 " incarnatana, e. Rosa spinosissima,  
 on the coast  
 " suffusana, e. hawthorn  
 " rosæcolana, e. rose  
 " roborana .....rose  
 P. tripunctana ...sloe, &c.  
 A. Udmanniana bramble  
 S. achatana .....hawthorn  
 S. latifasciana ... under moss, on  
 trees  
 " littorana .....sea pink  
 " lacunana .....various low plants  
 " urticana .....various low plants  
 M. Schulziana? Pinus sylvestris  
 " Ratzeburgiana spruce fir, terminal  
 shoots, and needles  
 E. arbutana .....Arctostaphylos uva-  
 ursi  
 E. quadrana? ...Scabiosa arvensis  
 C. cinctana?.....Anthyllis vulneraria  
 " politana .....polyphagous  
 S. subjectana ...various plants  
 " virgaureana...various plants  
 " Wahlbomiana polyphagous, like  
 all the genus  
 " abrasana? ...Achillea millefolium,  
 &c.  
 S. ictericana..... almost any low plant  
 B. uliginosana ...Lythrum salicaria  
 P. inornatana ...— ?  
 " lætana .....aspens  
 G. minutana.....black poplar  
 " trimaculana...elm  
 " nævana .....in holly shoots

## LARVÆ]

## MAY

- G. geminana ...in shoots of Vaccinium  
 H. cruciana .....in sallow and willow shoots  
 B. angustiorana yew  
 P. corticana .....hawthorn  
 " profundana ...oak  
 " ophthalmicana white poplar  
 " sordidana .....alder  
 E. bimaculana ...alder, birch  
 " cirsiana .....from Sept., in thistle and knapweed stems, in woods  
 " Pfulgiana.....from Sept., in thistle and knapweed stems, in open places; the piece of stem containing the larvæ may be cut off above and below the entrance-hole, and kept in damp sand  
 " turbidana .....roots of butter-burr?  
 " fœniana .....from Oct., in r. of Artemisia  
 " signatana .....Cerasus padus  
 " grandævana (?) in r. of Petasites, & Tussilago  
 " populana .. ...sallows  
 O. ulmiana? .....bilberry  
 S. spiniana? ... hawthorn, sloe  
 C. Hercyniana ...spruce fir  
 " ustomaculana Vaccinium  
 P. mercuriana ...Dryas octopetala  
 R. Buoliana .....Scotch fir  
 " pinicolana ...in shoots of Scotch fir  
 " sylvestrana .. in shoots of Scotch fir  
 S. regiana.....under sycamore bark  
 D. politana .....r. of Achillea millefolium  
 " alpinana (?) ...tansy r. (?)  
 " Petiverana ...r. of Achillea millefolium  
 " acuminatana ox eye  
 " simpliciana ...Artemesia  
 " consortana ...shoots of chrysanthemum  
 C. hypericana ...tops of hypericum  
 " maritimana ...Artemesia maritima  
 S. vibrana .....Carduus acanthoides, and C. crispus  
 E. dubitana .. ...Hieracium, fl., and other Compositæ  
 E. ambiguana ..in fl.-buds of vine?  
 " angustana ...heath  
 " vectisana .....Plantago maritima  
 X. hamana .....has been bred from Ononis repens  
 A. zephyrana ...in stems and r. of Eryngium maritimum  
 C. Francillonana from Oct., in stems of wild carrot  
 T. pubicornella on ——? near Grassington, Yorks  
 " pseudo-bombycella from October, lichen, on oak, beech, &c.; in a long slender case
- THE PSYCHÆ.—If a sharp lookout is kept in likely localities, the case-bearing larvæ of some of the genus Psyche may be found, though the perfect insect is rarely met with. Mr. R. MITFORD, of Hampstead, who has added much to our knowledge of the English members of this unsatisfactory group, writes to me of them as follows:—They have had here few friends, and in our List we have one or two which do not agree with Bruand's description of the insects. With the exception of a few of the species, it is utterly impossible to give the food-plant, as many of them are not found until they are crawling up tree-trunks, &c., to spin up, and others which may be found feeding on leaf or lichen on one tree or plant, will readily accommodate themselves to anything else that falls in their way; yet I have found that nearly all the species I find at Hampstead prefer the buckthorn bushes, particularly when in blossom, to anything else, whether for leaf, blossom, or lichen, I know not, but they will eat all the three. I have found all these insects the easiest things to rear in existence.
- P. villosella (nigricans) e. grasses, heath, furze, &c.; New Forest, &c. Probably 2 years feeding up. This, and other low-plant feeding case-bearers, may be obtained by sweeping, or beating

## LARVÆ]

## MAY

- P. opacella, e. ...grass, heath, furze, &c. ; has been found on fallen firs ; New Forest, Witherslack, Rannoch. Probably 2 years feeding up
- " calvella (fusca) from Aug., on bramble ; 2 years feeding up
- " salicolella .....—?
- " betulinella (anicanella) buckthorn
- " pullella.....grass, on heaths
- " intermediella —? Black Park, Virginia Water, &c.
- " roboricolella on trunks, and stones, and short grass, among Scotch fir
- " crassiorella ...—?
- " reticella .....—?
- P. Verhuellevella seed-fronds of *Asplenium ruta-muraria* and harts-tongue
- D. marginepunctella in a case, on trees, &c.
- X. melanella.....lichens, in a case, on trees, and palings
- P. Birdella .....probably among hay grass
- S. choragella ...in fungi
- " emortuella ...in fungi, on horn-beam
- " arcuatella.....in fungi
- " granella .....among grain
- " cloacella .....in rotten wood
- " arcella .....in rotten wood
- T. fulvimitrella in fungi, and rotten birch stumps
- " albipunctella rotten sticks
- " caprimulgella in rotten wood
- " pelliellona ...in carpets, cloth, feathers, &c.
- " pallescetella in rabbit, hare, and cat skins
- " ganomella ...from Oct., in birds' nests
- " biseliella .....from Oct., in bird skins, hair seating, &c. ; all the year round
- " nigripunctella in a case, on old fences
- " semifulvella ...from Nov., in birds' nests, feeding on wool
- T. perochraceella ants' nests
- L. quadripunctella in shoots of roses
- " praelatella.....from Sept., in a flat case, on underside of wild strawberry
- " rubiella .....in shoots of raspberry
- I. canariella .....*Rosa spinosissima*
- M. fastuosella ...nut
- N. Schiffermillerella? marsh mallow
- " minimella ...ox eye, fl.
- Y. plumbella ...spindle
- " padella.....hawthorn, apple, &c.
- " cognatella ...apple and spindle
- " evonymella ...*Prunus padus*
- P. Curtisella.....in shoots and young stems of ash
- E. Messingiella *Cardamine amara*
- P. xylostella.....turnip, &c.
- " porrectella ...*Barbara vulgaris*, *Hesperis matronalis*
- H. sequella .....sycamore
- " vittella.....elm, beech, &c. "
- " radiatella .....oak
- " cctella .....oak
- Y. asperella .....apple
- H. scabrella ...apple, hawthorn
- " nemorella ...honeysuckle
- " harpella .....honeysuckle
- P. quercella .....oak, and between leaves of sallow
- E. Allisella .. ...*Artemisia vulgaris*, terminal shoots
- D. costosella.....furze, *Genista anglica*, and broom, fl.
- " pallorella.....in leaves of *Centaurea scabiosa*
- " assimilella ...broom
- " nanatella .....carline thistle
- " atomella .....*Genista anglica*, *G. tinctoria*, broom
- " arenella .....*Anthriscus*, thistles, and knapweed
- " propinquella thistle
- " *Alstræmeriella* hemlock
- " hypericella ...*hypericum*
- " carduella .....thistle
- " ocellella .....sallow
- " rotundella .. wild carrot

## LARVÆ]

## MAY

- D. *enicella* .....in *Eryngium maritimum*, and *E. campestris*, on the Continent  
 " *Douglasella* ...wild carrot  
 " *Weirella* .....*Anthriscus*  
 " *chærophyllivorella*, e. *Chærophyllum*  
 G. *rufescentella* in grasses  
 " *populella* .....sallow shoots  
 " *nigra*.....on *Populus nigra*, and *P. tremula*  
 " *lentiginosella* *Genista*  
 " *mulinella* .....furze and broom, fl.  
 " *sororculella* ...dwarf willow  
 " *pelicella*.....*Rumex acetosella*, in leaves near the stem  
 " *viscariella* ...*Lychnis* shoots  
 " *affinella* .....under moss, on old walls  
 " *basaltinella*? moss?  
 " *vulgella* .....hawthorn; between united leaves  
 " *fugitivella*.....nut, elm, maple  
 " *muscosella* ...on poplars, and willows  
 " *fraternella* ...in seeds, and shoots of *Stellaria uliginosa*  
 " *leucomelanella* *Silene maritima*, shoots  
 " *maculiferella* *Cerastium semidecandrum*  
 " *vicinella* .....*Silene maritima*  
 " *marmorella* ...chickweed, on sand hills  
 " *instabilella* ...*Plantago maritima*  
 " *ocellatella* ...*Beta maritima*, fl.  
 " *atriplicella* ...*Atriplex*, and *Chenopodium*  
 " *sequacella* ...in shoots of sun cistus  
 " *leucatella*.....hawthorn, apple, mountain ash  
 " *nanella*.....pear, fl.  
 " *Mouffetella* ...in shoots of honeysuckle  
 " *dodecella*.....in shoots of fir  
 " *ligulella* .....on *Lotus corniculatus*  
 " *tæniolella*.....*Lotus corniculatus*, and other *Leguminosæ*, between united leaves  
 G. *coronillella* ...*Coronilla varia*; between united leaves  
 " *atrella* .....in *Hypericum* stems  
 " *confinis* .....on moss, on old walls  
 " *gemma*.....lichens, on oak  
 " *pictella*.....chickweed, on sand hills  
 " *sangiella* .....in *Lotus corniculatus*  
 " *pinguinella* ...in leaves of poplar; pupates under the bark  
 P. *neuropterella* from Oct., in heads of *Cirsium acaule*  
 A. *spartiella* .....furze  
 " *genistella* .....*Genista tinctoria*, and broom  
 M. *marginella* ...juniper  
 " *juniperella* ...juniper  
 A. *palpella* .....lichens, and rotten wood  
 N. *verbascella* ...nr. Norwich, among *Verbascum pulverulentum*  
 S. *humerella*.....*Artemisia campestris*; between united leaves  
 P. *bicostella* .....from Nov., *Erica cinerea*  
 H. *Christiernella* *Polygala*  
 D. *sulphurella* ...in rotten wood  
 " *oliviella*?.....decayed wood  
 C. *augustella*? bark of trees  
 " *tinctella*? .....decayed wood  
 C. *fusco-aurella* in dead sticks  
 B. *senescentella* thyme  
 " *cicadella*, e....among r. of *Scleranthus perennis*, and *S. annuus*  
 " *chenopodiella* *Chenopodium*, and *Atriplex*  
 G. *thrasionella*? in stems of rush?  
 " *equitella* .....in shoots of *Sedum acre*  
 " *schnœnicolella* in seed-heads of *Schoenus nigricans*  
 A. *ephippella* ...wild cherry, in the shoots  
 " *nitidella* .....in hawthorn shoots  
 " *spiniella* .....in mountain ash  
 " *albistriella* ...sloe, in the shoots  
 " *semifuscella*, birch, mountain ash, sloe shoots

## LARVÆ]

## MAY

- A. mendicella ...sloe shoots  
 " retinella .....birch  
 " dilectella .....juniper shoots  
 " andereggiella wild apple  
 " curvella .....apple shoots  
 " sorbiella .....mountain ash shoots  
 " pygmælla.....in willow catkins,  
 and shoots
- Z. saxifragæ, e. Saxifraga azoides, &c.
- G. elongella .....in rolled alder, and  
 birch leaves  
 " ononiella .....rest harrow & clover
- G. atriplicivorella from Sept., in  
 Atriplex
- C. alcyonipennella Centaurea, bur-  
 dock, and thistles  
 " Wockeella ...Stachys betonica  
 " ochreella .....sun cistus  
 " salicornella ...from Oct., Sali-  
 cornia, in the stems  
 " vibicella .....Genista tinctoria  
 " conspicuella.. Centaurea nigra, &c.  
 " pyrrhulipennella heath  
 " anatipennella sloe  
 " palliatella... ..oak, willow, &c.  
 " ibipennella ...birch  
 " currucipennella oak, willow  
 " discordella ...Lotus corniculatus  
 " saturatella ...from Sept., broom  
 " onosmella ...Echium vulgare  
 " troglodytella Inula dysenterica,  
 Eupatorium cannabinum  
 " lineolella .....Ballota nigra  
 " murinipennella rushes  
 " cæspititella...from Sept., rushes;  
 seeds  
 " salinella .....from Oct., Atriplex  
 portulacoides  
 " hemerobiella plum, pear, cherry;  
 in a case on the leaves  
 " juncicolella ...from Oct., heath  
 " laricella .....from Sept., larch  
 " albitarsella ...from Nov., Ori-  
 ganum, and Glechoma  
 " nigricella.....hawthorn, sloe, apple  
 " fuscocuprella from Sept., elm,  
 alder, birch  
 " gryphipennella from Sept., rose  
 " vimineta... ..from Sept., willow,  
 and osier
- C. olivaceella ...Stellaria holostea,  
 Cerastium vulgatum, and C.  
 arvense  
 " solitariella ...from Oct., Stellaria  
 holostea  
 " artemisicolella from Aug., fl. of  
 Artemisia vulgaris, and A.  
 campestris  
 " graminicolella? Lychnis flos cuculi?  
 " lutipennella...oak, birch  
 " badiipennella elm, ash  
 " limosipennella elm  
 " chalcogrammella Cerastium  
 arvense  
 " bicolorella?...alder
- B. præangustella poplar, willow; be-  
 tween united leaves
- O. v-flavella.....in fungi, and wine  
 corks
- C. Illigerella ...Ægopodium poda-  
 graria, in crumpled leaves
- L. paludicolella Epilobium hirsutum  
 " lacteella .....Epilobium hirsutum  
 " conturbatella Epilobium angusti-  
 folium, among terminal leaves  
 " Raschkiella ...Epilobium angusti-  
 folium  
 " ochraceella ...Epilobium hirsutum,  
 in stem and r.  
 " phragmitella Typha latifolia, heads  
 " rhamniella ...buckthorn
- C. Schrankella...in Epilobium alsini-  
 folium
- E. Gleichenella in Luzula, and Carex  
 " magnificella...Luzula pilosa  
 " albifrontella...in many grasses  
 " atricomella ...in stems of Dactylis  
 glomerata  
 " luticomella ...in stems of Dactylis  
 glomerata  
 " cinereopunctella from Sept., in  
 Carex glauca  
 " trapeziella ...from Oct., in Luzula  
 pilosa; examine the under-side  
 of the leaves  
 " perplexella ...in Aira cæspitosa  
 " tæniatella ...from Sept., in Brachy-  
 podium sylvaticum  
 " megerlella ...from Sept., in Brachy-  
 podium, Bromus, Aira, &c.

## LARVÆ]

## MAY

- E. adscitalla .....in *Sesleria cærulea*,  
and *Aira cæspitosa*  
" rhyncosporella in *Eriphorum*, and  
*Carex*  
" eleochariella...in *Eriphorum*, and  
*Carex*  
" biatomella ...in *Carex glauca*  
" triatomella ...in a fine grass  
" pollinariella...*Brachypodium syl-*  
*vaticum*  
" cygnipennella *Dactylis glomerata*,  
and other grasses  
T. dodonæella from Oct., in oak  
L. quinqueguttella in dwarf shallows  
" vacciniella ...in whortleberry  
L. Clerckella ...in sloe, apple,  
cherry, hawthorn, &c.  
C. spartifoliella under bark of broom  
" Wailesella ...in *Genista tinctoria*  
O. auritella .....in fl. stalks of *Caltha*  
*palustris*  
B. aurimaculella on *Chrysanthemum*,  
and ox eye  
" maritimella ...*Tripolium vulgare*  
" cristatella.....on yarrow  
" artemisiella ...*Artemisia campestris*,  
and yarrow  
T. immundella...under bark of broom
- A. Bennetii .....*Statice limonium*  
P. Bertrami .....*Achillea millefolium*,  
and *A. ptarmica*  
" ochrodactylus yarrow shoots  
" isodactylus ...in shoots and stems  
of *Senecio aquaticus*, &c.  
" Zetterstedtii? in stems of *Senecio*  
*sylvaticus*  
" parvidactylus thyme, and *Hiera-*  
*cium pilosella*  
" phæodactylus rest harrow  
" serotinus .....*Galium mollugo*  
" plagiodactylus *Scabiosa*, and *Ve-*  
*ronica chamædrys*  
" lithodactylus *Inula dysenterica*, &  
*I. conyza*  
" tephrodactylus from Sept., golden  
rod ; in shady places  
" galactodactylus burdock  
" spilodactylus *Marrubium vulgare*  
" tetradactylus thyme  
" pentadactylus *convolvulus*, &c.  
" dichrodactylus tansy  
" Lienigianus, e. *Artemisia vulgaris*  
" brachydactylus *Lactuca muralis*, &c.  
" baliodactylus *Origanum vulgare*  
" aridus .....on the Continent on  
fl. buds of *Coris monspeliensis*

## PUPÆ]

Although the practice of searching for pupæ has never been recommended during the summer months, the number of kinds, as proved by the subjoined list, shows that it should not be omitted from our programme, at least when we are in quest of any particular species, or when circumstances prevent our following out any other plan of operations.

- M. *Athalia*, e. ...suspended, among  
plantain, &c.  
S. *Megæra*, b. ...on grass stems, &c.  
L. *Alexis*, b. ...under stones, &c.  
" *Adonis*, m. ...sub. at, or among  
*Hippocrepis comosa*  
S. *populi* .....sub., at r. of poplar,  
willow, &c.  
" *tiliæ* .....sub., at elm, lime,  
beech  
C. *porcellus* .....sub., near *Galium*  
*elpenor*.....sub., near willow  
herb, &c.
- S. *myopæformis* in wood of branches  
and trunks of apple, and pear  
trees  
" *culiciformis*...in stumps of felled  
birch  
" *formicæformis* in withy stumps.  
Pupæ of clear-wings are best  
sawn out of the wood  
" *cynipiformis* in oak stumps  
" *muscæformis* in the heart of  
withered plants of sea pink  
" *tipuliformis* ...in wood of currant  
bushes

## PUPÆ]

## MAY

- S. sphegiformis in r., branch, or twig of alder  
 " asiliformis ...in r. or stem of ash, or poplar  
 " bembeciformis in stem, or branch of poplar, osier, or willow  
 " apiformis, b. in r., or base of trunk of poplar  
 M. arundinis ..inside reed stem, which the pupa can traverse, by means of its hooks  
 C. ligniperda ...at various trees, spun up, under bark; s. sub.  
 H. lupulinus.....at r. of dead nettles, &c.; in a long cocoon, like a gallery, which it can traverse, by means of its hooks  
 " velleda.....at r. of brake fern; spun up amongst loose soil  
 L. asellus .....spun up, on a leaf  
 N. cucullatella...on twigs, and bark of hawthorn, and sloe  
 " confusalis .....on bark of oak  
 S. irrorella .....in a slight web, under stones, oyster, cockle, mussel shells, &c., on the coast, just above the tide-mark  
 L. aureola .....under moss, on lichen-covered larch, oak, &c.  
 " deplana .....on lichen-covered yew, spruce fir, oak, beech  
 " lurideola .....on lichen-covered trees, and old walls  
 C. plantaginis ...spun up, between leaves of violets, plantain, &c.  
 " villica .....spun up, about low plants  
 A. fuliginosa ...in a boat-shaped cocoon, on food-plant  
 " lubricipeda ...spun up, on trees, palings, &c.  
 " menthrasti ...spun up, on trees, palings, &c.  
 " urticæ .....under moss, on trees  
 L. salicis ..... between leaves of willow, poplar, &c.; under bark and copings, and on palings, &c.  
 B. rubi .....in a long, loose cocoon, among food-plant  
 A. prunaria .....amidst folded leaves  
 E. fasciaria .....at base of Scotch firs; rarely within 2 feet of the tree, at 1½ to 2 inches deep  
 E. dolobraria ...under moss, on oak, &c.  
 N. zonaria .....to March, sub., on sand-hills  
 B. repandata ... } e. spun up, in  
 " rhomboidaria } loose cocoon  
 " abietaria, e. in cocoon, about larch  
 " roboraria .....at oak, in slight cocoon; s. sub.  
 " consortaria ...under moss, on oak  
 I. lactearia.....spun up, among leaves of oak, or birch  
 P. baiularia ..... spun up, in a loose net-work, on underside of oak twigs  
 H. thymiaria ...in loose cocoon, amongst leaves  
 E. porata .....fastened to leaf of oak  
 E. heparata .....at alder; on the surface  
 A. bisetata ..... in slight cocoon, at base of leaves of dandelion  
 " trigeminata ...in loose cocoon  
 " promutata ...  
 " fumata .....  
 " aversata .....  
 C. exanthemaria spun up, under leaves of willow, and alder  
 S. belgiana .....among heath, in a slight cocoon, on the ground  
 S. dealbata .....in shuttle-shaped cocoon, on grass stem  
 A. ononaria .....among, or near rest harrow, on the surface  
 A. strigillaria, e. in a web among heath, or broom  
 L. cæsiata, e. ...in a slight web, among leaves of bilberry, whortleberry, or heath; on mountainous heaths  
 " olivata .....among Galium mollugo, in a slight cocoon, on the surface of the soil, under a leaf, or stem  
 E. unifasciata ...from May, among, or near Odontites rubra; s. remains several years in pupa

## PUPÆ]

## MAY

- E. isogrammata.....about Clematis vitalba  
 „ nanata .....about heath  
 „ minutata .....about heath  
 „ rectangulata...on apple, and crab; under moss, and loose bark  
 M. ocellata .....in cocoon, amongst Galium; near the ground  
 M. galiata.....sub., near Galium  
 A. sinuata.....on the ground, in earthen cocoon, among Galium  
 C. picata .. .....from Sept., in a slight cocoon, on the surface, among, or near chickweed  
 „ sagittata .....spun up, about Thalictrum, or on the ground near; in fens  
 „ russata .....spun up, on leaf of strawberry, birch, hawthorn, willow, &c.  
 „ populata .....spun up, about bilberry, &c.  
 „ fulvata .....about dog rose  
 E. palumbaria ...in compact cocoon, among broom, &c.  
 P. falcula .....birch, &c.; between united leaves ...  
 „ hamula.....oak, birch; between united leaves  
 „ unguicula.....among beech leaves, in a slight web, or on the ground  
 D. furcula.....spun up, on trunk of willow, or willow  
 „ vinula .....spun up, on trunk of willows, poplars, or willow  
 S. fagi .....spun up, at beech, oak, birch, elm; among leaves, or at r.  
 P. bucephala .. sub., at various trees  
 C. reclusa.....spun up, among dead leaves of willows, poplars, willows  
 P. palpina .....at willows, and poplars, on edges of streams, in cocoon on the ground, or under sods  
 N. camelina .....at various trees, in a slight cocoon  
 „ cucullina .....at maple, and sycamore, under moss, &c.  
 N. dictæa .....in large cocoon, at poplars, willows, and willows, under a leaf, or sod  
 „ dictæoides ...in a slight cocoon, at birch, under a leaf, &c.  
 „ dromedarius in a slight cocoon, at birch, alder, nut, under a leaf, &c.  
 „ ziczac .....at poplars, willow, willows, in a slight cocoon  
 „ Dodonea.....sub., at oak, or birch  
 T. batis.....near bramble, and wild raspberry,  
 C. duplaris .....between united birch leaves  
 „ fluctuosa .....among birch leaves  
 D. Orion .....at birch, and oak; in a cocoon of gnawed bark, or rotten wood  
 A. tridens.....spun up, in crevices of bark, at hawthorn, sloe, rose, willow, willow, mountain ash  
 „ psi .....in bark crevices of various trees  
 „ leporina .....in excavations in the bark of birch, poplar, alder, willow  
 „ aceris ..... spun up, among fallen leaves, and under loose bark of sycamore, horse-chestnut, maple, birch, and s. oak  
 „ strigosa .....amongst dead leaves of hawthorn, or rubbish, or decayed wood; s. sub.  
 „ ligustri.....spun up, under moss, stones, &c., near ash, and privet; also sub.  
 „ rumicis.....spun up, in crevices of trees, palings, walls, &c.  
 L. lithargyria ...sub., about grass  
 „ littoralis .....below the surface, on sand-hills, about marum grass; on the coast  
 A. puris .....sub., at elm  
 X. rurea .....under moss, on stumps, &c.  
 „ hepatica .....under moss, and stumps  
 D. pinastris .....in a cocoon, on the ground, among dock, sorrel, &c.



## PUPÆ]

## MAY

- P. leucophæa* ...amongst moss  
*A. unanimis* ...under bark of willows, in damp places, and among decayed willow wood  
*C. Morpheus* ...spun up, in a leaf, or an earthen cocoon, attached to food-plant  
*R. tenebrosa*, b. among violets, and other low plants; a little beneath the surface  
*A. segetum*, s. ...sub., among Cruciferae, grass, &c.  
*T. ianthina* ..... } sub., at various  
   *fimbria* ..... } low plants  
   *orbona* ..... }  
*N. augur* ..... } sub., near rose,  
   *baia* ..... } bramble, &c.  
   *festiva* ..... sub.  
   *conflua* ..... among low plants;  
   on, or near the surface  
   *umbrosa* ..... under moss, &c.  
*A. nebulosa* ..... sub., near low plants  
*H. marginata* ...sub., near *Ononis procurrens*  
*H. dipsacea* ..... among melilot, and probably *Silene otites*, and *Linaria*  
*A. myrtilli* ..... spun up, in heath  
*E. venustula* ..... at r. of *Tormentilla reptans*, and grass  
*A. urtica* ..... spun up, among nettle leaves  
   *triplesia* ..... spun up, among nettle leaves, hop, &c.  
*P. chrysitis* ..... among the leaves of burdock, thistle, nettle, dead nettle, &c.  
*M. typica*, e. ...spun up, on walls, palings, &c.  
*P. ænea* ..... among *Polygala vulgaris*  
*H. tarsipennis* at willow, or wild raspberry (?); spins down a leaf  
*A. flexula*, e. ...in a spun leaf  
*E. sambucalis* ...spun up, in crevices, in palings, walls, &c., near elder  
*P. margaritalis* ... among wild mustard  
*G. canella* ..... among *Salsola kali*  
*P. trigonodactylus* on coltsfoot  
   *osteodactylus* on golden rod

## IMAGOS]

The rapidly lengthening lists, which each month now discloses, plainly enough indicate the increasing number of possible captures open to the collector. A great number of species will require the stimulant of the beating stick before they will discover themselves. A rarity sometimes

“Then breaks from out the bush with hurried wing,”

and the collector has himself to thank if he misses it. A mallet, which is used on the Continent, has been recommended for jarring moths off trees with slender trunks, and the lower branches of other trees. The yew is a good tree for harbouring moths, and may be sometimes pelted with stones, &c., with advantage. The plant or tree which the larva feeds upon is often chosen by the imago for its place of concealment, and may be said to constitute the next natural attraction to flowers,—

“The murmurous haunt of flies on summer eves,”

which are visited by many moths and butterflies, both during sunshine and at night. A mass of flowers, in the sunshine,

“With butterflies for crowns,”

forms, indeed, a beautiful object, besides giving the collector a chance of a good “haul.”

## IMAGOS]

## MAY

Many small moths (says Mr. C. G. BARRETT) may be blown (by the mouth) into the net. If a steady wind is blowing this mode of capture is often very productive; if it is stormy or gusty, hardly a specimen can be obtained. Many species which cannot be seen may be thus captured, especially from trunks of trees which they so much resemble in colour as to be undistinguishable. This practice of blowing, however, tries the "wind," and only the strong can keep up the exercise.

Some of the species which rest on tree trunks, and which may be found this month, require to be carefully sought for. Some notes on this subject will be found under the February Imagos. The northern and eastern side of tree trunks, in larch and beech woods, in most elevated districts, yield *T. crepuscularia*, and sometimes *T. consonaria*, *T. biundularia*, and *H. abruptaria*. *T. consonaria* when disturbed generally dives down into the grass, from whence it sometimes requires care to extricate it without damage.

The reader may be reminded that most of the Pyrales require to be beaten out of the thick undergrowth in which they hide; and that Tortrices generally fly most at about a couple of hours before dusk, while many also fly in the early sunshine.

Now that the Noctuæ are beginning to appear in some plenty, the reader should not forget the desirability of resorting to "sugaring," which, from this family's love of sweets, often proves a means of capturing large numbers. Many of them also show a great liking for light, and this is indicated in the lists where it has been strongly manifested.

- |  |  |
|--|--|
| P. Machaon.....fens, and marshes         | L. alsus, e. ....hills, railway banks, |
| L. sinapis.....woods; does not           | coast sand-hills, &c.                  |
| travel quietly if boxed                  | " argiolus .....among holly, in        |
| P. brassicæ .....gardens, &c.            | plantations, woods, and gardens,       |
| " rapæ..... gardens, &c.                 | and at fl.                             |
| " napi .....gardens, &c.                 | N. Lucina, e. ...woods, and banks      |
| " Daplidice.. ...has been taken in       | near, where primrose abounds           |
| lucerne fields                           | S. alveolus .....woods, and fields     |
| A. cardamines ...fields, &c.             | T. tages .....heaths, commons,         |
| A. Euphrosyne woods, &c.                 | hills, &c.                             |
| M. Artemis .....wet meadows; rests       | H. sylvanus .....hills, and woods      |
| among the herbage in dull                | S. ocellatus ..... } rest on trees,    |
| weather                                  | " populi ..... } palings, &c.;         |
| " Cinxia .....on the coast               | " tiliæ ..... } come to l.             |
| S. Ægeria.....woods, and lanes           | D. lineata.....at fl.                  |
| Megæra .....lanes, banks, walls          | C. porcellus, e. may be found on       |
| C. Pamphilus ...fields, &c.              | patches of Galium verum, or on         |
| T. rubi .. .....near woods               | the ground near; hovers over fl.       |
| P. Phlæas .....fields, and lanes,        | at early dusk, and comes to            |
| coast sand-hills, &c.                    | sugar                                  |
| L. agestis .....hilly fields             | M. stellatarum...flies by day, and in  |
| " Alexis, e. ...fields, and hills; rests | the evening; hovers over fl.;          |
| on grass, &c., at night                  | often found flying over old walls      |
| " Adonis.. .....chalk downs, and         | where Galium grows, and on             |
| limestone hills                          | coast sand-hills                       |

## IMAGOS]

## MAY

- M. fuciformis ...flies in the sunshine, and hovers over fl., generally from 9 till 11 a.m., and 3 to 4 p.m.
- " bombyliformis flies in the sunshine and hovers over fl., seldom after 1 or 2 p.m.; may be found at rest on the ground in dull weather
- S. myopæformis on apple, and pear trees, particularly if old, and unhealthy, and bushes, &c., near
- " culiciformis, e. on birch
- " cynipiformis, e. on oaks; s. in coppices
- " sphegiformis on low plants near alder, and hovers over fl.; also flies in the evening
- " apiformis, e. on poplars; s. mistaken for a hornet
- H. lupulinus, e. flies just before dusk
- P. geryon .....on grassy hill-sides; flies in the sunshine
- N. confusalis, e. at rest, on trees, &c.
- L. aureola.....rests on larch trunks, high up, and may be beaten from trees
- " rubricollis ...flies in the sunshine, over the tops of larch, &c.
- D. pulchella.....has been taken in fields, flying by day
- C. plantaginis, e. hills, and the ridings of hilly woods; flies by day
- A. fuliginosa.....
- " mendica .....
- " lubricepeda ...gardens, &c.
- " menthrasti ...gardens, &c.
- O. pudibunda ...gardens, &c.; s. found hanging to the undersides of bramble and hop leaves; flies about 11 p.m.
- D. coryli .....beech woods, &c.
- B. rubi .....heaths, &c., in bright weather often flies about 3 p.m.; also in the evening
- L. ilicifolia .....on moors
- S. carpini.....heaths, and open places; flies in the sunshine
- E. advenaria, e. hides in grassy ridings of woods, among bilberry; easily disturbed
- R. cratægata ...beaten from hedges
- V. maculata .....woods; flies by day
- E. dolobraria ...woods; beaten from oak
- S. lunaria .....woods; comes to l.
- " illustraria.....woods
- O. bidentata .....rests on tree trunks
- B. hirtaria, b. ...in the squares of London
- A. betularia .....on trees
- H. abruptaria ..on trees, palings, &c., and in gardens; comes to l.
- B. cinctaria .....
- T. consonaria .. at rest, on trees; in beech woods
- " crepuscularia, b. on trees
- " biundularia ...on trees, and palings
- " punctulata ...
- N. viridata .....mosses and fens; fades soon after appearing
- I. lactearia, e. ...woods; flies by day; soon fades
- E. porata .....woods
- " punctaria .....woods
- " trilineararia.....beech woods, flies in the sunshine
- " omicronaria ...woods; beaten from maple
- " orbicularia ...may be beaten from
- " pendularia ...woods, &c. [birch
- H. auronaria.....in fens, &c.
- A. luteata .....woods
- " candidata.....woods
- " Blomeraria ...on wooded hillsides, near wytch elms, at rest on larch, and other trees
- A. ornata .....on grassy hills, &c.
- " remutata, e....woods
- C. pusaria.....woods
- " rotundaria ...
- " exanthemaria woods
- C. temerata .....woods, &c., in the neighbourhood of wild cherry, and buckthorn
- " taminata ... woods
- M. notata .....woods; on birch trunks
- " liturata.....in larch woods
- S. clathrata .....in, and near saint-foin fields

## IMAGOS]

## MAY

- P. petraria .....  
 N. pulveraria ...  
 S. belgiaria, e....heaths  
 F. carbonaria ...  
   " atomaria .....fields, woods, fens,  
     heaths  
   " piniaria .....flies in the sunshine,  
     round fir trees; flies high after  
     the first week  
 M. euphorbiata woods  
 S. sacraria .....flies by day; has  
   been taken at fl., at sugar, and  
   at l.  
 L. purpuraria ...in the north; flies by  
   day, on dry hills  
 A. ononaria, e. among, or near rest  
   harrow  
 A. citraria, m. ...among wild carrot,  
   chiefly on the coast  
 L. adustata ... ..among spindle  
 L. marginata ...woods  
 P. hippocastanaria flies after dusk,  
   among heather  
 L. pectinataria ...in hedges; comes  
   to sugar  
 E. albulata .....among yellow rattle  
   " blandiata .....  
 E. venosata .....among Silene, and  
   Lychnis, and on palings near  
   " consignata ...in apple orchards,  
     rests on the trunks, just below  
     the first branches  
   " linariata .....among toadflax  
   " pulchellata ...among foxglove  
   " centaureata ...on palings, &c., and  
     among ragwort, &c.  
   " plumbeolata, e.  
   " pygmæata ...flies in the sunshine,  
     among long grass, and settles on  
     low fl.  
   " helveticata ...  
   " satyrata .....  
   " castigata .....on palings, &c.  
   " lariciata ... ..among larch  
   " virgaureata ...among golden rod  
   " albipunctata has occurred as early  
     as Jan. and Feb.  
   " pusillata .....among spruce  
   " irriguata .....rests on birch, oak,  
     &c.; may also be beaten
- E. pimpinellata  
   " fraxinata, e....s. as early as Jan.  
   " indigata .... on fir trunks  
   " nanata .....on heaths  
   " vulgata .....  
   " assimilata ...  
   " dodoneata ..flies in the early  
     morning sunshine  
   " exiguata .....  
   " pumilata .....  
   " coronata .....on trees, and palings  
 L. sexalata .....on tree trunks, in  
   hedges, and by beating  
   " hexapterata ...woods  
   " viretata .....on birch, and fir trunks  
 T. simulata .....  
 Y. ruberata .....  
   " impluviata ...  
 M. ocellata .....  
   " albicillata ...  
 M. hastata, e. ...woods; flies in the  
   sunshine, generally after 2 p.m.;  
   may be beaten from birch, and  
   other trees  
   " procellata ...beaten from clematis  
   " sociata .....(subtristata)  
   " montanata ...woods  
   " fluctuata .....on walls, and palings  
   " galiata .....  
 A. derivata .....  
   " berberata .....  
 C. propugnata ...woods  
   " ferrugata .....woods  
   " unidentaria ...  
 C. fluviana .....at light  
 P. lignata, e. ...  
   " vitalbata .....beaten from clematis  
 S. certata .....at rest on palings,  
   &c.; also at light  
 C. corylata .....woods  
   " russata ..... woods  
   " suffumata.....flies at dusk  
   " silaceaata .....among willow herb  
   " prunata .....  
 E. lineolata .....rests on coarse  
   grasses, on the coast  
 A. plagiata .....  
 C. obliquaria ...among broom; does  
   not fly till between 10 and  
   11 p.m.

## IMAGOS]

## MAY

- P. lacertula .....the hook-tips may be beaten from their hiding-places, in trees, by a long pole; females may be thus obtained, which are rarely seen
- " sricula, e. ....
- " falcula .....
- " hamula.....flies in the day time, generally in the morning; may be beaten from oak; comes to l.
- " unguicula.....a day-flyer; may be beaten from beech
- C. spinula .....at rest, on palings, &c.
- D. bicuspis ... )  
 " furcula, e. ... ) at rest, on willows,  
 " bifida, e. ... ) poplars, &c.  
 " vinula .....
- P. bucephala ...at rest; comes to l.
- C. curtula .....
- " reclusa .....
- G. crenata.....
- P. palpina .....at l.
- N. camelina.....hides on fronds of fern, and in, and on trees; comes to l.
- " dictæa .....at rest, at base of willows, and large poplars
- " dictæoides ...
- " dromedarius at l.
- " tritophus .....
- " ziczac .....hides in bark crevices of poplar
- " trepida.....at l., and on oak trunks
- " Chaonia .....
- " Dodonea .....
- T. batis.. .....flies over bramble, at dusk
- C. duplaris .....
- " fluctuosa ... } do not always travel  
 " ocularis ... } quietly when boxed
- A. psi .....at rest, on tree trunks
- " leporina .....on tree trunks, .s. high up
- " aceris .....on trunks of sycamores, and palings
- " megacephala on tree trunks, and palings
- " alni .....this rare species has been taken at sugar
- A. ligustri.....at rest, on ash trees
- " rumicis.....
- " auricoma .....
- " myricæ.....in the North
- M. flammea .....
- X. rurea, e. ....
- X. conspiciilaris, b. rests on trees, especially where the bark has been stripped
- N. saponaria, e.
- P. leucophæa, e.
- M. albicolon, e. on the coast
- " brassicæ .....on walls, palings, &c.
- A. basilinea .....
- " unanimitis, e. marshes, and fens
- G. trilinea.....in grassy places
- H. palustris, e. has been taken at l.
- C. cubicularis ...beaten from thatch
- R. tenebrosa, m.
- T. pronuba .....
- N. c.-nigrum ...
- " rubi .....
- T. gothica..... at fl.
- " rubricosa .....at fl.
- " opima ... .....at fl.
- " populeti .....at fl.
- D. carpophaga...at l.
- " capsophila ...
- " capsincola ...
- " cucubali .....may be taken at rest, and hovers over fl.
- E. lucipara .....
- H. adusta, e. ...
- " dentina.....
- " chenopodii ...at l.
- " suasa .....at sugared fl., on commons, &c.
- " pisi, e. ....
- " thalassina, e.
- " genistæ, e. ...
- " rectilinea.....at rest, on stones, &c., on dull days
- C. perspicillaris
- C. verbasci .....
- " scrophulariæ
- " asteris .....
- " chamomillæ...s. hides under the top ledge of a paling
- H. marginata, e.

## IMAGOS]

## MAY

- A. cordigera .....at Rannoch  
 " myrtilli.....flies in the sunshine,  
     on heaths  
 H. arbuti .....fields, &c. ; flies in  
     the sunshine  
 A. luctuosa .....flies in the sunshine,  
     in clover fields, &c., and hovers  
     over fl.  
 E. venustula, e.  
 C. alchymista ...  
 O. lunaris .....  
 E. mi..... } fly in the sunshine,  
 " glyphica ... } and hover over fl.  
 P. ænea..... }  
 M. salicalis.....among long grass, &c.  
 H. barbalis ... ..beaten from under-  
     growth  
     " tarsipennalis, e. woods  
 P. punicealis ...flies in the sunshine  
     " purpuralis ...flies by day  
     " ostrinalis, e. flies in the sunshine  
 H. cespitalis.....  
 E. cingulalis.....on grassy hill-sides,  
     &c.  
     " anguinalis ...on grassy hill-sides,  
     &c.  
     " octomaculalis, e. woods, &c.  
 A. nemoralis.....  
 P. stratiotalis ...flies at dusk, over  
     stagnant pools; comes to light  
 B. lupulinalis ...among hop  
     " lancealis, e....  
 M. unionalis.....successive broods  
 S. decrepitalis ...  
 S. dubitalis .....  
 C. pratellus .....s. at sugar  
     " chrysonuchellus among dry grass,  
     &c., local  
     " rorellus.....  
 H. nimbella.. ...among Jasione mon-  
     tana, and thistles, and ragwort,  
     on the coast  
     " senecionis ...  
 E. ficella, e. ....  
 P. interpunctella, e.  
 N. angustella ...  
 O. ahenella .....  
 M. cephalonica, e.  
 H. prasinana ...woods  
     " clorana .....osier beds  
     T. ministrana ...woods  
     A. prodromana northern moors  
     P. mixtana .....from July, moors  
     A. Conwayana...  
     P. Lecheana.....woods  
     P. prælongana ...  
     " marginana .. damp woods, heaths,  
     and fens  
     S. lariciana .....among larch  
     " suffusana .....hedges  
     " simplana .....among poplar  
     P. tripunctana, e. gardens, and hedges  
     S. euphorbiana S. coast  
     M. palustrana ...Perthshire, &c.  
     R. arcuana .....among young oaks  
     E. arbutana .....on heaths, in the N.  
     E. fraetifasciana on downs  
     " quadrana .....Kent, Surrey, &c.  
     P. rugosana, e. in hedges, among briony  
     C. politana .....on heaths  
     " musculana ...hedges  
     C. favillaceana...in woods, among  
     juniper  
     C. rusticana .....moors, fens, mosses  
     B. lanceolana ...among rushes  
     P. siculana .....Witherslack  
     " unguicana ...heaths  
     " uncana .....heaths, and woods  
     " comptana.....chalk downs, &c.  
     " subarcuana ...fens  
     " myrtiliana ...moors, among Vac-  
     cinium  
     " Lundana .. ...  
     " diminutana, e. among sallows  
     " Mitterpacheriana among oak  
     " upupana .....Southern woods  
     G. campoliliana among willow  
     " obtusana .....Lancashire  
     P. tetraquetra woods  
     " immundana ...woods  
     E. Pfulgiana.....  
     " gallicolana ...Dareath  
     C. strobilana ...woods, among spruce  
     " splendidulana on oak trunks  
     " argyran .....on oak trunks  
     " nemorivagana moors, and Scotch  
     mountains  
     " Hercyniana ...among spruce  
     " distinctana...Westmoreland, Cum-  
     berland, Norfolk

## IMAGOS]

## MAY

- C. vacciniana ...among bilberry  
 R. turionana.....among Scotch fir  
 S. perlepidana...among grass, and  
     low bushes  
   " internana.....among furze  
   " composana ...in clover fields  
   " germarana ...woods in the S.  
 D. sequana .....dry fields and rail-  
     way banks  
   " plumbana.....  
 P. Rheediana ...in hawthorn hedges  
 C. albersana.....woods  
   " ulicetana .....among furze  
   " aspidiscana ...knocks about if kept  
     long in a box  
 X. Fabriciana ...  
 L. reliquana.....woods  
   " servillana.....woods in the S.  
 E. maculosana...woods  
   " Degreyana ...Norfolk  
   " curvistrigana woods in the S.,  
     among ragwort  
   " vectisana .....  
   " udana .....marshes, &c.  
   " notulana .....fens, and marshes  
   " rupicolana ...marshes  
   " ciliana .....  
   " pallidana .....cliffs  
   " anthemidana chalk districts  
 X. Zoegana .....  
   " hamana .....  
 A. Beaumanniana among rushes, in  
     damp places  
   " zephyrana ...South coast  
   " maritimana, e. on the coast  
 C. Francillonana on the coast  
   " stramineana...chalky places  
 T. hyemana .....oak woods  
 D. fagella .....on trees  
 P. villosella (nigricans) e. New Forest  
   " opacella, e....New Forest, Withers-  
     slack, Rannoch  
   " calvella (fusca) e.  
   " pullella, e. ...heaths, the larva  
     feeding on grass  
 S. inconspicuella  
 S. emortuella ...Cheshire  
   " cloacella .....Witherslack  
 T. imella .....Lytham  
   " rusticella .....among cloth, &c.  
   " monachella ...Cambs  
   " ganomella ...hedges  
   " bistrigella ...on birch twigs  
   " ruricolella ...  
 L. luzella ... ..Yorks  
 I. masculella ...among hawthorn  
   " capitella, e....  
 M. calthella .....in fl., of *Caltha*  
     *palustris*, and buttercup  
   " mansuetella, e. Windermere  
   " allionella, e. among *vaccinium*  
   " Thunbergella  
   " purpurella ...among birch, and  
     Scotch fir  
   " salopiella .....among birch  
   " Sparmannella among birch  
   " subpurpurella, e. among oak  
   " fastuosella .. among nut  
 N. Swammerdammella, e. on trees,  
     among heath  
   " Schwarziella in hedges, &c.  
   " pilella .....Yorks, Scotland,  
     Lake District  
   " metaxella.....Yorks, Scotland  
 A. fibulella .....in veronica fl. These  
     "long horns" fly in the sunshine  
   " rufimitrella ...in wet meadows,  
     and bogs  
   " viridella, e.....in hedges, and  
     among oak  
 S. comptella.....among sloe  
   " griseocapitella among birch  
   " pyrella .....in hawthorn hedges  
 Y. viginipunctella Guildford, Becken-  
     ham  
 A. decemguttella Darent  
 C. pyraustella ...has occurred in  
     Sutherlandshire  
 P. xylostella .....among *Cruciferæ*  
   " porrectella, e. in gardens  
 G. velocella .....among sheep's sorrel  
   " ericetella .... moors, &c.  
   " longicornis ...in bare, burnt places  
   " diffinella .....among sheep's sorrel  
   " desertella .....on coast sand-hills  
   " acuminatella among thistles  
   " mundella .....sands, on the coast  
   " proximella ...among birch, and  
     alder, on moors  
   " notatella .....among willow

## IMAGOS]

## MAY

- G. luculella .....among oak  
 " scriptella .....among maple  
 " æthiopella ...on moss  
 " solutella .....Rannoch, Lizard  
 " littorella .....Birkenhead, Isle of Wight  
 " aleela .....West Wickham  
 " triparella ..... among oak  
 " cerealella .....among grain  
 " anthyllidella among Anthyllis, and clover  
 " Hermannella in fens, and on the coast  
 " næviferella ...  
 " pictella .....coast sand-hills  
 " brizella .....about thrift  
 " intaminatella railway banks  
 " gracilella, e....  
 " umbrosella .. coast sands  
 M. fasciella .....Cambs, Lewes  
 " ustulella .....near Worcester  
 H. Geoffroyella, e.  
 D. sulphurella ...  
 CE. minutella ...in hay lofts  
 " trisignella.....  
 " stipella .....among dead fir trees  
 " grandella, e....Llangollen, Bewdley Forest [N.  
 " subaquilella ...Lancashire and the  
 " tinctella .....Gravesend, Dareuth, W. Wickham  
 " flavifrontella Cambs, Wither-slack, &c.  
 B. grandipennella among furze  
 P. Lewenhoekella  
 R. Erxlebenella among lime under-wood  
 " pronubella ...has occurred in Sutherlandshire  
 G. fuscoviridella  
 " Haworthella in the N.  
 " Schoenicolella, e. in the Norfolk fens, and at the Lizard  
 " Fischeriella ...  
 Æ. dentella .....Cambs, Sanderstead, &c.  
 P. obscurepunctella  
 T. sericiella .....  
 " stanneella.....among oak  
 A. conjugella ...among mountain ash  
 A. mendicella ...on sloe  
 " arcæuthinella among fir, and juniper  
 " præcolella ...Sanderstead  
 O. pinariella .....among Scotch fir  
 G. alchimiella ...  
 " elongella .....among alder, and yew  
 " tringipennella...among Plantago lanceolata  
 " syringella.....in gardens, among lilac  
 " omisella .....among Artemesia vulgaris  
 " auroguttella ...among Hypericum quadrangulum  
 " imperialella ...Cambs, Dorset  
 " Hoffmanniella  
 " Kollariella ...  
 O. avellanella ...among nut  
 " Devoniella ...has occurred near Dawlish  
 " anglicella .....among hawthorn  
 " betulævorella among birch  
 " torquilella ...among sloe  
 " Scotiella.....in mountain ash  
 " Loganella ...in the N.  
 " guttella.....among apple  
 C. albicostella, e. among furze  
 " murinipennella... among Luzula sylvatica  
 " virgaureella...  
 " viminetella ...  
 " gramincolella among ragged robin  
 " limosipennella among elm  
 C. orichalcella, e.  
 L. miscella ... among sun cistus  
 " epilobiella ...from Aug., among willow herb  
 " subbistrigella from Aug.  
 C. flavicapitella among hawthorn  
 A. modestella ...among Stellaria holostea  
 " fuscociliella ...among nut  
 C. festaliella .....among blackberry  
 A. Pfeifferella ...among Cornus sanguinea  
 S. Brunnichella in chalk pits, among Clinopodium vulgare  
 E. poella .....among Poa aquatica



## IMAGOS]

## MAY

- E. Kilmunella ...moors, marshes, and bogs, among coarse grass  
 " cinereopunctella many of the genus are found among carices, coarse grass, &c.  
 " trapeziella ...  
 " Gregsonella...  
 " nigrella.....  
 " subnigrella, e.  
 " humiliella, e.  
 " Bedellella.....  
 " perplexella ...  
 " subobscuraella  
 " zonariella .....  
 " gangabella, e.  
 " tæniatella .....  
 " obliquella.....Grange  
 " Megerella.....  
 " cerussella ...among reeds, in marshes, &c.  
 " biatomella ...in wet places  
 " ruficinerella ...among grass  
 " subochreella...moors  
 " cygnipennella, e.  
 T. marginea (emyella) among black-berry  
 " angusticolella...among rose  
 L. roborella .....many of the genus are found flying in the early morning  
 " hortella .. ...  
 " amyotella.....among oak  
 " lantanella.....  
 " trigutella .....  
 " quinqueguttella...among dwarf willows  
 " nigrescentella  
 " irradiella .....among oak  
 " Bremiella.....  
 " insignitella ...Castle Eden, &c.  
 " lautella .....among oak  
 " vacciniella ...  
 " cavella .....W. Wickham  
 " pomifoliella ...among hawthorn, and apple  
 " corylella .....among nut  
 " spinicolella ...among sloe  
 " faginella .....among beech  
 " torminella ...  
 " salicicolella ...among willow
- L. viminetella ...  
 " carpinicolella among hornbeam  
 " ulmifoliella ...among birch, &c.  
 " spinolella .....  
 " quercifoliella among oak  
 " Messaniella ...among evergreen oak  
 " corylifoliella among hawthorn  
 " Caledoniella in the N.  
 " viminiella.....among willow  
 " alnifoliella ...among alder  
 " Heegeriella ...among oak  
 " Cramerella ...among oak  
 " tenella .....  
 " sylvella (acerifoliella) among maple  
 " emberizæpennella  
 " Frolichella ...among alder  
 " Dunningiella Yorks, &c.  
 " Nicelliella ...among nut  
 " Stettinella ...among alder  
 " Klemannella Preston, &c.  
 " Schreberella among elm  
 " tristrigella ...among elm  
 " trifasciella ...among honeysuckle  
 " scabiosæcolella Surrey  
 " comparella ...  
 C. spartifoliella among broom  
 " laburnella.....among laburnum  
 " Wailesella ...among Genista  
 " lotella .....among Lotus major  
 " lathyrifoliella among vetches  
 " orobiella .....Scarborough  
 O. reliquella....near Thetford  
 B. aurimaculella among Chrysanthemum leucanthemum  
 " cidariella .....among alder  
 " ulmella.....among oak, &c.  
 " cratægifoliella...about hawthorn hedges  
 " Demaryella ...  
 " Boyerella .....among elm  
 " hippocastanella  
 " cristatella .....among yarrow  
 N. atricapitella...among oak  
 " perpygmæella  
 " pomella .....  
 " oxyacanthæcolella  
 " viscerella .....  
 " catharticella...  
 " Septembrella among hypericum  
 " intimella .....Witherslack, Bristol

## IMAGOS]

## MAY

- N. argyropezella  
 " trimaculella ...  
 " floslactella ...among nut  
 " salicivorella ...among sallow  
 " myrtillella ...  
 " microtheriella  
 " betulicolella...  
 " ignobilella ...among hawthorn  
 " argentipedella  
 " acetosella ..... Witherslack, Isle of  
     Wight  
 " plagicolella ...  
 " prunetella ...Scarboro'  
 " tityrella .....  
 " malella .....among wild apple  
 " atricolella.....  
 " arcuosella.....  
 " gratiosella.....  
 " marginecolella  
 " alnetella .....among alder  
 " glutinosella ...
- N. splendidissimella  
 " apicella .....amongst aspen  
 " ruficapitella ..among oaks  
 " castanella ... ..  
 " luteella... ..  
 " æneofasciella Darlington, Wither-  
     slack  
 " sorbiella .....  
 " aucupariella ...among mountainash  
 " ulmivorella ...among elm  
 " tilæella .....  
 " centifoliella ...among roses  
 T. pulverosella...among wild apple  
 P. microdactylus among Eupatorium  
     cannabinum  
 " tetradactylus  
 " Hodgkinsoni  
 " pentadactylus among Convolvulus  
     arvensis, and Calystegia sepium  
 A. polydactyla ...from Aug.

# JUNE

## OVA]

“The leafy month of June” is one of the most prolific in insect life, and consequently the number of species obtainable is now reaching its maximum. Many eggs laid this month soon hatch, so that vigilance and activity will have to be exercised to secure the kinds which may be desired.

THE WEATHER.—As it is sometimes important, in fixing the time for an entomological excursion, to know the weather we are likely to have, the chief signs upon which it may be fore-casted are subjoined:—

A dark blue sky indicates fine weather.

A rosy sky at sunset, whether clear or cloudy, presages fine weather; a bright yellow, wind; a pale yellow, wet; a sickly-looking greenish hue, wind and rain; a dark or Indian red, rain.

A grey sky in the morning, fine weather; red, bad weather, or much wind, perhaps rain; a high dawn, wind; a low dawn, fine.

Soft-looking, or delicate clouds foretell fine weather, with moderate or light breezes; hard-edged, oily-looking clouds, wind. Generally, the softer the clouds, the less wind (but perhaps more rain) may be expected; and the harder, more greasy, rolled, tufted, or ragged, the stronger the coming wind will prove. Small inky-looking clouds foretell rain; light-scud clouds driving across heavy masses show wind and rain; but if alone, they indicate wind only. High upper clouds crossing the sun, moon, or stars in a direction different from the lower clouds, or the wind felt below, foretell a change of wind in their direction. After fine clear weather, the first signs in the sky of a coming change are usually light streaks, curls, whisps, or mottled patches of white distant cloud.

Dew is an indication of fine weather; so is fog. Remarkable clearness of atmosphere near the horizon, distant objects being rendered unusually visible, is a sign of wet, if not wind.

- |   |  |
|---|--|
| P. Machaon .....on underside of leaflets of Peucedanum palustre, in fens  | A. Euphrosyne on dog, and sweet violet; bluntly conical; dull greenish at first, afterwards brownish                   |
| L. sinapis, b. ... on Vicia cracca, and Orobus tuberosus; long, standing on end, curved, yellow white                 | “ Selene .....on dog, and sweet violet   |
| P. cratægi.....on hawthorn, sloe, and orchard trees   | M. Artemis .....on scabious, plantain; upon the underside of leaves nearest the ground; yellow                         |
| A. cardamines ...on fl.-stalks of Cardamine, Erysimum, &c.; bright orange   | “ Cinxia .....on Plantago lanceolata; in batches   |
| C. Edusa .....white clover (Trifolium repens), lucerne, &c. The egg laid up to this time produces the imago in August | V. cardui, e. ...on thistles; by preference Cirsium lanceolatum and carduus arvensis; low down on the plant; s. nettle |

## OVA]

## JUNE

- S. Semele.....on *Triticum repens*
- C. Davus, e.....on *Rhynchospora alba*
- " *Pamphilus* ...on small mat grass (*Nardus stricta*)
- L. agestis .....on *Erodium cicutarium*
- " *Alsus*, e. ....on *Anthyllis vulneraria*; upon the calyx, low down
- " *Arion*, e. ....on thyme; at the base of the florets; round, flattened, and depressed in the centre, greenish white; hatch within two or three weeks after being laid
- N. Lucina .....on primrose, and cowslip; pale glaucous
- H. Paniscus .. ..on plantain
- M. stellatarum...on *Galium Mollugo*. The egg is deposited while the moth is on the wing, curling its abdomen so as to place the egg upon the undersurface of the leaf
- " *fuciformis* ...on honeysuckle, upon the underside of the leaf
- H. hectus.....on *Pteris aquilina*. The eggs of the *Hepialus* are laid loosely over the plant, while the moth is on the wing; at first white, but soon turn black; globular
- " *lupulinus* .....on dead nettle, &c.
- " *velleda* .....on *Pteris aquilina*
- " *humuli*.....on various plants
- Z. trifolii .....on trefoil, and vetches. The eggs of the *Zeuzera* are laid in heaps; yellow
- " *loniceræ* .....on clover, & grasses
- " *filipendulæ*, e. on crowfoot, trefoil, &c.
- C. dominula ...among houndstongue, scattered loosely; rather small
- E. russula..... on plantain, heath, &c.
- C. plantaginis ...on violets, plantain, &c. The eggs of the *Chelonia* are deposited in regular batches upon the leaves; globular, straw colour
- C. caia .....on nettle, & various plants
- " *villica* .....on chickweed, furze, &c.; pearly
- O. pudibunda ...on hop, oak, &c.; in regular batches
- " *gonostigma* ...on oak, nut, willow, bramble
- B. quercus (*callunæ*) scattered over heath, bilberry, &c., as the moth flies; globular, large
- E. advenaria ...on dogwood, and probably wild rose, and bilberry
- B. rhomboidaria in crevices of bark of various trees; long, dark green
- P. baiularia .....on oak; large, oval, brownish
- E. omicronaria...on maple; oblong, red
- A. remutata .....on ——? has been laid in confinement upon *Polygonum aviculare*, which plant the larva will eat; red
- C. temerata .....on sloe, wild cherry; upon the shoots, and in crevices of the bark
- S. belgiaria .... on heath, upon the shoots; rather large, brick-shaped, lead coloured
- F. piniaria .....on Scotch fir, and larch; on the higher branches, upon the needles, in a row
- S. dealbata, e. ....on grasses; bright orange
- S. sacraria .....on dock, chamomile, and other *Compositæ*; long, narrow, oval, and flattened
- L. adustata .....on spindle; oblong, oval, pinkish brown
- E. albulata .....on yellow rattle; upon the bracts
- " *decolorata* ...on fl. of *Lychnis dioica*; two or three eggs upon a fl.-head; yellow
- M. ocellata .....on *Galium*; large
- M. sociata..... on *Galium Mollugo*. Deposited singly on the food-plant

## OVA]

## JUNE

- M. montanata ...on primrose  
 „ galiata .....on Galium sextatile  
 A. rubidata, e....on Galium  
 C. munitata .....on groundsel  
 C. corylata, e. ...on sloe, lime; large, oval, pearly  
 L. griseata .....on Sisymbrium Sophia  
 P. lacertula .....on birch; upon the twigs  
 „ unguicula, b. on beech; upon the leaf, generally on stunted and pollard trees  
 D. furcula.....on sallow, willow, poplar; upon upper surface of leaves, in groups of two or three; black, small  
 „ bifida .....on poplars, willows, sallows; upon upper surface of leaves, in groups of two or three; black, small  
 „ vinula .....on willows, poplars, sallow; upon upper surface of leaves, in groups of two or three; chocolate brown  
 P. palpina.....on poplars, and sallows  
 N. camelina ... } birch; on underside  
 „ dictæoides } of leaves; white  
 „ dromedarius }  
 „ dictæa ..... } on poplars, and  
 „ ziczac ..... } sallows  
 „ trepida .....on oak; laid sparsely upon the leaves; pale  
 A. leporina, b. ...on the bark of birch, poplar, alder, sallow; light purple  
 „ strigosa.....on hawthorn; upon the twigs  
 „ rumicis.....on plantain, and other low plants; upon the leaves  
 „ myricæ .....on sallow; rather large, quite flat on the base, round and globular above, pink, speckled with purple, and a distinct spot of this colour in the centre  
 S. venosa .....on reed grass; upon the leaves, and stems  
 L. comma .....on Dactylis glomerata, and other grass, and sorrel; in clusters upon the stems  
 M. albicolon.....on Atriplex, and Chenopodium  
 A. basilinea .....on immature wheat; in the ears  
 A. segetum .....on Cruciferæ, &c.  
 „ exclamationis on grass, cabbage, &c.  
 „ corticea .....on Chenopodium  
 N. plecta .....on Galium verum, and Asperula odorata  
 D. carpophaga, e. on fl.-heads of Silene inflata, and Lychnis  
 „ capsophila ...on fl.-heads of Silene maritima  
 „ capsincola ...on fl.-heads of Lychnis, and Silene  
 „ cucubali ..... on fl.-heads of Silene inflata, Lychnis, and Cucubalus  
 „ cæsia.....on fl.-heads of Silene maritima  
 E. lucipara .....on brake fern, male fern, nettle, plantain, primrose, sallow, dandelion, &c.; in a row, upon the back of the leaf  
 H. chenopodii ...on Chenopodium  
 „ rectilinea .....on sallow, bilberry, bramble; upon the leaves  
 C. umbratica ...on sowthistle, lettuce; upon the leaves  
 A. luctuosa .....on small convolvulus; upon stems, and fl.-buds  
 H. barbalis .....on oak, and birch catkins; globular, pale greenish yellow  
 C. pratellus .....probably in moss, growing amongst grass; “oval, more pointed at one end, pale yellow, and ornamented with slight longitudinal ridges, connected by slight cross-bars;” probably laid loosely, as it is supposed most of the genus are

## LARVÆ]

## JUNE

Strange and new will be the larval forms of many species which will be met with in this and the last month, if the collector works as the tempting time, which will soon pass away, should prompt him; and the regular posting up of the entomological diary, with the due labelling of unknown or local species, for future identification, will be highly desirable.

From the end of this month to August, the delicate green larva of *P. Machaon* may be found in fens and marshes, feeding on umbelliferous plants. This, the largest of our Butterflies, never thrives when removed from its marshy habitat; all attempts to naturalize it in other localities having failed. Towards the end of the month, *G. rhamni* may be found of all sizes on the two buckthorns, *R. catharticus* and *R. frangula*. Sloe bushes in the neighbourhood of woods should be beaten this month for *T. betulæ*.

*C. ligniperda* may be taken at night by visiting the trees which can be seen to have been bored by this strong-smelling three-year wood-feeder. If roughly handled, it feigns death for some time. *T. cratægi* are extremely various in their appearance. Though hawthorn is their food-plant, they will eat many other plants. They often die whilst changing their fourth skin. *L. trifolii* is seldom found far from the coast; and when a number are removed from their habitat, there is generally a large per-centage of deaths. *L. griseola*, *L. quadra*, *L. lurideola*, and *M. miniata*, should not be sought for later than the beginning of this month, or perhaps better at the end of May, as all these species are often full-fed at that period, and if left too late, may be found to be ichneumoned.

*E. fuscantaria* may be beaten from its food-tree, small, at the end of the month. Ash is its favourite food, but it will also eat privet. Old junipers in gardens, shrubberies, and on hills, should be searched to the middle of this month for *E. sobrinata*.

*P. palpina* has a knack of wriggling off the branch it is on, as soon as the branch is touched. *P. Cassinea* lies close along the petiole of a leaf, and is not easily seen. Though elm and nut are its favourite food, it will eat of almost any tree; as also will *P. populi*. *P. Cassinea*, although not generally full-fed until this month, is sometimes more forward; it should, therefore, also be looked for in May.

*X. lithoxylea*, *M. strigilis*, *M. literosa*, *G. trilinea*, *C. Morpheus*, and many others, may be found on elder, red currant, beans, &c., by visiting them with a lantern at night. *M. oxyacanthæ* is easily found at night. It falls to the ground the moment it is touched. *B. notha* is more frequently found on aspen than willow. When full-fed it eats some depth into rotten wood, and then assumes the pupa state.

- |  |   |
|--|---|
| <i>P. Machaon</i> , e... Peucedanum<br>lustre, and other Umbelliferæ;<br>in fens | <i>P. rapæ</i> .....turnip, and other<br>Cruciferæ, tropæolum, &c.      |
| <i>L. sinapis</i> ..... <i>Vicia cracca</i> , and<br><i>Orobis tuberosus</i>     | " <i>napi</i> .....rapeseed, and other<br>Cruciferæ                     |
| <i>P. brassicæ</i> .....cabbage, and other<br>Cruciferæ, tropæolum, &c.          | " <i>Daplidice</i> ..... <i>Reseda lutea</i> , and<br><i>R. luteola</i> |
|  | <i>G. rhamni</i> .....buckthorn   |

## LARVÆ]

## JUNE

- C. Edusa .....Dutch clover, lucerne, &c.
- A. Paphia, b. ...from Aug., dog, and sweet violet
- " Aglaia, b. ...from Aug., dog, and sweet violet, and wild hearts-ease, on hill-sides, and sea-side sand-hills
- " Adippe, b. ...from Aug., dog, and sweet violet
- " Latona.....from Aug., violet, and wild heartsease
- V. c-album .....nettle, elm, hop, sloe, currant
- " urticae, b.....nettle; in batches, on the underside of the leaves; green
- " polychloros .. elm, osiers, sallow, aspen, Pyrus aria, and fruit trees; s. the eggs are laid in the autumn, and the young larvæ hibernate
- " Antiopa .....willow, birch, poplar, nettle
- " Io ..... nettle
- " Atalanta .....nettle, generally in sheltered places
- " cardui .....Cirsium arvense, and other thistles; will also eat nettle, mallow, scarlet bean, &c.
- A. Iris .....from Aug., sallow, poplar
- E. Medea .....from Oct., moorland grasses
- S. Ægeria, 2..... grasses
- " Megæra, 2 ...grasses
- " Semele .....from Aug., quaking grass, couch grass, &c.; on dry hill-sides, and sea-shore sand-hills
- " Tithonus .....from Aug., annual meadow grass, &c.
- " Hyperanthus from Aug., Aira cæspitosa, annual meadow, millet, and other grasses, in and near woods
- C. pamphilus ...grasses
- T. quercus, b. ...oak. See last month
- " w-album, b....wytch elm
- " pruni .....sloe
- T. betulæ .....sloe, birch; generally on stunted bushes
- P. hippothoe ...great water dock; formerly in the Cambridge fens
- " Phlæas .....dock, ragwort, sorrel
- L. Ægon .....Ornithopus perpusillus
- " Corydon .....from Oct., Hippocrepis comosa, &c.
- " Argiolus .....holly, and probably also on buckthorn. The eggs have been laid on the fl.-stalks, rather close to the fl.; the larva feeds first on the fl., then on the green berries. Some have been found on the underside of the leaves, in which they had eaten shot-holes. It spins up closely adhering to the underside of a holly leaf; the butterfly appearing in Aug., as the second, or autumnal brood
- H. comma .....Ornithopus perpusillus, Lotus corniculatus, and other Leguminosæ, in rolled-up leaves
- " linea .....from Aug., grasses. Conceals itself by drawing the edges of a blade of grass together
- " Actæon .....in Calamagrotis epigejos
- D. lineata .....Galium, vine, &c.
- S. chrysidiformis r. of dock, and sorrel. Supposed to be 2 years feeding up
- Z. meliloti, b. ...from July, Lotus corniculatus, vetches, &c.; partial to chalky soils
- N. senex .....lichens; in fens, and bogs
- " mundana .....lichens; on top stones of walls
- C. miniata.....from Aug., lichen, on oaks (Lichen caninus); also withered sallow, and oak
- L. muscerda .....lichens, on sallow, in fens
- " pygmæola .....lichens, among moss

## LARVÆ]

## JUNE

- L. caniola .....Lotus corniculatus, and other Leguminosæ; prefers the fl. On the Continent on lichens upon roofs. Spins up on underside of pieces of bark
- " deplana .....lichens, on yew, oak, beech, spruce; may be beaten from the trees
- " lurideola .....from Aug., lichens, on ash and elm
- " complana .....from Aug., lichens, on sloe, and fir
- " griseola, b. ...from Aug., lichens on poplar; will also eat withered sawlow, &c.
- " stramineola (var.) from August, lichens, on sloe, oak, sawlow, &c.
- " quadra .....lichens, on oak, beech
- D. pulchella .....Myosotis arvensis
- C. caia .....from Sept., various plants
- L. dispar .....sloe, hawthorn, and various fruit trees
- " monacha .....oak, beech, birch, fir, apple, &c.; hides in the crevices of the bark
- D. coryli .....beech, and several other trees; generally beaten from beech
- T. cratægi .....hawthorn, sloe, sawlow, birch, oak, plum
- P. populi .....oak, poplar, lime, ash, hawthorn
- E. lanestris .....hawthorn, sloe, &c.; in large nests of silk on hedges, &c.
- B. neustria .....sloe, hawthorn, fruit trees, &c.; in large nests of silk
- " castrensis, e. on Artemisia maritima, and Daucus maritimus; will also eat knotgrass, chrysanthemum, wild cherry, and various trees, if sprinkled with salt water. Feeds in the sunshine
- " roboris .....from Sept., hawthorn, dogwood, bramble, broom, heath, &c.
- B. trifolii .....from Sept., trefoil, clover, broom, furze, grass, raspberry, &c.; attached to the coast
- E. versicolora ...birch
- E. vespertaria ...nut
- " apiciaria .....nut, poplar, willow, sawlow, alder
- R. cratægata .....from Sept., hawthorn, sloe
- P. syringaria .....from Sept., lilac, privet, elder, honeysuckle
- S. illunaria .....willow, ash, hawthorn, oak, plum, &c.
- " illustraria .....oak, birch, ash, beech, maple
- E. tiliaria .....oak, sawlow, birch, alder, &c.
- " fuscantaria, e. ash, privet; eats round holes in the leaves
- " erosaria .....oak, birch, &c.
- " angularia .....oak, birch, ash, beech
- P. pilosaria .....oak, elm
- N. zonaria .....on Ammophila arundinacea, and other sand-hill plants
- " hispidaria .....oak
- B. hirtaria .....lime, elm, ash, and fruit trees
- A. prodomaria ...oak, birch, elm, nut
- H. abruptaria ...lilac, rose, privet
- C. glabraria .....lichens, on fir
- B. perfumaria ...ivy, lilac, clematis, &c.
- " abietaria, b. ...from Sept., larch, and spruce; has been found on whortleberry; will also eat birch, and oak
- T. biundularia ..... oak, birch, &c. Vary very much
- D. obfuscata .....from Sept., heath, vetch, &c.
- M. cineraria ..... lichens, on walls
- P. cytisaria, b. ...broom and Genista anglica, on heaths, forests, and waste places on the coast
- I. vernaria, b. ...from Sept., Clematis vitalba
- H. thymiaria, b. hawthorn, oak



## LARVÆ]

## JUNE

- H. auroraria, b. from Aug., plantain  
 A. strigaria, b. (?) —? Will eat knotgrass  
 " strigilata .....from Aug., Clematis, Stachys, &c.  
 " imitaria .....Galium; will also eat sorrel  
 P. petraria ... ..brake fern  
 S. sacraria.....dock, chamomile  
 A. gilvaria .....from Sept., Achillea millefolium, &c.  
 L. marginata ...sallow, willow, aspen  
 H. leucophearia oak, maple  
 " aurantiaria ...oak, birch, hawthorn  
 " progemmaria oak, birch, hornbeam  
 A. æscularia.....oak, elm, lime, sloe, hawthorn, horse chesnut, apple, privet, &c.  
 C. boreata .....birch, in a curled-up leaf  
 O. dilutata .....oak, and other trees  
 L. multistrigaria Galium  
 " ruficinctata ...Saxifraga granulata, and S. hypnoides; has also been found on fruit trees, peppermint, and sage  
 E. consignata ...fruit trees, oak, nut, &c.  
 " pygmæata ... Stellaria holostea, fl.; will also eat Cerastium tomentosum, fl.  
 " pusillata .....spruce  
 " irriguata .....oak, sloe  
 " pimpinellata seeds of Pimpinella magna, and P. saxifraga, also Angelica  
 " dodoneata ...oak  
 " abbreviata ...oak  
 " sobrinata juniper  
 " pumilata .....fl. of Anthriscus sylvestris, gorse, marjoram, asters, clematis, &c.  
 L. polycommata honeysuckle, ash  
 T. simulata .....juniper  
 M. rubiginata ...alder  
 M. rivata .....Galium Mollugo  
 " sociata .....Galium Mollugo  
 " fluctuata .....cabbage, horseradish, nasturtium, &c.
- A. badiata .....dog rose  
 " derivata .....dog rose, honeysuckle  
 " berberata ...barberry  
 P lapidata .....—? will eat clematis  
 " vitalbata, e...Clematis vitalba  
 S. dubitata .....buckthorn  
 " vetulata, b. ...buckthorn; between united leaves  
 " rhamnata, b. buckthorn, birch; between united leaves  
 " certa .....barberry; between united leaves  
 C. immanata ...bilberry, alder, birch, strawberry, &c.  
 " prunata .....currant, gooseberry, sloe, &c.  
 " dotata .....black and red currant  
 E. cervinaria ...mallow, hollyhock  
 " mensuraria ...grasses  
 " lineolata .....Galium verum, on the coast; will also eat G. sextile and G. Mollugo  
 C. imbutata .....cranberry; also eats whortleberry  
 C. spartiata .....broom; feeds under the leaves, in which it makes holes. Is a cannibal in confinement  
 P. lacertula ..... birch; between united leaves  
 " sicula .....oak, birch, lime  
 " hamula, e. ...oak, birch  
 " unguicula, e. beech; generally on pollard and stunted trees  
 C. spinula, b. .... hawthorn, sloe, mountain ash  
 P. Cassinea, b....oak; s. elm, lime, willow; grips its food-plant tightly  
 " nubeculosa ...birch; stale, dryish food is stated to suit the larva best, in confinement; two years in pupa  
 P. plumigera ...maple; will also eat sycamore  
 P. palpina, e. ....willows, sallows, poplars  
 N. carmelita.....birch  
 " dictæa, e....poplars, willow

## LARVÆ]

## JUNE

- N. ziczac ..... poplars, sallows, willow, alder  
 " Chaonia, m. oak  
 D. cæruleocephala hawthorn, sloe, apple  
 C. diluta ..... oak, birch; between united leaves  
 " or ..... poplars; between the leaves  
 " flavicornis ... birch, in rolled up leaves; cannot be beaten out  
 " ridens ..... oak; between united leaves  
 A. leporina ..... birch, poplar, alder, sallow  
 " megacephala poplar  
 " rumicis ..... bramble, plantain, and other low plants; will eat knotgrass  
 " auricoma ..... bramble, bilberry, birch, oak  
 " menyanthidis *Menyanthes trifoliata*, *Myrica gale*, heath, bramble, sallow  
 N. fulva ..... in stems of *Carex*, and *Poa aquatica*  
 " Hellmanni, b. in r. of common reed  
 " neurica ..... in stems of common reed  
 " geminipuncta in stems of common reed. Holes covered with silk from within are visible on stems containing larvæ  
 " lutosa ..... from Oct., in stems of common reed, near the r.  
 H. nictitans ..... at r. of *Tussilago*, *Cyperacæ*, &c.  
 " petasitis ..... in stems, and r. of butter burr, and burdock  
 " micacea ..... at the base of leaves of *Carex*, and inside stems, and r. of *Equisetum arvense*, and *E. fluviatile*, and dock  
 X. lithoxylea ... grass, and other plants  
 X. conspicillaris *Lôtus corniculatus*, and other low plants  
 C. graminis ..... r. of grass; hides under stones  
 L. cespitis ..... grasses; hides among the r. by day  
 C. exulis, b. .... various species of *Poa*  
 M. furva ..... grasses, especially *Aira canescens*  
 " brassicæ ..... cabbage, dock, *Chenopodium*, *chrysanthemum*, &c.  
 M. strigilis ..... grasses, and other plants  
 " literosa ..... slender foxtail grass, and other plants  
 " furuncula ..... *Festuca*, slender foxtail grass, and other plants  
 " arcuosa, b. ... *Aira cæspitosa*  
 C. Haworthii ... *Eriphorum vaginatum*  
 A. suffusa ..... r. of spinach, lettuce, radish, &c.  
 " cursoria ..... *Euphorbia esula*, sandwort, sea violet, &c.  
 " nigricans ..... plantain, clover, &c.  
 " tritici ..... roots of sandwort, sea violet, and other low plants  
 " præcox ..... sandwort, sea violet, chickweed, and other low plants, on the coast; also dwarf willows. May be traced, and dug up in the sand, in which it burrows  
 T. pronuba ..... from Aug., dock, and other plants  
 N. glareosa ..... dock, sorrel, broom  
 " subrosea ..... *Myrica gale*, sallow  
 " rubi ..... low plants  
 T. piniperda ..... Scotch, and other firs  
 T. gothica ..... sallow, hawthorn, oak, &c.; also dock, nettle, laurel, broom, lilac, &c.  
 " leucographa plantain  
 " rubricosa ..... dock, elm  
 " instabilis ..... sloe, sallow, willow, oak, dock, and other low plants  
 " opima ..... willow, sallow, rose  
 " populeti ..... poplars, especially *Populus nigra*; between united leaves  
 " stabilis ..... oak, elm, hawthorn, &c.

## LARVÆ]

## JUNE

- T. gracilis.....willow, sallow, low plants  
 " miniosa .....oak, and birch, when young; then hawthorn, and low plants  
 " munda .....oak, elm, poplar  
 " cruda .....oak, nut, sallow; also other caterpillars  
 O. upsilon, b. ...willow, poplar  
 " lota, b..... willow, sallow, poplar  
 A. pistacina .....buttercup, dock, &c. Spins a tight, neat earthen cocoon, in which it remains some weeks before pupation  
 " litura .....meadow sweet, and other low plants; also oak, willow, alder  
 C. vaccinii .....elm, oak, sallow, willow, and low plants  
 " spadicea .....sloe, hawthorn, and honeysuckle when young; later on various low plants  
 S. satellitia .....oak, &c.; between the leaves; also other caterpillars  
 D. rubiginosa.....apple, dandelion, and other low plants  
 H. croceago .....oak  
 X. citrago.....lime, between united leaves  
 " silago .....sallow  
 " aurago .....beech; hides in the chinks of the bark  
 " gilvago.....wych elm (seeds)  
 " ferruginea ...sallow, aspen (buds), wych elm (seeds)  
 C. xerampelina ash  
 T. retusa, b.....sallow, poplar, willow; between the leaves  
 E. fulvago.....oak, birch  
 D. oo .....oak, between united leaves  
 C. trapezina .....oak, birch, hornbeam, &c.; also other caterpillars  
 " diffinis .....elm; between united leaves  
 E. ochroleuca ...Dactylis glomerata  
 D. capsophila ... Silene maritima (seeds); will also eat S. inflata; may be found this month in all stages of growth  
 P. xanthomista Plantago maritima, campion, violet, harebell, &c.; found amongst the r. by day; feeds on the fl., &c., at night  
 " flavocincta ...chickweed, groundsel, mint, everlasting pea, &c., plum, &c.  
 D. templi .....Heracleum sphondylium; inside the stem, and r.  
 E. nigra ..... Galium Mollugo, plantain, dock, chickweed, grass  
 " viminalis .....sallow  
 " lichenea .....from Nov., ragwort, and various low plants, on the coast  
 V. oleagina .....sloe; in shady places, and skirts of woods  
 M. oxyacanthæ hawthorn, sloe  
 A. Aprilina .....oak; hides in bark crevices during the day  
 H. satura .....honeysuckle  
 " protea, b. ...oak  
 " dentina.....roots of dandelion  
 " peregrina.....Chenopodium, and Salsola kali  
 X. lithoriza .....honeysuckle  
 C. solidaginis ...bilberry; will also eat hawthorn  
 C. vetusta.....poplar, and various meadow, and marsh plants  
 " exoleta.....scabious, campion, rest harrow, dock, Eryngium maritimum, turnip, asparagus, &c.  
 X. lambda .....Myrica gale; on moors  
 " furcifera, m....alder, birch  
 " rhizolitha.....oak  
 " petrificata ...oak, lime, birch  
 C. verbasci ..... Verbascum, and Scrophularia aquatica. Most of the Cucullia feed in the sunshine  
 " scrophulariæ ...Scrophularia nodosa

## LARVÆ]

## JUNE

- C. chamomillæ..... chamomile, fl.,  
Pyrethrum inodorum, and P.  
maritinum. Basks in the sun-  
shine. Has been found in  
waste places, shipwright's yards,  
&c.
- H. armigera.....wild mignonette
- H. arbuti .....Cerastium arvense,  
fl. and seeds, forget-me-not, &c.
- A. sulphuralis ...small convolvulus
- A. luctuosa .....small convolvulus ;  
feeds by night, principally on  
the unexpanded fl.-buds
- B. parthenias ...birch ; s. beech, and  
oak
- " notha .....aspens, willow ; be-  
tween united leaves
- P. orichalcea ...Eupatorium canna-  
binum
- " bractea.....Eupatorium canna-  
binum
- " festucæ.....Carex, reeds, and  
grasses ; near the sea
- " iota .....nettle, dead nettle,  
honeysuckle, groundsel, &c.
- " interrogationis nettle
- G. libatrix..... willow, willow,  
poplar
- A. pyramidea ... oak, elm, birch,  
willow
- " tragopogonis hawthorn, larkspur,  
columbine (seed pods), and low  
plants
- T. craccæ .....Vicia sylvatica
- C. nupta .....willow, poplar
- " promissa .....oak
- " sponsa .....oak
- M. salicalis (?) ...willow, willow
- " rostralis .....hop
- H. derivalis .....from Aug., among  
dead oak leaves
- " cribralis, b....from Aug., Carex  
sylvatica, and Luzula pilosa
- P. glaucinalis ...in nest-like forma-  
tions on the end of birch twigs.  
Larvæ, pupæ, and imagoes are  
all found during this month
- C. angustalis ...moss, on sea shores
- P. punicealis ...Nepeta cataria, fl.  
heads
- P. purpuralis .....Mentha arvensis,  
between the leaves
- " ostrinalis .....var. of P. purpu-  
ralis?
- H. cespitalis, e. under leaves of  
Salvia pratensis, and Plantago
- A. niveus .....in a case, under the  
leaves of Potamogeton
- P. forficalis .....cabbage, horserad-  
ish, &c.
- S. sticticalis .....Artemisia, near the  
coast
- " cinctalis ..... broom, clover?
- S. alpinalis .....Senecio
- S. lineola .....the lichens on sloe,  
Parmelia parietana, and P.  
olivacea
- C. fascinelinus...at Yarmouth, in the  
r. and stems of Triticum jun-  
ceum, spinning silken galleries  
about the r.
- " paludellus ...Typha latifolia
- C. cicatricellus...bullrush
- " phragmitellus from Oct., common  
reed
- S. forficellus.....Poa aquatica
- " mucronellus...common reed
- " gigantellus ...common reed
- I. carnella.....Lotus corniculatus,  
fl.
- H. binævella, b. in heads of thistles
- H. senecionis ...mines in stems of  
ragwort
- E. pinguis.....under the bark of  
ash
- N. genistella ...from Sept., furze ;  
also Genista Corsica
- P. dilutella .....thyme
- " subornatella ..thyme (Zeller) Glo-  
bularia vulgaris (Herr Mann),  
between the leaves
- " obductella ...in spun-up leaves of  
Origanum vulgare, Mentha  
arvensis, Melissa acinos
- R. consociella ...oak
- " advenella ...hawthorn
- " suavella .....sloe
- O. ahenella .....under the radical  
leaves of Helianthemum vulgare
- " tumidella.....oak

## LARVÆ]

## JUNE

- O. rubrotibiella, b. oak  
 G. cerella .....wax, in beehives  
 S. Revayana ...sallow (?)  
 T. podana .....rose, fruit trees, &c.  
 " rosana .....almost any plant  
 " heparana .....hawthorn, &c.  
 " ribeana .....hawthorn, and al-  
 most any tree  
 " corylana .....plane trees, &c.  
 " costana.....figwort, and other  
 marsh plants  
 " viburnana ...Myrica gale, and  
 Vaccinium  
 " icterana .....knapweed, plantain,  
 and almost any low plant  
 " viridana .....oak, birch, &c.  
 " adjunctana ...ivy, &c.  
 C. pilleriana ...vine, and almost any  
 plant  
 L. literana .....oak  
 " niveana .....birch  
 " Boscana .....elm  
 P. autumnana ...Myrica, willow, &c.  
 " comariana ...Comarum, Fragaria,  
 &c., in boggy heaths, and fens  
 " Schalleriana hawthorn  
 " camparana ...  
 " Caledoniana Myrica gale  
 " variegana.....bramble, hawthorn,  
 &c.  
 " cristana .....dwarf willows, and  
 hawthorn, between united leaves  
 " Hastiana, e. dwarf willows  
 " maccana .....Myrica gale  
 " ferrugana.....birch, oak  
 " tristana.....guelder rose  
 " aspersana.....Potentilla, meadow  
 sweet  
 " Shepherdana hemp agrimony,  
 meadow sweet, in the tops  
 " lipsiana (?) ...Myrica gale  
 T. caudana ..... willow, willow,  
 poplars  
 D. Bergmanniana, b. rose ; folded  
 leaves  
 " Foskaleana ...maple, lime  
 P. Lecheana.....sallow, willow, oak,  
 honeysuckle, &c.  
 P. sellana .....heads of Centaurea ?  
 Cirsium ?  
 P. marginana ...teazle heads, and  
 probably in seed-heads of various  
 Compositæ, in heaths, and fens  
 S. roborana .....rose  
 P. tripunctana ...sloe, &c.  
 A. Udmanniana bramble  
 S. euphorbiana...Euphorbia paralias,  
 heads  
 " littorana .....sea pink  
 " lacunana .....various low plants  
 " urticana .....various low plants  
 " M. Ratzburgiana spruce fir, ter-  
 minal shoots and needles  
 P. rugosana .....Bryonia dioica  
 S. subjectana ...various plants  
 " virgaureana ...various plants  
 " chrysantheana various plants  
 " penziana .....the r. of grass, on  
 rocks  
 S. ictericana.....almost any low plant  
 G. nævana .....holly  
 " geminana.....in shoots of Vacci-  
 nium  
 H. angustana ...sallow, and willow  
 shoots  
 P. corticana .....hawthorn  
 " profundana ...oak  
 " occultana..... larch, and Scotch fir  
 " Solandriana...birch, alder, nut,  
 poplar  
 " semifuscana...meadow sweet, and  
 dwarf willow shoots  
 E. fœnana.....from Oct., in r. of  
 Artemisia  
 P. mercuriana ...Dryas octopetala  
 P. pinicolana ...in shoots of Scotch fir  
 D. politana .....r. of Achillea mille-  
 folium  
 " alpinana ? ...tansy, r. ?  
 " consortana ...shoots of chrysan-  
 themum  
 C. maritimana ...in stems, or r. of  
 Artemisia maritima  
 " pupillana ? ...in r. of Artemisia  
 maritima  
 S. vibrana ..... Carduusacanthoides,  
 and C. crispus  
 C. scintillulana...Scutellaria galericu-  
 lata  
 X. Fabriciana ...nettle

## LARVÆ]

## JUNE

- E. Degreyana? in seeds of *Linaria vulgaris*  
 X. hamana .....has been bred from *Ononis repens*  
 C. rutilana .....in a web, among juniper  
 L. phryganella...oak, hawthorn, bilberry, &c.  
 T. pseudo-bombycella from Oct., lichen, on oak, beech, &c.; in a long, slender case between united leaves  
 P. calvella (fusca) from Aug., on bramble; 2 years feeding up  
 S. inconspicuellæ on tree trunks, and palings  
 P. Verhuellella in the indusia of *Asplenium ruta-muraria*, and *Scolopendrum vulgare*  
 X. argentimaculella powdery lichens, on walls  
 T. tapetzella ...woollen cloth, &c.  
 " pelliõella ...in carpets, cloth, feathers, &c.  
 " pallescentella in rabbit, hare, and cat skins  
 I. muscalella .....oak; mines the leaves about this time, then cuts out its case, and feeds on the ground, on all kinds of plants  
 I. Zinckenella ...in birch leaves  
 S. comptella.....sloe, and plum  
 S. cratægella ...hawthorn, sloe  
 Y. viginipunctella, e. *Sedum telephium*  
 " plumbella ...spindle  
 " irrorella .....spindle  
 " padella.....hawthorn, apple, &c.  
 P. xylostella.....turnip, &c.  
 " porrectella ... *Barbara vulgaris*, *Hesperis matronalis*  
 " annulatella ...*Cochlearia*  
 " Dalella.....*Arabis*  
 H. vittella .....elm  
 Y. sylvella .....oak  
 " alpella .....oak  
 " lucella .....oak  
 " horridella.....apple, sloe  
 H. scabrella.....apple, hawthorn  
 H. nemorella ...honeysuckle  
 P. caudella .....spindle  
 O. sparganiella...stems of *Sparganium*  
 P. quercella .....oak, and between leaves of willow  
 E. Allisella .....*Artimisia vulgaris*  
 D. costosella.....furze, broom, and *Genista* fl.  
 " liturella .....knapweed  
 " pallõrella ...in leaves of *Centaurea scabiosa*  
 " umbellella ...furze  
 " assimilella ...broom  
 " arenella .....*Anthriscus*, thistles, and knapweed  
 " subpropinquella thistle  
 " Alstræmeriella hemlock  
 " vaccinella.....wild carrot  
 " capreolella ...wild carrot  
 " hypericella ...*Hypericum*  
 " conterminella shoots of willow  
 " angelicella ...*Angelica*  
 " Yeatesiella ...wild carrot  
 " applanella ... wild carrot, and most *Umbelliferæ*  
 " granulõsella...*Anthriscus vulgaris*, *Chærophyllum*, and other *Umbelliferæ*  
 " depressella ...seed-heads of wild carrot  
 " pimpinella ...*Anthriscus*  
 " albipunctella *Chærophyllum*  
 " nnicella .....in *Eryngium maritimum*, and *E. campestris*, on the Continent  
 " pulcherimella *Bunium flexuosum* fl.  
 " Weirella .....*Anthriscus*  
 " chærophyllivõrella *Chærophyllum*  
 " ultimella .. ...wild parsnip  
 " nervõsella ...parsnip, and *Cenanthæ crocata*  
 " heraciella ...thistle, *Heracleum*, and parsnip  
 " olerella .....on *Achillea millefolium*  
 P. gibbosella ...sallows  
 G. rufescentella in grasses  
 " nigra .....on *Populus nigra*, and *P. tremula*

## LARVÆ]

## JUNE

- G. temerella...sallow shoots  
 " lentiginosella *Genista*  
 " alacella .....lichens, on fruit trees  
 " artemisiella..... thyme, between terminal leaves  
 " albipalpella...*Genista anglica*, between united leaves  
 " affinella .....under moss, on old walls  
 " rhombella ...in wild apple leaves  
 " maculella.....in seeds, and shoots of *Stellaria*  
 " Hubnerella (?) in oak tumps  
 " ocellatella ...*Beta maritima*, fl.  
 " atriplicella ...*Atriplex*, and *Chenopodium*  
 " leucatella.....hawthorn, apple, mountain ash  
 " albicapitella *Genista anglica*  
 " vorticella.....*Lotus corniculatus*  
 " tæniolella ...*Lotus corniculatus*, and other *Leguminosæ*, between united leaves  
 " sircomella? ...*Cerastium vulgatum*  
 " atrella .....in *Hypericum* stems  
 " næviferella ...in leaves of *Atriplex*, and *Chenopodium*  
 " Hermannella in leaves of *Atriplex*, and *Chenopodium*  
 " subdecurtella *Lythrum salicaria*  
 " ericinella .....heath  
 " Knaggsiella, b. in seed capsules of *Stellaria holostea*  
 P. neuropterella from Oct., in heads of *Cirsium acaule*  
 C. striatella .....tansy, in the stem  
 C. conscriptella? birch  
 A. spartiella.....furze  
 N. Durdhamella *Origanum*, in rolled-up leaves  
 A. granitella ...*Inula dysenterica*, in the leaves  
 G. Hawthorthella *Eriphorum*, seeds  
 " equitella ...in shoots of *Sedum acre*  
 A. spinella .....in mountain ash  
 " sorbiella ... ..mountain ash, shoots  
 C. farinatella ...Scotch fir, in the leaves  
 O. pinariella ...Scotch fir, in the leaves
- Z. saxifragæ, b. on *Saxifraga azoides*, &c.  
 G. stigmatella ...in willow, poplar  
 " tringipennella in plantain  
 " syringella.....ash, privet, and lilac  
 " auroguttella...willow herb, and *Hypericum*  
 " Kollariella, e. mining leaves of broom  
 C. Brogniartella oak  
 C. alcyonipennella *Centaurea*, burdock, and thistles  
 " vibicella .....*Genista tinctoria*  
 " conspicuella...*Centaurea nigra*, &c.  
 " pyrphulipennella heath  
 " anatipennella sloe  
 " niveicostella...thyme  
 " genistæcolella *Genista anglica*  
 " saturatella ..from Sept., broom  
 " onosmella, b. *Echium vulgare*  
 " troglodytella *Inula dysenterica*, *Eupatorium cannabinum*  
 " murinipennella rushes  
 " albitarsella ...*Origanum*  
 " nigricella.....hawthorn, sloe, apple  
 " gryphipennella rose  
 " viminetella ...sallow, and osier  
 " lutipennella...oak, birch  
 " ardeæpennella, e. oak  
 " artemisiella .. *Artemisia*  
 B. præangustella willow, poplar; between united leaves  
 O. v-flavella .....in fungi, and wine corks  
 C. Illigerella, b. *Ægopodium podagraria*, in crumpled leaves  
 " chærophylllella, e. most *Umbellifera*  
 L. miscella .....sun cistus  
 " conturbatella *Epilobium angustifolium*, among terminal leaves  
 " epilobiella ...*Epilobium hirsutum*, tops  
 " decorella .....in stems of *Epilobium montanum*, *E. parviflorum*, *E. palustre*, *E. hirsutum*, &c., producing gall-like swellings  
 H. Rösella .....*Atriplex* and *Chenopodium*

## LARVÆ]

## JUNE

- |   |  |
|---|--|
| A. modestella ...in seeds of <i>Stellaria holostea</i>                      | N. centifoliella... <i>Rosa centifolia</i> , and <i>R. canina</i>  |
| A. Pfeifferella .. dogwood  | " ulmivorella ...elm   |
| E. atricomella ...in stems of <i>Dactylis glomerata</i>                     | T. pulverosella in wild apple  |
| " Megerlella ... in <i>Brachypodium</i> , <i>Bromus</i> , <i>Aira</i> , &c. | P. rhododactylus in fl. of rose  |
| " adscitella .....in <i>Sesleria cærulea</i> , and <i>Aira cæspitosa</i>    | " Bertrami, b. <i>Achillea millefolium</i> , and <i>A. ptarmica</i>  |
| " rhyncosporella <i>Eriphorum</i> , and <i>Carex</i>                        | " acanthodactylus <i>Bartsia</i> , and rest harrow   |
| " triatomella ...in a fine grass  | " hieracii ..... <i>Hieracium umbellatum</i> , and <i>Teucrium scorodonia</i> , first biting through the stems, and causing the leaves to wither |
| " pollinariella... <i>Brachypodium sylvaticum</i>                           | " lætus ..... <i>Audryala sinuata</i> , on the Continent   |
| " cygnipennella <i>Dactylis glomerata</i> , and other grasses               | " pilosellæ ..... <i>Hieracium pilosella</i>   |
| T. marginea .....in bramble   | " phæodactylus rest harrow   |
| L. quinqueguttella in dwarf willows   | " Lienigianus... <i>Artemisia vulgaris</i>   |
| P. suffusella .....in poplars   | " spilodactylus <i>Marrubium vulgare</i>   |
| " salignella.....in willows   | " brachydactylus <i>Lactuca muralis</i> , &c.  |
| C. Wailesella ...in <i>Genista tinctoria</i>                                | " baliodactylus <i>Origanum vulgare</i>  |
| B. maritimella ... <i>Tripolium vulgare</i>                                 | " tetradactylus...thyme  |
| " artemisiella ... <i>Artemisia campestris</i> , and yarrow                 | " dichrodactylus tansy   |
| N. sericopeza ...sycamore   | " polydactyla...honeysuckle, buds  |
| " poteriella..... <i>Poteriam sanguisorba</i>                               |  |

## PUPÆ]

The various modes in which the metamorphosis of pupation is carried out in the Lepidoptera constitute a most interesting subject of study; and in the months succeeding those most prolific in insect life that variety is seen to perfection. The forms, indeed, seem—

“Numerous as shadows haunting fairly  
The brain, new stuff'd, in youth, with  
triumphs gay  
Of old romance.”

The peculiar mode of concealment known as “the cocoon,” variously worked out, is more especially seen in the summer months, at least in the species we have been able to tabulate; while in those changing towards the autumn the subterranean form becomes more common. While some species are remarkable for the little trouble they take in effecting this change—simply spinning a few threads, or even dispensing with these—others are conspicuous for the care and labour they put into the work. Although some of the changes are peculiar to some families, it is found to be impossible to make simple form of pupation a basis for classification. While some cocoons are as flimsy as a cobweb, others are as tough as horn, with intermediary forms of texture both numerous and remarkable; yet all are the result of fluid exudations woven into form and substance by the caterpillar. While the pupæ of some, even



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of the commonest species, are conspicuously exposed without covering, and therefore fully open to injury or destruction, those of others are carefully swathed in silk, and surrounded by almost indestructible coverings, and ingeniously concealed, or buried in the earth,

“Far from the sun and summer gale.”

It is the business of the collector, by acquiring a knowledge of the habits of as many species as possible, to learn their secrets, and “by his so potent art,” to bring them to the light of day, for his own and others' advantage.

- A. *Paphia* .....on a stem of bramble, or some low shrub, in woods  
 “ *Aglaia*, e. ...among violet, and wild heartsease, on hillsides, &c.; suspended by the tail within an enclosure of spun leaves, on the top of the plant, or attached to stalks of bent grass, &c.  
 “ *Adippe*..... among, or near violets  
 “ *Latona*.....among dog violet, or sweet violet  
 M. *Athalia*, b. ... suspended, among plantain, &c.  
 V. *c-album*, b. ... suspended, among nettle, and on walls, &c.  
 “ *urticæ* .....suspended, among nettle  
 L. *sibylla*, e. ...suspended, on stems of fern, underside of leaf of honeysuckle, &c.  
 A. *Iris* .....has been found suspended from underside of oak, and sallow leaf, and neighbour-ing objects  
 A. *Galatea* .....attached to timothy, and other grass  
 E. *Medea*, e. ...among moorland grass, near the ground  
 S. *Semele* .....under r. of *Aira*, and *Triticum*, and clods, on dry banks  
 “ *Ianira*..... } attached to a  
 “ *Hyperanthus*, e. } blade of grass, &c.  
 C. *Davus* .....among, or near *Rhyncospora alba*; freely suspended  
 T. *w-album*, b. at wych elm; fastened on a leaf, or twig  
 L. *Ægon*, e. .... among *Ornithopus perpusillus*, at the base of the plant-stems  
 “ *Artaxerxes*, b. slightly attached to stems of sun cistus, near the ground  
 Z. *æsculi* .....in r., branch, or twig of elm, pear, &c.  
 L. *asellus* .....spun up, on a leaf  
 P. *statices* .....spun up, on sorrel  
 Z. *minos* .....oval cocoon, attached to stones  
 “ *trifolii* .....cocoon on stem of grass, &c.; yellow  
 “ *meliloti* .....cocoon on grass stems, &c.; pale yellow  
 “ *lonicera* .....cocoon on stem of grass, &c.; some yellow, some white  
 “ *filipendulæ* ...cocoon on stem of grass, &c.; white  
 N. *albulalis* .....probably in the leaves of bramble, or ash  
 S. *irrerella*, b. ...in a slight web, under stones, oyster, cockle, mussel shells, &c., covered with ground lichen; on the coast, just above the tide mark  
 C. *miniata* ... ..spun up, under moss, on lichen-covered trees  
 L. *deplana* .....spun up, on lichen-covered trees  
 “ *lurideola* .....spun up, on lichen-covered trees, and old walls  
 “ *molybdeola*...spun up, under stones, or moss  
 “ *complana*.....under moss, on lichen-covered sloe, and fir, and on rocks, on the sea shore  
 “ *griseola* .....under moss, on lichen-covered poplars, &c.

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- L. quadra, e.....on palings, near lichen-covered trees, in crevices of bark, or between leaves
- E. grammica ...cocoon between leaves of food-plant
- C. dominula.....spun up, near its food-plant
- C. caia .....in a slight cocoon, amongst leaves, &c.; on palings, &c.
- L. chrysothorax in a slight cocoon, amongst leaves, &c.
- " auriflua .....in a slight cocoon, on palings, &c.
- O. fascelina .....spun up, among dwarf willow
- E. lanestrís, e. ...to Jan.; hard, oval cocoon on the ground, near hawthorn, sloe, &c.; s. remains in pupa many years
- B. neustria .....in cocoon among, or near sloe, hawthorn, and fruit trees
- L. quercifolia ...in a dark, papery cocoon, amongst leaves, &c.
- O. potatoria.....papery cocoon, on, or near coarse grass
- O. sambucata ...cocoon, hung among ivy, &c.
- E. vespertaria under moss, on nut, &c.
- " apiciaria .....under moss, on poplar, willow, willow
- M. margaritata at various trees; on the ground
- P. syringaria ...fastened to a twig, or under a leaf, or blade of grass; the caterpillar skin is often found hanging from the long-tailed pupa
- C. elinguaría ...between leaves of honeysuckle, hawthorn, sloe, &c.; on the ground, or under moss
- E. angularia.....under moss, on oak, birch, beech, &c.
- N. zonaria .....sub., on sand-hills
- " hispidaria ...to Jan., at oak
- C. glabraria .. ...at fir
- B. abietaria .....sub., at larch, and spruce
- G. papilionaria, b. in a transparent cocoon, among leaves, and moss, on various trees
- I. vernaria .....in loose cocoon, amongst leaves, in, or near Clematis vitalba
- A. rusticata .....sub., at — ?
- " incanaria .....sub., at — ?
- " ornata .....sub., near thyme
- " straminata ...on heaths, in a loose cocoon, near, or on the ground
- " emutaria .....in marshy places
- " inornata .....spun up, among leaves of poplar, willow, and heath
- H. vauaria .....spun up, among leaves of gooseberry, currant, &c.
- S. dealbata .....in shuttle-shaped cocoon, on grass stems
- A. grossulariata, b. between united leaves of gooseberry, currant, sloe, nut, &c.
- E. subciliata.....about maple
- " rectangulata on apple, and crab; under moss, and loose bark
- T. firmata.....in a cocoon, among fir
- Y. elutata, b. ...amongst seed-down of willow, and moss, &c., on nearly every kind of tree
- C. sagittata .....spun up, about Thalictrum, or on the ground, near; in fens
- " prunata .....on currant, and gooseberry; between leaves
- " testata .....spun up, among leaves of birch, willow, poplar; generally on heaths, in the North
- C. spinula.....spun up, among hawthorn, and sloe
- C. curtula.....spun up, between dead leaves of poplars, and willow
- P. palpina .....at willows, and poplars; on edges of streams; or under sods
- L. impura .....among Dactylis glomerata; on the ground

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- X. polyodon, b. under clods, and stones  
M. abjecta.....under clods, and stones, in an earthen cocoon  
A. unanimitis.....under bark of willows; in damp places, and among decayed willow wood  
M. arcuosa, b. ...at the crown of r. of *Aira cæspitosa*  
,, ripæ, b. ....sub., near *Cynoglossum officinale*; on the coast; found by raking sand-hills  
,, cursoria .....by raking sand-hills, on the coast  
T. Orbona .....among broom, and low plants; on the surface  
O. upsilon, b. ...under bark, or spun up, at r. of willow, and poplar  
C. xerampelina sub., at ash; cocoon very tender, and brittle; s. the larva remains unchanged in the cocoon for several weeks  
T. subtusa .....sub., at poplar  
E. fulvago .....spun up, in dead leaves, &c.; and probably s. sub., at oak, and birch  
D. oo ..... at oak, on the ground; in an oval cocoon  
C. trapezina, e. at oak, birch, hornbeam, &c.; among leaves, on, or near the surface  
D. capsophila ...to April, sub., about *Silene maritima*; on the coast  
,, capsincola ...to April, about *Silene maritima*; on the coast  
E. viminalis .....sub., near willow  
,, lichenea .....sub., by *Sedum acre*, &c.; near the coast  
P. bractea.....near the r. of *Eupatorium cannabinum*  
,, festucæ.....amongst grasses, reeds, &c.; near the coast  
P. iota .....amongst the leaves of nettle, dead nettle, &c.  
A. pyramidea, b. at oak, elm, birch, willow; cocoon on the ground, in spun up, withered leaves, &c.  
M. maura .....spun up, under loose bark, &c.  
C. sponsa, e. ...at oak; among the leaves on the tree  
H. cribralis .....among willow, *Luzula pilosa*, and *Carex sylvatica*  
P. glaucinalis ...among birch twigs  
C. fascinelinus...in cocoons, just under the sand, among *Triticum junceum*  
A. lotella .....among *Festuca ovina*, and *Aira canescens*  
G. canella.....from Oct., among *Salsola kali*  
H. quercana.....in a boat-shaped, light green cocoon, amongst oak leaves  
A. Bennetii .....on *Statice limonium*  
P. ochrodactylus on tansy  
,, parvidactylus on thyme, and hawkweed  
,, plagiodactylus on scabious, and speedwell  
,, fuscodactylus on speedwell  
,, lithodactylus on fleabane  
,, tephrodactylus on golden rod, in shady places  
,, osteodactylus on golden rod  
,, galeodactylus on burdock  
,, pentadactylus on convolvulus  
,, spilodactylus, e. on *Marrubium vulgare*  
,, tetradactylus on thyme  
,, pentadactylus on convolvulus  
,, dichrodactylus on tansy

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Every available place where the Lepidoptera "most do congregate" will now, during this, the most prolific month in the year for the perfect insect, be eagerly scanned by the collector desirous of making the best use of his time. The sun is near his meridian, and long and brilliant days promise excellent sport, if we are only properly endued with that "fiery quality,"

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energy. As some species can be more readily taken early on sunny summer mornings, the hours of sleep should not be unduly prolonged. Some stern poet cynically says :—

“ Nature requires five ;  
 Custom gives seven ;  
 Laziness takes nine ;  
 And wickedness eleven !”

And though we shall, of course, meet with many species “of no mark or likelihood,” we can scarcely fail in a fair locality to be rewarded with some good prizes. Many butterflies commence flying at seven o'clock in the morning on hot days. In day searching, the beating-stick will be a *sine quâ non* ; but low bushes and herbage should not be beaten from the top, but rather from beneath, otherwise many species which are concealed therein are only driven lower down. Not much good will attend the beating of thatch this month. The food of the larvæ of the species required, especially where it occurs in some plenty, should have special attention paid to it. Flowers, especially *Silene*, *Lychnis*, honeysuckle, and ragwort, are often a great attraction. The lime, and other trees which blossom this month, should be sought for and examined. *Cossus* infected trees, and gummy exudations from fruit trees are alike a fascination, both for butterflies and moths. Day sugaring, as well as by night, has been recommended, and where flowers are scarce is generally successful. Many species may be smoked out of grass, bushes, and banks by ignited touch-paper. Among those species which do not travel quietly when boxed are *T. rubi*, *H. hectus*, *A. velleda*, *C. plantaginis*, *T. derasâ*, and *T. batis*.

At that charming time, when

“ the twilight shadows grow,  
 And steal the rose-bloom genial summer sheds,”

many species start out from their hiding places, and remain on the wing for a short time only. Then is the “witching time” to catch them ; and in some favoured places local species appear in swarms at such times.

At night, when  
 “ The dark, delightful woods lie veiled and still,”

many fragrant flowers become extra fragrant, and additionally attractive to moths. The following are more especially of this character :—Wallflowers, lime blossoms, the butterfly orchis, the fragrant orchis (occurring on chalky heaths) the musk mallow, and the yellow bedstraw. The lure of “sugar,” too, at this time may be used with advantage, especially where there are few flowers ; or the flowers themselves may be sugared, more particularly in places where there are no trees. Large bare tracks may be thus made to yield a good harvest. If pieces of white paper are placed near the trees, &c., when they are sugared, they may be readily seen and identified in the dark in the successive visits which are paid to them in the course of the night. The French are said to use putrid soapsuds as a bait, as the sugar in France, which is made from beet, is not attractive, from having no smell. Artificial light is also a great means of capture. A bright light placed near a partially-open window is recommended.

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Many species may be found at rest on tree trunks, and palings and fences near. *S. fagi* is a prize well worth the search. It rests almost as if set out on the tree, and from the light brown of its ample, serrated wings forming a contrast to the dark trunk on which it rests, it can sometimes be discovered a good distance off. It is useless looking for it (or indeed for any other species which rest on trunks) among very young trees. The difficulty generally is in first finding a species, as the eye does not exactly know what it is looking for, and mistakes many of the stains and marks on trees and palings for insects; but having once seen the desiderated species, the eye, thus educated, will ever afterwards quickly detect it. The number of markings on trees and wooden fences which resemble moths is surprising; but when we know the species we are looking for, and the exact appearance they present when spread out flat, as they generally are, little difficulty is felt in rapidly making a thorough examination of a large number of trees. After having looked at a tree or fence, and found nothing, it is desirable to give it a parting tap with a stick; like the magic wand of a harlequin it will sometimes bring forth something we little expected.

- P. Machaon ...fens, and marshes  
P. cratægi, e. ...near woods, &c.  
" brassicæ ...gardens, &c.  
" rapæ .....gardens, &c.  
" napi .....gardens, &c.  
A. cardamines...fields, &c.  
C. Edusa .....lucerne, and clover fields, and railway banks; fond of fl.  
A. Paphia, e. ...woods  
" Aglaia, e. ...hillsides, coast sand-hills, &c.  
" Niobe, ♂ b....hillsides, in company with Aglaia, or Adippe. Has occurred in Kent, the New Forest, and near Windermere  
" Adippe, e. ...woods  
" Euphrosyne, b. woods, &c.  
" Selene .....woods, &c.  
M. Artemis .....wet meadows  
" Cinxia .....  
" Athalia .....woods, and heaths  
V. c.-album, e. gardens, hopgrounds, &c.  
" urticæ, e.....gardens, fields, &c.  
L. sibylla, e. .. woods, parks, forests  
E. epiphron .....in marshy hollows, on mountain sides  
S. Ianira, e.....fields, &c.  
" hyperanthus woods, &c.  
C. Davus .....Northern moors  
" Pamphilus ...fields, &c.  
T. w-album, e. flies over trees, and is attracted by fl. of bramble, lime trees, grass, &c.  
" pruni ..... woods, at fl. of privet, &c.  
P. Phlæas.....fields, lanes, coast sand-hills, &c.; at fl.; rests on sorrel, &c., at night  
L. Artaxerxes (var.) at St. Arthur's seat, &c.  
" agestis .....hilly fields, &c.  
" Alexis .....fields, hills, &c.; rests on grass stalks, &c., in dull weather, and at night  
" Alsus .....hilly fields, railway banks, coast sand-hills, &c.  
" Arion .....dry, hilly fields, where thyme abounds, and deserted stone quarries, in hilly districts; rests on grass stems, &c., in dull weather, and at night  
N. Lucina, b. ...woods, and banks near, where primrose abounds  
H. sylvanus .....woods, hills, &c.  
" Paniscus, e....woods  
S. ocellatus ... }  
" populi ..... } on trees, palings,  
" tilix ..... } &c., come to l.  
" ligustri ..... }  
D. euphorbiæ ...has occurred on the coast, and at Killing, Ireland, among Euphorbia

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- C. porcellus .....may be found on patches of *Galium verum*, or on the ground, near; hovers over fl. at early dusk, and comes to sugar
- " elpenor .....at honeysuckle, yellow flag, and other fl., and at light
- " nerii .....
- M. fuciformis, b. flies in the sunshine, and hovers over fl., from 9 till 11 a.m., and 3 to 4 p.m.
- " bombylifomis flies in the sunshine, and hovers over fl., seldom after 1 or 2 p.m.
- S. myopæformis on old apple, and pear trees, and fl., bushes, and palings near
- " culiciformis...on birch
- " formicæformis, b. in, and near withy beds; flies in the sunshine; fond of sunning itself on leaves
- " chrysidiformis, e. on the S.E. coast; flies from about 9 to 11 a.m., and 3 to 4 p.m.; "booms along like a burnet"
- " ichneumoniformis by sweeping the fl. of rushes, &c., on slopes on the coast; hovers over fl.
- " cynipiformis...at rest, on oak; s. in coppices
- " muscæformis on the coast, among sea pink
- " tipuliformis.....among currant bushes; flies in the sunshine, and rests on the leaves
- " scolixformis...
- " sphegiformis, b. at rest, on alder, and low plants; hovers over fl.; also flies in the evening
- " asiliformis ...
- " apiformis.....on poplars; liable to be mistaken for a hornet
- M. arundinis...among reeds; emerges from the pupa generally at about 10 p.m.
- Z. æsculi .....on trees, &c.
- C. ligniperda ...on trees, and palings
- H. hectus .....flies at dusk
- H. lupulinus.....flies just before dusk
- " velleda.....on walls, and in crevices of birch trunks
- " humuli.....in fields, &c.
- L. asellus, e. ...
- " testudo.....may be shaken from young oaks; the ♂ flies in the sunshine
- P. stacies, b. ...in damp meadows
- " geryon .....on grassy hill-sides; flies in the sunshine
- " globulariæ, m. in grassy places; very local; generally appears on the 14th, or 15th
- Z. minos .....flies in the sunshine, during the early part of the day; afterwards rests on fl.
- " nubigena .....flies in the sunshine
- " trifolii .....flies in the sunshine
- " melliloti, e. ...smaller, slenderer, and less densely clothed than trifolii, and the marginal border of the hind wing narrower
- " loniceræ .....flies in the sunshine
- " filipendulæ ...flies in the sunshine
- S. phegea .....on old ramparts
- N. ancilla .....
- N. cucullatella...at rest, on trees, and palings
- " confusalis.....at rest, on trees, &c.
- " strigula.....
- S. irrorella .....on the coast
- L. mesomella ...on trees, &c.
- " aureola, b. ...rests on larch trunks, high up, and may be beaten from trees
- " deplana .....beaten from yew, larch, &c.
- " lurideola .....at fl.
- " griseola .....comes to fl.
- " stramineola (var.) by damp wood-sides, ditches, and fens
- " rubricollis ...flies in the sunshine, over trees, &c.; s. perches on grass
- E. grammica, e. on heaths
- D. pulchella.....has been taken in fields, flying by day
- E. jacobææ, e. ...gardens, fields, &c.; flies in the sunshine

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- C. dominula.....at rest  
 E. russula.....on heaths  
 C. plantaginis...on hills, and in woods near  
 " villica, e. ....comes to l.  
 A. fuliginosa.....  
 " mendica, b. ....at rest  
 " lubricepeda...gardens, &c.  
 " menthrasti...gardens, &c.  
 " urticæ.....in wet places  
 L. dispar.....formerly found at large, but now the breed seems to be entirely maintained artificially  
 O. pudibunda...in gardens, &c.; flies about 11 p.m.  
 " fascelina.....on heaths, &c.  
 " cœnosa.....fens, and marshes  
 " gonostigma...local  
 D. coryli.....beech woods, &c.  
 B. rubi.....heaths, &c.; s. flies in the afternoon sunshine, and in the evening  
 " roboris, e. ...flies at dusk; more frequently met with in the larva state  
 L. quercifolia...hedges, &c.  
 E. vespertaria...flies from 7, to 9, or 10 a.m.  
 " advenaria...among bilberry, and grass, in wood ridings; hides low down in the herbage, but is easily disturbed  
 R. cratægata...hedges, &c.  
 V. maculata.....woods; flies by day  
 A. prunaria, m. woods; flies in the sunshine, also at dusk  
 M. margaritata...hedges, &c.  
 E. fasciaria, e. ...beaten from fir trees; flies at night  
 E. dolobraria, b. woods; rests exposed on leaves of bushes, &c., and may be beaten from oak  
 P. syringaria...gardens, &c.; flies at dusk, over fl.  
 S. lunaria, b. ...woods  
 A. betularia.....at rest  
 H. abruptaria, b. gardens, &c.; at rest, on palings, tree trunks, &c.; comes to l.  
 C. viduaria.....  
 " lichenaria, e. on lichen-covered oak trunks  
 B. repandata...gardens, &c.; comes to sugar; rests on tree trunks  
 " rhomboidaria gardens, &c.; on palings, and trees  
 " perfumaria...  
 " cinctaria.....on tree trunks  
 " roboraria.....on oak trunks  
 " consortaria...on tree trunks  
 T. extersaria...at sugar  
 " punctulata, b.  
 B. fuliginaria  
 P. cytisaria.....heaths, forests, and waste places, on the coast; beaten from broom, furze, and heath  
 G. papilionaria, e. woods, forests, fens; flies at dusk; may be beaten from trees, in the day time; has been found among brake fern  
 N. viridata, b. ....mosses, and fens  
 I. lactearia.....woods; flies by day; soon fades  
 P. baiularia.....flies at dusk, 10 or 12 feet high; the ♀ attracts the ♂  
 H. thymiaria...beaten, from hedges  
 E. porata, b. ...woods  
 " punctaria.....woods  
 " trilineararia...flies in the sunshine, among beech  
 " omicronaria...beaten, from maple  
 " orbicularia...beaten, from birch  
 " pendularia...woods; beaten, from trees  
 H. auroraria.....in fens, &c.  
 A. luteata.....woods  
 " candidata...woods  
 " sylvata.....woods  
 " Blomeraria...on wooded hill-sides, near wytch elms; at rest, on tree trunks; soon disturbed  
 E. heparata.....among alder  
 V. cambriaria, e. at rest, on rocks  
 A. ochrata.....on the Kent, and Essex coasts  
 " perochraria...near Redhill  
 " rubricata.....heaths, and coast sand-hills; flies at dusk

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- A. scutulata .....hedges, &c.  
 " bisetata .....hedges, &c.  
 " trigeminata ...  
 " contiguaria ...Conway, Bangor, &c.  
 " herbariata ...has been found in  
 herbalists' shops  
 " osseata .....Portland, among  
 various plants. The Isle of  
 Portland is an excellent locality  
 for the Acidalia  
 " dilutaria, e....  
 " interjectaria...Bristol, & Thetford  
 " incanaria .....on palings, &c., near  
 gardens  
 " circellata ...near Manchester  
 " ornata ...on grassy hill-sides,  
 &c.  
 " promutata ...woods  
 " straminata ...  
 " subsericeata beaten, from wild  
 rose  
 " strigaria (?) ...bushes, on hills  
 " immutata.. ...fens, &c.  
 " remutata .....woods  
 " fumata .....heaths, in the North  
 " emutaria .....salt marshes of Kent,  
 Norfolk, and New Forest.  
 Flies at dusk. The Sheerness  
 specimens are more tinged with  
 rose colour than the others  
 " aversata .....woods, &c.  
 " inornata, e....found on fir trunks.  
 Flies at dusk  
 " degeneraria...at rest, on various  
 plants, and the face of the rock  
 at Portland  
 " emarginata, e.  
 T. amataria .....lanes, and fields  
 C. pusaria ... } woods  
 " exanthemaria }  
 C. temerata .....woods, &c.; near  
 wild cherry and buckthorn  
 " taminata .....woods  
 M. alternata, b. woods  
 " notata .....woods; on birch  
 trunks  
 " liturata.....beaten, from larch  
 S. clathrata .....clover, and saintfoin  
 fields, &c.  
 P. petraría .....
- N. pulveraria ...  
 S. belgiaria .....on heaths  
 F. atomaria ..... fields, woods, heaths,  
 fens  
 " piniaria .....flies in the sunshine,  
 round fir trees  
 " pinetaria .....Scotch heaths; flies  
 in the sunshine  
 " conspicuata...on broom  
 M. euphorbiata woods  
 S. dealbata .....flies in the sunshine  
 L. purpuraria ...on dry hills, in the  
 North; flies by day  
 A. grossulariata gardens, and hedges  
 " ulmata.....edges of woods  
 L. adustata .... among spindle  
 L. marginata ...woods  
 L. didymata. ....  
 " cæsiata.....Scotland. Comes to  
 sugar  
 " salicata, b. ...  
 " olivata ..... woods  
 " pectinaria ...in hedges; comes to  
 sugar  
 E. affinitata .....beaten, from bushes,  
 near woods  
 " alchemillata...  
 " albulata .....among yellow rattle  
 " decolorata ...flies at dusk, at fl. of  
 Lychnis dioica  
 " tæniata, e. ...  
 " unifasciata ...at l., has occurred  
 at Forest Hill, West Wickham,  
 and Cheltenham  
 " ericetata .....at fl., on heaths;  
 flies by day  
 " blandiata .....  
 E. venosata .....among Silene inflata,  
 and Lychnis, and on palings  
 near  
 " consignata...in apple orchards;  
 rests on the trunks  
 " linariata .....among toadflax  
 " pulchellata ...among foxglove  
 " centaureata ...on palings, &c., and  
 among ragwort  
 " subfulvata ...at fl.  
 " subumbrata ...Cambs, Yorks  
 " plumbeolata.. at l.  
 " isogrammata



## IMAGOS]

## JUNE

- E. pygmæata ...flies in the sunshine, among long grass, and settles on low fl.  
 " satyrata .....  
 " egenata .....  
 " castigata .....on palings, &c.  
 " valerianata ...among valerian  
 " trisignata .....  
 " lariciata .....among larch  
 " virgaureata, b.  
 " albipunctata  
 " irriguata .....beaten from trees ; also at rest, on birch trunks  
 " fraxinata .....among ash  
 " indigata .....in fir woods  
 " innotata .....at Wallasy  
 " nanata .....on heaths  
 " subnotata.....often on the banks of rivers  
 " campanulata at fl., in woods, &c.  
 " absynthiata ...  
 " knautiata.....has been taken by Mr. Gregson at Bull Hill, Bolton  
 " tenuiata .....beaten, from sallows  
 " dodoneata ...flies in the early morning sunshine  
 " exiguata .....  
 " togata .....at rest, on tree trunks  
 " rectangulata at rest, on apple, and pear trees, and palings  
 " debilitata.....may be beaten from grass, on wood-paths  
 C. sparsata .....flies round sallows, in the evening  
 L. sexalata .....on tree trunks, in hedges, and by beating  
 " viretata ..... on birch, and fir trunks  
 T. variata .....among larch  
 Y. ruberata .....  
 " elutata, e. ... woods ; flies high, when disturbed  
 M. ocellata .....  
 " albicillata ...  
 M. hastata .....may be beaten, from birch, and other trees ; flies in the sunshine, generally after 2 p.m. When flying high, it may be brought within reach by throwing a clod, &c., at it, as it is very combative  
 M. procellata ...may be beaten, from clematis  
 " unangulata ...beaten, from hedge-banks  
 " montanata ...woods  
 " galiata .....beaten, from bushes  
 A. sinuata .....Cambs  
 " rubidata .....  
 C. munitata .....fond of settling on the underside of fallen trees  
 " propugnata ...woods  
 " ferrugata .....woods  
 " unidentaria ...  
 " quadrifasciaria, e. on palings, &c.  
 C. bilineata .....hedges  
 P. tersata .....among clematis  
 " lignata .....  
 " vitalbata, b....among clematis  
 S. vetulata .....among buckthorn  
 " rhamnata ...among buckthorn, and at light  
 " certata .....among barberry, and at rest on palings, &c.  
 " undulata .....woods  
 C. picata .....beaten, from bushes  
 " corylata .....woods  
 " russata .....woods  
 " silaceaata .....among willow herb  
 " prunata .....  
 " fulvata .....beaten, from bushes  
 " dotata, e.....near woods  
 E. mensuraria ...in grassy woods  
 " palumbaria ...at light  
 " lineolata .....rests on coarse grasses, on the coast  
 A. plagiata .....  
 L. griseata .....on the Norfolk coast, among Sisymbrium  
 S. obliquaria ...among broom ; does not fly till between 10, and 11 p.m.  
 T. charophyllata flies in the sunshine, in grassy places, near woods  
 P. lacertula .....beaten from birch  
 " sicula, b. ....  
 " hamula.....flies in the day time, generally in the morning; beaten from oak  
 " unguicula, b. flies in the day time  
 C. spinula.....on palings, &c.

## IMAGOS]

## JUNE

- D. furcula* ..... } rest on willows,  
 " *bifida* ..... } poplars, &c.  
 " *vinula* ..... }  
*S. fagi* ..... at rest, on tree trunks,  
 and palings; generally in old  
 beech woods  
*P. bucephala* ... at rest; at light  
*G. crenata* ..... formerly at Epping,  
 and Halton, Bucks.  
*P. palpina* ..... at light  
*N. camelina* ..... at light; hides on  
 fronds of fern, and in, and on  
 trees  
 " *cucullina*, e. s.  
 " *bicolora* ..... has been taken at  
 Burnt Wood, Staffordshire  
 " *dictæa* ..... at rest, at base of  
 willows, and large poplars  
 " *dictæoides* ...  
 " *dromedarius* at light  
 " *ziczac* ..... hides in bark crevices  
 of poplar  
 " *trepida* ..... at light, and on oak  
 trunks  
 " *Dodonea* .....  
*T. derasa* .....  
 " *batis*, e. .... flies over brambles,  
 at dusk  
*C. duplaris* .....  
 " *fluctuosa* ... } do not always travel  
 " or ..... } quietly, when boxed.  
 " *ocularis*, e. } C. or is s. found at  
 } rest, on aspens  
*D. Orion*, e. .... at rest, on oak trunks  
*A. tridens* ..... } rest, on trees,  
 " *psi* ..... } palings, &c.  
 " *leporina* ..... rests on tree trunks,  
 s. high up  
 " *aceris* ..... on trunks of sycamore,  
 and palings near  
 " *megacephala* on tree trunks, and  
 palings, among poplars  
 " *strigosa* ..... Cams  
 " *alni* ..... at sugar  
 " *ligustri* ..... on ash trees  
 " *rumicis* .....  
 " *menyanthidis* heaths, &c.  
 " *myricæ* ..... at Rannoch  
*S. venosa* ..... in fens  
*L. conigera* .....
- L. turca* ..... in grassy woods  
 " *lithargyria*, e.  
 " *obsoleta* ..... in marshes  
 " *littoralis* ..... on coast sand-hills;  
 settles on tufts of *Ammophila*  
*arenaria*  
 " *pudorina* ..... marshes, and fens  
 " *comma* .....  
 " *straminea* ..... marshes, and fens  
 " *impura* .....  
 " *pallens* .....  
 " *phragmitidis* marshes, and fens  
*T. Bondii* ..... rests on stems of  
 grass, at night  
*M. flammea* ..... marshes, and fens  
*S. ulvæ* ..... marshes, &c.  
*N. despecta* ..... the *Nonagriæ* fly at  
 dusk, for about 20 minutes, after  
 which they settle on fl., and on  
 the foliage of their food-plant  
 " *concolor*, e. .... fens  
 " *Hellmanni* ..... fens  
*G. flavago* .....  
*A. putris* ..... at r. of trees  
*X. rurea* .....  
 " *lithoxylea* .....  
 " *sublustri* .....  
 " *polyodon* .....  
 " *hepatica* .....  
*D. pinastri* .....  
*N. saponaria* ... comes to l.  
*P. leucophæa* ...  
*M. anceps* ..... marshes, and fens  
 " *albicolor*, b. on the coast  
 " *furva*, e .....  
 " *brassicæ* ..... hides on walls, pa-  
 lings, &c.  
*persicariæ* ..... on palings, &c.  
*A. basilinea* .....  
 " *connexa* .....  
 " *gemina* .....  
 " *unanimis* ..... marshes, and fens  
 " *ophiogramma* marshes, &c. ; s. at  
 light  
 " *oculea* .....  
*M. strigilis* .....  
 " *fasciuncula* ... wet woods, &c. ;  
 at fl.  
 " *litorosa* ..... on the coast  
 " *furuncula* ...

## IMAGOS]

## JUNE

- M. arcuosa, e. ...flies at dusk, then settles on fl., and the foliage of its food-plant
- P. captiuncula ...at Darlington
- G. trilinea.....
- H. palustris, b. has been taken at l.
- A. caliginosa ...in moist woods
- C. Morpheus ...
- " blanda .....at fl.
- " cubicularis ...beaten from thatch ; flies in hay fields
- R. tenebrosa.....
- A. valligera, e. mostly on the coast ; at fl.
- " Puta.....
- " suffusa.....
- " segetum.....
- " exclamationis often in kitchen gardens
- " corticea, e. ...comes to l.
- " ripæ ..... under pieces of wood, &c., near the coast
- porphyrea .....among heath ; frequents the fl. at night
- " ravida, m. ...
- " pyrophila.....at fl.
- T. fimbria.....
- " Orbona..... } come to l.
- " pronuba ... }
- N. augur.....
- " plecta.....
- " c-nigrum .....comes to l.
- " triangulum ...
- " brunnea.....
- " festiva.....
- " conflua.....
- " Dahlii.....
- " rubi.....
- " baia.....
- O. Upsilon, e. ...flies over willows
- D. oo.....
- D. irregularis ...at rest, on viper's bugloss, and in crevices of bark of trees
- " carpophaga ...among *Silene inflata* ; flies at dusk, at *Silene* fl. The whole genus are attracted by fl.
- " capsophila ...
- " capsincola ...among *Lychnis*
- D. cucubali .....among *Lychnis flos-cuculi* ; flies in the sunshine
- " albimacula ...
- " conspersa.....
- " cæsia.....
- " Barrettii .....on the Hill of Howth, Ireland, and Isle of Man
- H. dysodea .....at fl. of red valerian
- " serena .....on trees, palings, &c., near kitchen gardens
- P. meticulousa ...
- E. lucipara.....
- A. herbida .....woods, &c. ; very local
- " occulta..... at rest ; early in the morning ; unquiet when boxed
- " nebulosa.....
- " tinctoria .....on trees, and palings ; unquiet when boxed
- " advena..... at fl. ; rests on stumps, and trees
- H. adusta.....
- " glauca.....
- " dentina.....
- " chenopodii ...at l.
- " atriplicis.....
- " suasa.....at sugar, on commons, &c.
- " oleracea.....
- " pisi.....
- " thalassini.....
- " contigua.....
- " genistæ.....
- " rectilinea .....at rest on stones, &c., on dull days
- C. lychnitis.....
- " asteris.....
- " gnaphalii.....
- " absynthii.....
- " chamomillæ...rests on railings, &c. ; s. hides under the top edge of a paling
- " umbratica ...at rest, on palings, and at fl.
- H. marginata ...
- " peltigera .....may be started from herbage
- " dipsacea .....flies over fl., in the sunshine
- A. melanopa ...at Rannoch ; flies in the sunshine

## IMAGOS]

## JUNE

- A. cordigera.....at Rannoch; flies in the sunshine  
 " myrtilli.....on heaths, &c.; flies in the sunshine  
 H. arbuti, b. ...fields, &c.; flies in the sunshine  
 A. sulphuralis ...wet places, among *Convolvulus arvensis*; s. on fl. of knapweed in the day time; flies quickly a little way, when disturbed  
 A. luctuosa .....flies in the sunshine, over fl., in clover fields, &c.; on the chalk and limestone  
 E. venustula.....  
 " fuscua .....s. in fir woods  
 B. argentula.....in the bogs of Killarney, and the S. W. of Ireland  
 H. unca .....marshes, and fens  
 M. ostrina..... } in sheltered spots, on  
 " parva ..... } sand-hills  
 A. urticæ .....  
 " triplasia .....  
 P. chrysitis .....among nettle  
 " festucae, s. ...in fens, sea marshes, &c., and at fl. of *Lythrum salicaria*  
 " iota .....among *Glechoma hederacea*  
 " v-aureum.....over *Lychnis* fl., &c.  
 " gamma.....flies in the sunshine  
 " ni .....  
 " interrogationis flies wildly; rests on rocks, and stumps, in dull weather  
 M. typica .....rests on walls, &c.  
 T. pastinum .....beaten, from bushes  
 O. lunaris .....  
 E. mi..... }  
 " glyphica ... } fly in the sunshine,  
 P. aenea..... } and hover over fl.  
 M. salicalis .....among long grass, and rushes, in wood-paths, and young underwood; comes to l.  
 H. proboscidalis among nettle  
 " crassalis .... on heaths, among bilberry; may be beaten out of over-hanging banks in woods; is very active in the net  
 H. albistrigalis... comes to rush fl., and s. sugar  
 R. sericealis .....in damp woods, and marshes  
 S. emortualis ...among oak  
 H. derivalis .....  
 " barbalis ....beaten, from undergrowth  
 " tarsipennalis woods, &c.  
 " grisealis .....  
 A. flexula .....beaten, from hedges, &c.  
 P. fimbrialis.....at light  
 " farinalis .....at rest, in stables, corn stores, &c.  
 " glaucinalis ...in thatch, and at light  
 A. pinguinalis ...on walls in stables, houses, granaries, &c.  
 " cuprealis, e. occurs in houses  
 C. augustalis ...  
 P. purpuralis ...flies by day, among grass, &c.  
 " ostrinalis .....flies by day  
 R. sanguinalis ...flies at dusk  
 E. octomaculalis woods, &c.  
 A. nemoralis ...  
 E. flammealis ...on sloping hills, and cliffs, near the sea, among fern; very local  
 N. ciliaris .....in fens  
 S. punctalis .....among *Iris foetidissima*  
 C. lemnales .....flies over duckweed-covered ponds, at dusk; comes to light  
 P. stratiotalis ...beaten, from water-plants; flies at dusk; comes to light  
 H. nymphæalis } may be beaten from  
 " stagnalis ... } water-plants; flies  
 " ..... } at dusk  
 A. niveus .....at rest, on twigs, &c., in weedy ponds, and rivers, close to the water's edge, or flying slowly over the surface  
 B. pandalis .....among grass, &c., in woods, particularly beech  
 " verticalis .....among nettle  
 " lancealis .....in damp woods, or lanes near  
 " fuscalis .....marshes, &c.

## IMAGOS]

## JUNE

- B. terrealis .....among golden rod  
 " urticalis .....among nettle  
 E. crocealis .....among fleabane  
 " verbascalis ... among Teucrium scorodonia  
 " sambucalis ...among elder  
 P. forficalis, e....in gardens  
 " margaritalis, e. fens, &c.  
 S. sticticalis .....at l., and fl.  
 " palealis .....among wild carrot, and Peucedanum, on the S.E. coast  
 " cinctalis ..... in clover fields; comes to l.  
 S. alpinalis .....on the tops of mountains, in Perthshire, &c.  
 " olivalis .....in hedges  
 " prunalis .....in hedges, &c.  
 L. pulveralis.....among hairy mint  
 S. hybridalis ... among grass, and clover  
 S. ambigualis ...s. at sugar, and at rest. Many of the genus may be found at rest, on walls, palings, &c.  
 " Zelleri .....beaten, out of old willows, and hawthorns  
 " dubitalis .....  
 " murana .....among heath  
 " ingratella .....  
 " mercurella ...  
 " atomalis .....among heath  
 P. cerusellus.....in grassy places, among shingle  
 C. pratellus .....s. at sugar  
 " dumetellus ...  
 " sylvellus .....in fens, &c. ; local  
 " pascuellus ...damp meadows, and moors; local  
 " uliginosellus, e. in fens, &c. ; local  
 " furcatellus ...a mountain species, in Britain, not below 2000 ft.  
 " margaritellus damp, grassy places, in open woods  
 " culmellus.....  
 " chrysonuchellus among dry grass, &c. ; local  
 " rorellus .....  
 " cassentiniellus Brighton, &c. ; considered a var. of Rorellus
- C. hortuellus ...among grass, and moss  
 C. phragmitellus marshes, and fens  
 S. forficellus.....weedy ditches, &c.  
 " mucronellus, e. fens, &c.  
 A. lotella .....on coast sand-hills; flies at dusk  
 M. cirrigerella ...some specimens were taken, for the first time, in this country in 1874, near Marlborough, Wilts. They were found to be very fond of going into lighted candles. Probably about the 20th of the month would be the best time to look for the species, as some which were taken (on the 30th) were worn  
 H. nimbella .....among Jasione montana, and thistles, and ragwort; on the coast  
 " nebulella .....among Carduus nutans, &c. ; very local  
 E. elutella..... in grocers' warehouses, &c. ; also thatch, and ivy  
 " cinerosella ...  
 " semirufa .....  
 C. bistriga .....  
 P. interpunctella in corn, seed, and grocers' warehouses, &c.  
 N. angustella ...among spindle  
 G. canella.....among Salsola  
 P. betulella .....among birch  
 " carbonariella among burnt heath, and birch  
 " adelphella ...  
 " dilutella .....in chalky places  
 " subornatella .....  
 " abietella .....may be beaten from young fir trees  
 P. palumbella ...among heath  
 R. formosella ...  
 " marmorea ...among sloe  
 " tumidella, e. among oak  
 O. ahenella .....  
 H. prasinana ...woods  
 " quercana .....woods  
 T. podana.....hedges  
 " sorbiana .....woods  
 " rosana .....gardens, woods, &c.

## IMAGOS]

## JUNE

- T. cinnamoneana Kent, Surrey, Hants  
 " heparana .....hedges  
 " ribeana.....  
 " corylana, e.... among nut, dog-wood, &c.  
 " unifasciana ...hedges  
 " semialbana ...on the chalk  
 " costana.....fens, and marshes  
 " viburnana ...boggy heaths, and moors  
 " viridana .....among oak, &c.  
 " ministrana ...woods  
 " Branderiana Essex, Cambs, Hants  
 D. Grotiana.....among oak, in woods  
 A. Gerningana...heaths, and moors, in the N.  
 P. permutana ...among Rosa spinosissima  
 " comariana ...boggy heaths, and fens  
 D. Lorquiniana fens  
 " Læfingiana... among oaks, in woods, and hedges  
 " Holmiana ...hedges  
 " Bergmanniana..... rose bushes, hedges, &c.  
 " Foskaleana ...maple, hedges, &c.  
 A. Conwayana...  
 P. Lecheana.....woods  
 D. semifasciana among willows  
 P. picana .....on birch trunks  
 " capræana .....Kent  
 " prælongana ...among birch  
 " pruniana .....  
 " ochroleucana among rose  
 " cynosbana ...  
 " dimidiana ...  
 " sauciana .....Sheffield, Leith Hill, Hazlemere  
 " Grevillana ...Scotch mountains  
 " Staintoniana Perthshire, among Arctostaphylos uva ursi  
 " gentianana ...Gravesend  
 " marginana ...damp woods, heaths, and fens  
 " carbonana (fuligana) woods, and fens  
 A. salicana .....among willow, and poplar  
 S. lariciana .....in larch woods  
 S. ocellana .....among alder  
 " dealbana .....  
 " neglectana ...among willows, and poplars  
 " simplana .....among aspen  
 " incarnatana ...on the coast  
 " suffusana .....hedges  
 " rosæcolana ...in gardens, among roses  
 " roborana .....  
 P. tripunctana ...  
 A. Udmanniana among bramble  
 S. achatana .....  
 S. latifasciana ...woods  
 " euphorbiana...among spurge  
 " littorana .....banks, on the coast  
 " abscisana.....at Folkestone, among Inula, and thistles  
 " cespitana ..... coast, and other sandy districts  
 " conchana ...meadows, & marshes  
 " Daleana .....among Vaccinium, at Rannoch, &c.  
 " micana .....marshes  
 M. Schulziana ...heaths, and mosses  
 " palustrana ...Rannoch, among heath  
 " Ratzeburgiana among spruce fir  
 " rubiginosana Scotch mountains  
 " consequana ...South coast, among Euphorbia paralias  
 R. arcuana .....among young oaks  
 E. rufana .....  
 " arbutana .....  
 O. antiquana ...corn fields  
 " striana ..... dry banks, and rough pastures  
 " ericetana .....in clover fields, and rough pastures  
 E. fractifasciana downs  
 P. rugosana .....hedges, &c., among Bryonia dioica  
 C. musculana ...hedges  
 S. nubilana .....hawthorn hedges  
 " Peterana .....dry banks  
 " subjectana ...  
 " virgaureana ...  
 " abrasana... ..  
 " hybridana ...among elm, and sloe  
 " octomaculana rough pastures

## IMAGOS]

## JUNE

- S. Colquhounana wild hills, on Scotch and Irish coast
- S. ictericana.....hay fields, and sand-hills
- C. favillaceana... in woods, among juniper
- O. rusticana .....moors, fens, mosses
- B. uliginosana ...in fens
- " lanceolana ...among rushes
- " furfurana ..... Lancashire coast, Scotland, &c.
- P. siculana .....Yorks
- " unguicana ...heaths
- " uncana.....on heaths, and in Southern woods
- " biarcuana ...among sallows
- " inornatana ...(subarcuana) in fens; local
- " paludana .....fens
- " comptana.....chalk downs, &c.
- " myrtiliana ..moors, among Vaccinium
- " derasana .....Southern woods
- " diminutana ...
- " Mitterpacheriana oak woods
- " upupana .....Southern woods
- " lætana .....Southern woods, among aspen
- G. nigromaculana among ragwort
- " campoliliana among sallow
- " Penkleriana...among nut, & alder
- " obtusana .....
- " geminana.....moors, among Vaccinium
- P. tetraquetana woods
- " Demarniana Southern woods
- H. cruciana .....among sallow
- P. bilunana .....
- " oppressana ...on poplar trunks; London district, and Norfolk
- " corticana .....
- " profundana ...
- " sordidana, e.
- E. bimaculana ...
- " cirsiiana .....
- " Pfulgiana.....
- " Brunnichiana
- " turbidana.....
- " foenana.....on the coast, and in fens, among *Artemisia vulgaris*
- E. nigrocostana in lanes, among Stachys
- " signatana.....
- " grandævana, e. S. Shields, among coltsfoot, on ballast heaps; flies at dusk, and rests on the leaves
- " gallicolana ...Darenth
- " trigeminana...fields, & dry banks, among ragwort
- " obscurana ...Darenth
- O. ulmana .....
- S. spiniana .....hawthorn hedges
- " rufillana .. ...among wild carrot
- " Wœberana ...gardens, among plum trees
- C. cosmophorana on fir shoots
- " strobilana ...woods, among spruce
- " splendidulana on oak trunks
- " argyran .....oak trunks
- " nemorivagana...moors, Rannoch, Scotch mountains
- " Hercyniana...among spruce
- " distinctana ... Westmoreland, Cumberland, Norfolk
- " ustomaculana
- " ravulana .....
- " vacciniana ...
- " nanana .....
- R. Buoliana .....among Scotch fir
- " turionana, b.
- " pinivorana ...
- " resinana .....Perthshire
- " duplana .....Perthshire
- " sylvestrana ...Bournemouth, Kent
- C. grossana .....among beech
- " pomonana ...among apple trees, and bred from bought apples, and pears
- O. funebrana ...bred from bought plums
- E. nigricana.....among peas
- " pisana ..... among peas, and vetches
- S. dorsana .....railway banks
- " leguminana...among fir, & alder?
- " coniferana ...among Scotch fir
- " perlepidana, b. among grass, and low bushes
- " composana ...among clover, and trefoils

## IMAGOS]

## JUNE

- S. Weirana .....among beech  
 " nitidana .....  
 " Trauniana ...among maple  
 " Germarana ...woods, in the South  
 D. politana .....  
 " sequana .....dry fields, and rail-  
 way banks  
 " Petiverana ...among yarrow  
 " plumbana ...  
 " plumbagana  
 " acuminatana railway banks  
 " herbosana ...N. of England, and  
 Scotland  
 " simpliciana ... among Artemisia  
 vulgaris  
 P. Rheediana ...in hawthorn  
 hedges  
 C. albersana.....woods  
 " ulicetana .....among furze  
 " nimbana .....among beech  
 " Juliana.....among oak  
 " microgrammana among rest harrow  
 " hypericana ...among Hypericum  
 cana .....among thistles  
 " fulvana..... chalky districts,  
 among Centaurea scabiosa  
 " Hohenwarthiana among thistles  
 " scopoliana ... among Centaurea  
 nigra  
 " expallidana ...dry banks  
 " conterminana  
 T. medianâ .....near London, Folke-  
 stone, Fulborne  
 S. vibrana.....  
 L. Servillana ...woods, in the S.  
 E. nana.....among birch  
 " maculosana ...woods, in the S.  
 " sodaliana .....among Rhamnus  
 catharticus  
 " hybridellana Witherslack  
 " manniana.....  
 " curvistrigana woods, in the S.,  
 among ragwort?  
 " udana .....marshes, &c.  
 " notulana .....fens, and marshes  
 " rupicolana ...marshes  
 " subroseana .. woods, in the S.  
 " implicitana ...woods, in the S.  
 " ciliana .....  
 " pallidana .....cliffs  
 X. Zoegana .....  
 " hamana .....among thistles  
 C. bifasciana ...woods, in the S.  
 A. Beaumanniana ...in wet, rushy  
 places  
 " zephyrana ...S. coast  
 " Schreibersiana in fens  
 " badiana .....railway banks, &c.;  
 among burdock  
 " cnicana .....among thistles  
 " maniana .....  
 " æniana.....  
 " Mussehliana Devonshire  
 maritimana, b. on the coast  
 C. Francillonana on the coast  
 " dilucidana ...  
 " Smeathmanniana  
 " stramineana...chalky places  
 " alternana .....Folkestone  
 T. pubicornella Howth, and Grass-  
 ington, Yorks  
 " pseudo-bombycella oak woods  
 P. villosella .....New Forest  
 " opacella .....New Forest, Wither-  
 slack, Rannoch  
 " calvella .....  
 " salicolella.....  
 " betulina ..... [heaths  
 " pullella..... among grass, on  
 " intermediella Black Park, Virginia  
 Water  
 " roboricolella  
 " crassiorella ...Hampstead, High-  
 gate  
 " reticella .....Sheerness, and near  
 Gravesend. The ♀ when alive  
 is banded with yellow like a  
 larva of E. jacobææ, but turns  
 nearly black soon after death  
 P. Verhuellella  
 D. marginepunctella  
 X. melanella ...  
 S. carpinetella ...among fir  
 " arcuatella.....Cheshire, Rannoch  
 " granella .....about granaries, and  
 flour mills  
 " cloacella .....  
 " cochylidella...  
 T. fulvimitrella Walsingham, Lan-  
 cashire, Rannoch



## IMAGOS]

## JUNE

- T. tapetzella ...common in houses, &c., where its larva feeds on hair stuffing, carpets, fur, &c.
- " albipunctella
- " misella .....in outhouses
- " pelliionella ...common in houses, its larva feeding on cloth, fur, &c.
- " fuscipunctella
- " ganomella ...woods, and hedges
- " merdella .....Darlington, Liverpool, Manchester
- " biseliella .....in houses, and museums, its larva feeding on hair, fur, and feathers
- " semifulvella...
- " perochraceella Rannoch
- L. quadripunctella among roses
- " luzella ..... berry]
- " prælatella ...among wild straw-
- " rubiella .....in gardens
- I. tenuicornella Witherslack, Manchester, West Wickham
- " Oehlmanniella
- " canariella.....Isle of Man
- M. calthella .....
- " aruncella .....dry banks
- " seppella .....on fl. of Veronica chamædrys, on dry banks
- " mansuetella...
- " Allionella ...among Vaccinium
- " Thunbergella ...
- " subpurpurella among oak
- N. Swammerdamella on trees, among heath
- " Schwarzziella, b. in hedges, &c.
- " pilella ..... Yorks, Scotland, Lake District
- " Metaxella ....among alder, in fens, &c.
- A. fibulella .....in Veronica fl.
- " rufinitrella.....in wet meadows, and bogs
- " sulzella.....
- " Degeerella ....in, and near woods
- " viridella .....in hedges, and among oak
- N. scabiosellus...among Scabiosa arvensis, and S. columbaria; very local
- N. cupriacella ...
- " Schiffermillerella Southend, Darenth
- " minimella ...Witherslack, Scotland, Mickleham
- S. comptella.....among sloe
- " cæsiella... ....among sloe
- " griseocapitella among birch
- S. lutarella.....
- A. funerella .....Richmond, Yorks; Cambs, Lake District
- " decemguttella Darenth
- P. Curtisella.....among ash
- E. Messingiella in swamps, and damp bottoms
- P. porrectella ...in gardens
- " annulata .....Howth, Morecomb, Castle Eden, Scotland, Portland
- E. lobella... .....among sloe
- D. assimilella ...among broom
- " conterminella
- " cnicella .....
- G. cinerella .....
- " rufescentella
- " inornata .....in fens
- " malvella .....in gardens, about hollyhocks
- " populella .....
- " nigra.....
- " lentiginosella
- " fumata ..... New Brighton, Birkenhead, Dawlish
- " ericetella ... moors, and heaths
- " mulinella.....among furze
- " divisella .....
- " soroculella ...among sallow
- " peliella..... Manchester, West Wickham
- " longicornis ....in bare, burnt places
- " diffinella ..... sand-hills on the coast
- " terrella.....
- " desertella.....
- " expolitella ... Darlington, Skid-daw, Pentlands, &c.
- " acuminatella
- " artemisiella ... coast sand-hills, Manchester, &c.
- " viscariella ...
- " arundinetella Hackney, Cambs

## IMAGOS]

## JUNE

- G. mundella .....coast sands  
 " umbrosella ....coast sands  
 " affinella .....  
 " boreella .....Scotland  
 " basaltinella ...Cambs, Addington  
 " domesticella  
 " proximella ...among birch, and  
 alder ; on moors  
 " notatella .....  
 " vulgella .....hedges, &c.  
 " luculella .....among oak  
 " scriptella .....  
 " fugitivella ...on trunks of elm,  
 and beech  
 " æthiopella ...on moss  
 " distinctella ...on the coast, and in  
 sandy places  
 " tricolorella ... among Stellaria  
 holostea  
 " muscosella ...  
 " fraternella ... among Cerastium  
 arvense  
 " leucomelanella  
 " marmorella ...coast sand-hills  
 " obsoletella ...Darlington, Redcar,  
 S. Shields, Portland  
 " ocellatella ...  
 " atriplicella ...among Atriplex, and  
 Chenopodium  
 " sequacella ...  
 " aleella .....West Wickham  
 " leucatella .....  
 " Mouffetella ...among honeysuckle  
 " dodecella .....  
 " triparella .....  
 " tenebrella ...  
 " ligulella .....among Lotus major,  
 on railway banks, &c.  
 " vorticella .....railway banks, &c.  
 " sircomella ...railway banks, &c.  
 " nigritella .....  
 " coronillella ...Mickleham  
 " anthyllidella railway banks, and  
 coast sand-hills  
 " bifractella ...Folkestone, Mickle-  
 ham  
 " oblitella .....in fens  
 " confinis .....on old walls  
 " cerealella .....in granaries  
 " nigricostella ..in fens
- G. næviferella ... among Chenopo-  
 dium  
 " subdecurtella... among Lythrum  
 salicaria, in fens  
 " inopella .....  
 " subocellella ...  
 " Strelitzella ...  
 " intaminatella railway banks  
 " Tarquinella...  
 " sangiella .....railway banks  
 " lathyrella ..... among Lathyrus  
 palustris ; in fens, &c.  
 P. lappella .....  
 " Metzneriella  
 " carlinella .....  
 S. parenthesesella  
 " humerella ...  
 P. bicostella .....moors, &c.  
 H. Geoffroyella  
 " bracteella.....near Gateshead  
 H. Christiernella, e. Castle Eden,  
 Darent, Greenhithe, Seven-  
 oaks  
 D. sulphurella ...  
 " oliviella .....Darent, Tenterden,  
 Lewes, &c.  
 Cæ. minutella ...in hay lofts  
 " flavimaculella among Angelica  
 sylvestris  
 " trisignella ...  
 " stipella..... Preston, Staley-  
 bridge, Lake District, Yorks,  
 Rannoch, &c.  
 " augustella ...Hyde Park, Bristol  
 " Woodiella ...formerly on Kersall  
 Moor, near Manchester  
 " grandella .....  
 " lambdella.....Charlton, Bristol  
 " subaquilella ...Scarboro', S. Shields,  
 Lake District, &c.  
 " tinctella .....Gravesend, Darent,  
 W. Wickham, &c.  
 " subochreella Cambs, Lewes, &c.  
 " flavifrontella Witherslack, Cambs,  
 &c.  
 B. grandipennella among furze  
 " fusco-æneella  
 " variella.....in sand-pits  
 " chenepodiella Yorks, &c.  
 " torquatella ...Scotland

## IMAGOS]

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- P. Lewenokella  
 " latreillella ...  
 A. perlepidella...Darenth, Bristol, &c.  
 R. Erxlebenella among lime under-wood  
 G. fuscoviridella  
 " Thrasonella...among rushes  
 " cladiella ..... among rushes, in fens, &c.  
 " equitella .....among Sedum acre  
 " oculatella.....Tenterden, &c.  
 E. dentella .....  
 T. stanneella ...among oak  
 " resplendella...  
 A. ephippella ...local  
 " nitidella .. ...among hawthorn  
 " albistriella ...  
 " conjugella ...among wild mountain ash  
 " ærariella ..... possibly a var. of A. conjugella  
 " mendicella ...among sloe  
 " glaucinella ...among oak  
 " retinella .....among birch  
 " abdominella, e.  
 " dilectella .....among juniper  
 " curvella .....among wild apple  
 " sorbiella .....  
 " pygmæella ...among willow  
 " Gœdartella ... among alder, and birch  
 " literella.....var. of Gœdartella, at Darenth  
 " Brochella..... among birch, and alder  
 " arceuthinella among fir, & juniper  
 C. farinatella ...among Scotch fir  
 G. alchimiella ...  
 " elongella .....among alder, & yew  
 " syringella..... in gardens, among lilac  
 " onioniella .....Kent  
 " auroguttella... among Hypericum quadrangulum  
 " Hoffmanniella  
 O. avellanella ...among nut  
 " betulævorella among birch  
 " scutulatella ...  
 " torquilella ...among sloe  
 " Scoticella.....
- O. Loganella ...  
 " guttella .....among apple  
 C. Fabriciella ...on railway banks  
 " paripennella  
 " Wockeella, e.  
 " lixella, e. ....  
 " conspicuella...  
 " pyrphulipennella  
 " albicostella ...among furze  
 " vulnerariella  
 " anatiennella  
 " palliatella.....  
 " ibipennella, e.  
 " currucipennella among willow  
 " niveicostella, e.  
 " discordella ...among Lotus major  
 " genistæcolella, e. among Genista anglica  
 " therinella.....among thistles; very local  
 " troglodytella  
 " lineolella .....on Ballota nigra  
 " murinipennella  
 " cæspititiella...among rushes  
 " salinella ..... Yorks, and near Brighton  
 " laricella, e. ...among larch  
 " albitarsella ...among ground ivy  
 " fuscocuprella among nut  
 " nigricella .....among hawthorn  
 " orbitella .....  
 " gryphipennella among rose  
 " siccifoliella ...  
 " vitisella ..... Staleybridge, and moors near Manchester  
 " viminetella ...among willow  
 " olivaceella ...Chesterfield  
 " solitariella ... among Stellaria holostea  
 " lutipennella...among oak  
 " badiipennella among hawthorn  
 " limosipennella  
 " chalcogrammella among Cerastium arvense  
 " Wilkinsonella  
 C. Lienigiella ...in fens, among reed  
 B. pinicolella ...among Scotch fir  
 L. paludicolella among willow herb  
 " lacteella ..... Yorks, Lake District, Bristol

## IMAGOS]

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- L. miscella, b. ...  
 " conturbatella among willow herb  
 " Raschkiella ...  
 " ochraceella, e.  
 " subbistrigella  
 " atrella .....among hawthorn  
 C. bimaculella, e. Black Park, and  
 Leith Hill  
 " Schrankella...  
 " flavicapitella among hawthorn  
 A. æratella .....  
 " terminella ...  
 C. festaliella.....  
 A. Treitschkiella about dogwood  
 S. Brunnichella in chalk pits, among  
 Clinopodium vulgare  
 E. Gleichenella most of the genus  
 are found among grass, sedges,  
 and rushes  
 " apicipunctella  
 " albifrontella...  
 " Holdenella ...  
 " atricomella ...  
 " luticomella ...  
 " kilmunella ...  
 " cinereopunctella  
 " trapeziella ...  
 " stabilella .....  
 " Gregsonella...  
 " nigrella .....  
 " perplexella ...  
 " humiliella ...  
 " subobscurella  
 " zonariella.....  
 " gangabella ...  
 " tæniatella.....  
 " cingilella .....  
 " obliquella... ..  
 " Megerella ...  
 " adscitella .....  
 " cerussella..... among reeds, in  
 marshes, &c.  
 " rhyncosporella  
 " eleochariella  
 " biatomella ...  
 " serricornella  
 " triatomella .. in chalk pits  
 " dispunctella ...  
 " collitella .....  
 " pollinariella...
- E. subochreella  
 " cygnipennella  
 T. complanella...among oak  
 " emyella .....among blackberry  
 " angusticolella  
 " dodonæa .....  
 L. roborella .....among oak  
 " amyotella.....  
 " quinqueguttella among dwarf  
 sallows  
 " irradiella .....  
 " insignitella ...Castle Eden, Scar-  
 boro', Windermere  
 " lautella .....among oak  
 " vacciniella ...  
 " cavella .....  
 " pomifioliella... among hawthorn,  
 and apple  
 " corylella .....among nut  
 " spinicolella ...among sloe  
 " faginella .....among beech  
 " carpinicolella among hornbeam;  
 local  
 " ulmifioliella ...among birch, &c.  
 " spinolella.....among sallows  
 " quercifioliella among oak  
 " viminiella ...among willow  
 " scopariella .. among broom  
 " ulicolella, e. among furze  
 " Heegeriella...among oak  
 " tenella ..... Epping, Winder-  
 mere, Wanstead  
 " sylvella.....among maple  
 " emberizæpennella  
 " Frolichella ...among alder  
 " Dunningiella ..... Yorks, Lake  
 District, &c.  
 " Nicelliella ...among nut  
 " Stettinella ...among alder  
 " Klemannella  
 " tristrigella ...among elm  
 L. Clerckella ...  
 P. salignella, e.  
 C. spartifoliella among broom  
 " laburnella ..among laburnum  
 " scitella .....  
 " Wailesella ...among Genista  
 " lotella .....among Lotus major  
 O. salaciella.....among sorrel  
 " auritella .....in fens

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- O. crepusculella  
 B. aurimaculella among chrysanthemum leucanthemum  
 " cidariella .....among alder  
 " ulmella.....among oak  
 " cratægifoliella about hawthorn hedges  
 " demaryella ...Scarboro'  
 " Boyerella..... among elm  
 " frangulella ...among buckthorn  
 " hippocastanella  
 " cristatella .....among yarrow  
 " artemisiella ...at Folkestone  
 N. atricapitella among oak  
 " anomalella ...  
 " perpygmæella  
 " pomella .....  
 " oxyacanthella  
 " viscerella .....  
 " catharticella  
 " septembrella among Hypericum  
 " cryptella .....  
 " Weaverella ...  
 " intimella .....  
 " Headleyella Mickleham, Scarboro'  
 " subbimaculella among oak  
 " apicella ..... on moors  
 " argyropezella  
 " quinquella ...
- N. sericopezella  
 " argentipedella  
 " angulifasciella  
 " arcuosella ...  
 " alnetella .....among alder  
 " continuella ...  
 " regiella.....  
 " sorbiella .....  
 " tiliæella .....  
 T. pulverosella.. among wild apple  
 P. Bertrami, e. among yarrow  
 " ochrodactylus among tansy  
 " trigonodactylus comes to l.  
 " Zetterstedtii...  
 " acanthodactylus  
 " baliodactylus  
 " aridius .....  
 " parvidactylus  
 " serotinus .....  
 " plagiodactylus among Scabiosa columbaria  
 " Hodgkinsonii, b.  
 " microdactylus among Eupatorium cannabinum  
 " paladum .....in fens  
 " tetradactylus  
 " pentadactylus  
 A. polydactyla, from Aug.

# JULY

## OVA]

Now that the heat of summer is really making itself felt, a slumbrous calm seems to hang over the landscape, "half drowned in sleepy peace,"

"As satiate with the boundless play  
Of sunshine on its green array."

And the Collector, yielding to the soothing influences around him, may perhaps be seen

"beneath an ancient shade,  
Or on the matted grass supinely laid."

But he should remember that he must work, often very hard, to obtain what he may be specially in search of, and that very few, if any, prizes will come to his hand unless they are thoughtfully sought for.

This may be a convenient time to note that the pursuit of Entomology is liable to be attended with some inconvenience, and, it may be, risk, which, however, may be minimized by a little pre-consideration. Marshes, and other disagreeable places, although "farthest from them is best," have occasionally to be visited, and the Collector would do well to be as expeditious as possible over his work in these localities, and he should be careful to keep as much as possible to the "windward" of the rotten carcasses, and worst spots he may think it desirable to explore, for the treasures to be found at them. When heated, he should be especially careful how he allows himself to "cool down," and not be tempted to sit, or lie down in damp or miasmatic places, because the shade may be grateful, as cold, fever, rheumatism, or worse, may result. In very hot weather drink of any kind should not be too freely indulged in, as its tendency is to unduly promote perspiration. If the journey on foot is a long one, or the time out in the blazing sun is prolonged, an occasional small "drink" of some acidulated preparation, in which is a "touch" of brandy or whiskey, with the partaking of solid food at short intervals, will prevent that exhaustion which sometimes culminates in sunstroke. Completeness of pre-arrangement in these cases, generally means efficiency of work, besides the absence of bad after-results. Midges, flies, &c., are often a source of annoyance on a hot day, particularly if the Collector is corpulent, and perspires freely. Stings may, however, be generally avoided by anointing the face, head, and hands with fluid camphor, or some other strong-smelling insect bane. Washing the head, &c., just before starting in a strong solution of borax, or of alum, both said to be particularly distasteful to insects, might be tried with advantage. Alcoholic emanations are great attractions to most insects, and therefore teetotallers are least liable to annoyance from this source. The Author remembers once collecting with a young wine and spirit merchant, who had hastily left his cellar for "a day out," and the attention which was paid him by hundreds of flying "cusses" was, to use another Americanism, "a caution." Adders may be often met with, but they never bite unless attacked, or accidentally trodden upon, and they are generally too

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much on the alert to be thus caught napping. They are much more alarmed at the presence of man than he ought to be of them, though a suddenly disturbed female will sometimes face him, and hold herself ready for attack, when she is burdened with a troop of young ones, clinging round her. High boots, or leggings, are a good protection against any such risk. Good lace-up boots are much to be preferred, for tramping about, to the effeminate, though it may be convenient, "elastics." It might be desirable to be provided with a small bottle of liquid ammonia, in case either of a bite, or a severe insect sting. Prompt application is essential to success. There is yet another risk sometimes incurred by the ardent Entomologist: a bull, or a cow may give chase, and, with dreadful declension of horns, threaten a most unwelcome "heave offering" over the hedge. Such an attack should be promptly met by the sudden opening of an umbrella in the face of your enemy, or the flinging about of your net, with a "jobbing" of the ferrule at his or her nose—a most sensitive part, and conqueringly seized upon by dogs at bull-fights. If these movements be accompanied by an unearthly noise, on your part, the chances of your tormentor's rapid retreat are increased.

- C. Edusa, s..... on white clover, lucerne, &c.
- A. Paphia, e. ....on dog, and sweet violet, and dead leaves, and moss near; in woods; whitish
- M. Athalia .....on Plantago lanceolata, and P. major; also foxglove, germander, and Teucrium scorodonia
- V. urticæ ..... on nettle; in batches, on underside of leaf; barrel-shaped, fluted, green
- L. sibylla .....on honeysuckle
- A. Iris .....on sallow; on upper-side of leaves
- A. Galatea .....among timothy, and other grass; laid loosely; globular, cream-coloured
- S. Semele .....on quaking grass, &c.
- " Ianira .....on meadow grasses; slightly oblong, imbricated
- " Tithonus .....on blades of grass; truncato-conical; at first canary yellow, changing to brown
- " hyperanthus...on annual meadow, millet, couch, and other grasses; singly
- T. quercus .....to April, on oak twigs, high up
- " w-album ..... to April, on wytch elm, also elm; on the twigs; whitish
- T. pruni .....to March, on sloe twigs
- L. Ægon, e.....to March, on Ornithopus perpusillus; white
- H. sylvanus .....on grasses; a little within the sheath; white, laid in a line
- " line..... to March, on grasses
- S. bembeciformis on poplar, willow; upon the bark; oblong, dark brown
- M. arundinis ...on stems of common reed; singly
- Z. æsculi .....on elm, pear, and other trees; in masses, in the chinks of the bark
- C. ligniperda ...in the chinks of the bark, of various trees, especially ash, willow, and elm
- H. sylvinus, e....among sorrel, and dock; laid while the moth is on the wing; at first white, but soon turn black
- C. miniata, e. ....on lichens, on oaks; laid in rows; yellow
- E. cribrum .....on heath; globular, shining metallic bronze
- C. villica .....on chickweed, furze, &c.; laid in regular batches, upon the leaves; pearly, pale straw-colour

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- L. *chrysoorrhæa* on sloe, and hawthorn. The eggs of the *Liparis* are laid in batches, round the twigs, and are covered with down from the parent moth
- " *auriflua* .....on sloe, hawthorn, oak, &c.
- " *salicis* .....on willow, poplar, &c. The satiny-like batches are very peculiar
- " *dispar* .....to March, on sloe, hawthorn, and various fruit-trees
- O. *gonostigma* on oak, nut, willow, bramble
- " *antiqua*.....on the old cocoon, which has been spun on various trees, and shrubs, palings, &c.; hollowed somewhat in the form of a cup
- B. *neustria* .....to March, on hawthorn, sloe, fruit-trees; in batches round twigs, and branches
- " *castrensis*.....to March, on *Artemisia maritima*, and *Daucus maritimus*
- O. *potatoria*.....on blades of coarse grass; white, with two rings of green
- E. *vespertina* ...to April, on nut
- B. *repandata* ... on birch, plum, bramble, &c. The eggs of the tree-feeding species of this genus are deposited in the chinks of the bark
- " *rhomboidaria* ...on ivy, birch, oak, plum, lilac, rose, elder, &c.
- " *perfumaria* ...on ivy, lilac, clematis, &c.
- " *abietaria* .....on larch, and spruce
- " *cinctaria* .....on heath. In confinement eggs have been laid, by preference, on willow catkins
- " *roboraria*.....on oak; in clusters; oblong, oval; at first dull greenish, then reddish brown
- " *consortaria* ... on oak; bright green
- G. *obscurata*.....on thyme, sun cistus, *Potentilla reptans*, *Poterium sanguisorba*
- D. *obfuscata*.....on heath, vetch, &c.
- P. *baiularia* .....on oak; large, oval, brownish
- H. *thymiaria* .. on hawthorn, oak; rather large, oblong-oval, and flattened; a peculiar shining greenish-bronze colour
- A. *Blomeraria* ...on wych elm; in small batches; somewhat brick shaped; at first pale, afterwards deep yellow, at last again pale
- A. *scutulata* .....on dandelion
- " *bisetata* .....on dandelion
- " *rusticata* .....on hawthorn
- " *holosericata* ...on sun cistus
- " *incanaria*.....on dandelion, groundsel, &c.
- " *ornata* .....on thyme and marjoram
- " *straminata* ...——? (Larva will eat knotgrass.) Rather large, oblong-square, with the corners rounded; reddish-brown; seem to be deposited loosely
- " *subsericeata*...on *Rosa spinosissima*?
- " *fumata* .....on heath
- " *strigilata* .....on clematis, and *Stachys*
- " *emutaria* .....on *Triticum repens*? Oblong, clear salmon colour
- " *aversata* .....on primrose, &c.
- " *emarginata* ...on *convulvulus*, *Gallium*, &c.
- T. *amataria* .....on dock, &c.
- F. *pinetaria* .....to Mar., on bilberry
- " *conspicua* ...on broom
- M. *euphorbiata* on *Euphorbia cyparissias*
- A. *strigillaria* ...on heath
- L. *cæsiata*.....on whortleberry, bilberry, and heath
- E. *sobrinata* .....on juniper
- Y. *elutata* .....on nut, willow, alder, bilberry, &c.
- M. *rubiginata* ...to April, on alder; large



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- M. procellata, e. on Clematis vitalba  
 " montanata ...on primrose  
 A. rubidata, b...on Galium  
 C. fluviata.....on Polygonum persicaria; oblong flattish, yellow, afterwards changing to brown  
 P. lignata.....on Galium palustre, &c.  
 " vitalbata .....on Clematis vitalba  
 S. vetulata .. ...to Mar., on buckthorn  
 C. picata, e. ...on chickweed; singly, on the leaves and stems; large  
 " sagittata .....on Thalictrum flavum, growing in fens  
 " immanata, e. to March, probably on alder, and other trees, and strawberry, bilberry, &c.  
 " prunata .....to April, on currant, gooseberry, sloe, &c., on the bark; large  
 " populata .....to April, on bilberry, whortleberry, poplar; globular, large, yellow  
 " fulvata .....to April, on dog rose; rose pink, large  
 E. palumbaria ...on twigs of broom  
 C. imbutata .....on cranberry; rather large, oblong-oval, at first pale yellow, afterwards orange  
 T. charophyllata to Feb., on Anthriscus sylvestris, and Bunium flexuosum  
 C. curtula .....on poplars, sallow  
 N. cucullina .....on maple; after the 10th to the e. of the month; on underside of leaves, in shady places in woods; generally singly, but s. in twos, and rarely in threes; circular, smooth, white, s. opalescent  
 " dictæa .....on poplars, sallow, willow; laid sparsely, on the leaves  
 " dictæoides ...on birch  
 A. aceris .....on sycamore, horse chesnut, maple, birch, and s. oak  
 L. littoralis ..... on Ammophila arundinacea  
 " impura .....on Dactylis glomerata  
 " phragmitidis on the common reed; upon the stems  
 N. lutosa .....on the common reed; upon the stems  
 L. exigua .....on plantain  
 C. exulis .....on various species of Poa; upon the stems  
 M. persicariæ ...on Polygonum persicaria, and other low plants  
 A. gemina.....on grass culms  
 M. nigricans.....on clover, plantain,  
 " porphyrea ...on heath [ &c.  
 C. Morpheus ...on dock, teasle, &c.  
 T. Orbona .....on broom, & various plants  
 " pronuba .....on stalks of grass, and ears of corn  
 N. augur .....on low plants, hawthorn, sallow, &c.  
 " festiva .....on violet, foxglove, sallow, &c.  
 " confua.....on Silene acaulis, and other low plants  
 T. subtusa, e. ...to Mar., on poplar, upon the twigs; hatch in the spring  
 D. carpophaga...on Silene inflata, and Lychnis; upon the fl.  
 H. adusta .. ... on hawthorn, sallow; upon the leaves, and twigs  
 C. umbratica ...on sowthistle, lettuce; upon the leaves  
 P. v-aureum ... on nettle, &c.; singly  
 A. pyramidea ...on oak, birch, elm, willow; in crevices, upon the bark; small  
 M. typica .....on dock, low plants, &c.; in clusters, upon the leaves  
 H. proboscidalis to March, on nettle; rather large, globular (slightly oval) indented on upper side; pale yellow  
 C. margaritellus probably among damp grass, in open woods; "greenish-yellow, oblong, and slightly oval, rounded at each end, one end slightly smaller; surface shining, covered with slight oval depressions placed side by side—not end to end—and arranged in wavy longitudinal lines."

## LARVÆ]

## JULY

Some few of the larvæ to be found this month occur in the list with the "h" annexed, signifying that they hibernate. These are, of course, now extremely small, and at this busy period of the year, unless required for purposes of observation, will be passed over by the Collector, until they reappear in the spring, in a state approaching maturity, especially as it is generally found to be a "ticklish job" to imitate the natural conditions sufficiently to preserve small larvæ alive through the winter.

During hot summers, and not unfrequently in confinement, especially with a little forcing, "double broods," or second appearances, of an insect not ordinarily appearing twice in a year, will come upon us. Sometimes only a portion of a brood feeds up rapidly, and the second imago emerges before the winter. *S. ocellatus*, and *S. populi* are pretty regularly double-brooded in the South and West of England, in confinement, without forcing, though we believe a second brood of *S. ocellatus* has never been seen at large. If the summer be hot, a second brood of *S. populi* not unfrequently occurs, and then the larvæ appear this month.

- P. Machaon* ... *Peucedanum palustre*, and other *Umbelliferæ*; in fens  
*A. cardamines* ... *Cardamine*, *Erysimum*, &c.; on the seeds  
*G. rhamni*, b. ... buckthorn  
*C. Edusa* ..... Dutch clover, lucerne, &c.  
 " *Hyale* ..... clover, melilot  
*A. Euphrosyne*, h. dog, and sweet violet  
 " *Selene*, h. .. dog, and sweet violet  
*M. Cinxia*, h. ... *Plantago lanceolata*  
*V. Antiopa* ..... willow, birch, poplar, nettle  
 " *Io* ..... nettle, feeding exposed, generally gregarious  
 " *Atalanta* ..... nettle; feeding concealed in curled-up leaves  
 " *cardui* ..... thistles; under a web, from 3 to 6 or so, on a plant. Will also eat nettle  
*S. Ægeria*, b. 2 ... grasses  
 " *Megæra*, b. 2 grasses  
*C. Pamphilus*, 2 grasses  
*T. rubi*, b. .... bramble; buds, and fl.; also broom, *Genista*, birch, *Salix fusca*, and bilberry  
 " *betulæ* ..... sloe, birch; generally stunted bushes  
*L. boetica* ..... *Collutea arborescens*  
 " *agestis*, 2 ... *Erodium cicutarium*  
 " *Adonis*, e. 2 ... *Hippocrepis comosa*, &c.  
*L. Alsus* ..... *Anthyllis vulneraria*, in the fl.-heads, or legumes; full grown about the m. of the month, but do not change to pupæ till after the winter  
 " *Arion*, h. ? ... thyme; in the fl., or among the seeds when young; is supposed to hibernate  
*N. Lucina* ..... primrose, and cow-slip; eats small holes in the leaves  
*T. Tages* ..... *Lotus corniculatus*  
*H. sylvanus* ..... grasses; in rolled-up blades  
 " comma, b. ... trefoil, and other *Leguminosæ*; in rolled-up leaves  
*S. convolvuli* ... small convolvulus, balsam, &c.; hides under sods  
*D. lineata* ..... *Galium*, vine, &c.  
*M. fuciformis* ... *Lychnis*, *Scabiosa*, *Galium*, honeysuckle, &c.  
 " *bombylifomis* *Scabiosa*  
*S. ichneumoniformis* in r. of *Lotus corniculatus*  
 " *muscæformis* in stems of *Statice armeria*. The larva is found from this month to Sept., and is supposed to be 2 yrs. feeding up  
*H. sylvinus* ..... at r. of sorrel, and dock; 2 years feeding  
*Z. nubigena*, h. ... thyme  
 " *meliloti*, e. h. *Lotus corniculatus*, vetches, &c.; partial to chalky soils

## LARVÆ]

## JULY

- Z. trifolii, h. .... trefoil, vetch  
 " lonicera, h. ... clover, grasses  
 " filipendulæ h. Lotus corniculatus, &c.  
 L. molybdeola, h. lichens  
 D. pulchella ..... field forget-me-not  
 L. monacha, b. oak, beech, apple, birch, fir, &c.; hides in the crevices of the bark  
 O. antiqua ..... various trees, and plants  
 D. coryli ..... beech, nut, birch, alder, oak, willow  
 E. lanestris ..... hawthorn, sloe, &c.; in large nests of silk  
 B. neustria ..... sloe, hawthorn, fruit-trees, &c.; gregarious, in a web, until nearly full-fed  
 " castrensis, b. ... Artemisia maritima, and Daucus maritimus. Feed in the sunshine. Will also eat knotgrass, chrysanthemum, wild cherry, and various trees, if sprinkled with salt water  
 E. versicolora ... birch  
 P. syringaria, h. lilac, privet, elder, honeysuckle; s. feed up this month, and a second brood appears in August  
 E. alniaria ..... alder, birch, willow, beech, &c.  
 " tiliaria ..... oak, willow, birch, alder  
 " fuscantaria, b. ash, privet; eats round holes in the leaves  
 " angularia ... oak, birch, beech, &c.  
 B. hirtaria ..... lime, elm, ash, and fruit trees  
 A. prodromaria oak, birch, elm, nut  
 T. consonaria ... beech, oak, birch  
 B. fuliginaria ... fungi; on timber  
 P. baiularia, h. ... oak. Covers itself with fragments of leaves, &c., after every moult  
 E. omicronaria, e. maple; s. beech  
 " punctaria ..... oak  
 " pendularia ... birch  
 A. trigeminata h. —? probably some low plant; will eat knotgrass  
 A. ornata, s., h. thyme, marjoram; will also eat mint  
 " promutata ... yarrow, mugwort, creeping cinquefoil  
 " straminata, h. —?   
 " mancuniata ... —? will eat knotgrass  
 " subsericeata ... —? will eat knotgrass  
 " emutaria, h. ... Triticum repens; will also eat M. lupulina, L. corniculatus, Chenopodium, mint, and knotgrass  
 " emarginata ... convolvulus, Galium  
 C. pusaria ..... oak, nut, alder, birch, willow  
 C. temerata ..... sloe, wild cherry, buckthorn?  
 " taminata ..... wild cherry, willow, buckthorn?  
 A. pictaria (?) ... stunted, and unhealthy-looking sloe bushes  
 N. pulveraria ... willow, nut, privet  
 F. carbonaria ... willow, birch  
 " atomaria ..... Centaurea, trefoils, &c.  
 A. citraria ..... wild carrot, trefoil, &c., near the coast  
 H. aurantiaria ... hawthorn, birch, oak  
 E. decolorata, b. to m. seed-capsules of Lychnis dioica  
 E. venosata ..... in seed-capsules of Silene inflata, and Lychnis dioica  
 " pulchellata ... in foxglove fl.  
 " valerianata ... Valerian officinalis, fl.  
 " plumbeolata Melampyrum pratense, fl.  
 " isogrammata clematis, fl.-buds  
 " pygmaea, m. Stellaria holostea, fl. Will also eat Cerastium tomentosum, fl.  
 " lariceata ..... larch, and spruce  
 " pusillata ..... spruce  
 " indigata ..... juniper, and Scotch fir; will eat cypress, in confinement  
 " vulgata ..... hawthorn, willow, golden rod, ragwort, &c.

## LARVÆ]

## JULY

- E. *dodoneata* ...oak  
 " *abbreviata* ...oak  
 " *coronata* .....fl. of clematis, worm-wood, bramble, *Eupatorium cannabinum*, golden rod, wild angelica, &c.  
 L. *viretata* .....privet, and *Actæa spicata*; when young, on the unripe berries  
 T. *variata* .....Scotch fir, larch  
 M. *ocellata* .....Galium  
 M. *unangulata* ...chickweed  
 " *galiata* .....Galium *sexatile*  
 C. *munitata*, h. groundsel  
 " *ferrugata* .... ground ivy, Galium, chickweed  
 S. *certata*, b. ...barberry; between united leaves  
 C. *psitticata* .....oak, lime, apple, rose; probably also birch, hawthorn, willow  
 " *russata*, 2. ...strawberry, birch, hawthorn, willow, &c.  
 " *immanata*.....strawberry, bilberry, birch, alder, &c.  
 " *silaceata* ..... *Epilobium*, and *Circaea lutetiana*, &c.  
 E. *cervinaria* ...mallow, hollyhock  
 A. *plagiata* ..... *Hypericum perforatum*, fl.  
 L. *grisæata* .....*Sisymbrium Sophia* (seed pods); on the coast; will also eat *Erysimum cheiranthoides*  
 C. *obliquaria* ...broom  
 D. *falcula* ..... birch; also oak, alder, willow, poplar  
 " *unguicula*..... beech; generally on the stunted bushes  
 C. *spinula*, 2. hawthorn, sloe, mountain ash  
 D. *furcula* ..... willow, willow, poplar  
 " *bifida* .....poplars  
 " *vinula* .....willows, poplars, willow; by preference the Lombardy poplar  
 P. *bucephala* .....elm, oak, lime, willow, beech, nut, &c.  
 C. *anachoreata*, b. poplars, willows  
 C. *reclusa*, b. between united leaves of willows, aspen, willow  
 P. *palpina*..... willows, willows, poplars, birch  
 N. *camelina* .....oak, beech, birch, maple, nut, alder, apple, willow, aspen, hawthorn  
 " *cucullina*, e. ....maple, sycamore  
 " *carneolata* .....birch  
 " *dictæoides* ...birch  
 " *dromedarius* birch, alder, nut  
 " *tritophus* .....birch, poplars  
 " *Chaonia* .....oak  
 " *Dodonea* .....oak, and birch  
 C. or ..... poplars; between the leaves  
 " *ocularis* .....poplars  
 " *flavicornis* ...birch; in rolled-up leaves  
 " *ridens* .....oak; between united leaves  
 D. *Orion* .....birch, oak; birch is recommended in feeding, as an alterative diet  
 A. *megacephala* poplar  
 " *strigosa*.....hawthorn; chiefly in Cambridgeshire, and in chalky districts  
 " *alni* ..... hawthorn, alder, willow, oak, lime, rose, elm, nut, beech, Spanish chesnut, horse chesnut, sycamore, poplar, willow, bramble. Has been found, at rest, on palings, &c.  
 " *rumicis* ..... bramble, plantain, knotgrass, and other low plants  
 " *auricoma* .....bramble, birch, oak, bilberry  
 " *menyanthidis* *Menyanthes trifoliata*, heath, willow, bramble, *Myrica gale*  
 L. *Comma* .....*Dactylis glomerata*, and other grass, also sorrel  
 N. *typhæ*, e. ...in stem of *Typha latifolia*  
 G. *flavago*.....inside thistles, Lappa, elder, foxglove, &c.; feeding on the pith  
 H. *petasitis* .....in r. and stems of butter burr, and burdock

## LARVÆ]

## JULY

- H. micacea .....at the base of leaves of *Carex*, and inside stems, and r. of *Equisetum arvense*, and *E. fluviatile*, and dock
- X. conspicillaris *Lotus corniculatus*, and other low plants
- N. saponaria ...*Silene*, *Lychnis*, and other low plants
- M. albicolon.....*Atriplex*, and *Chenopodium*, on coast-sands, &c.; also lettuce, &c., in gardens
- " brassicæ ..... cabbage, dock, *Chenopodium*, *chrysanthemum*, &c. [atum
- C. Haworthii ... *Eriphorum vagin-*
- H. palustris .....plantain, and other low plants
- A. suffusa, .....r. of spinach, lettuce, radish, &c.
- " saucia ..... ..plantain, dock, and other low plants
- " segetum, h. ...in r. of turnips, &c.
- " corticea, h. ...*Chenopodium*
- " cursoria ..... *Euphorbia esula*, sandwort, sea violet, &c.
- " tritici .....r. of sandwort, sea violet, and other low plants
- " præcox.....sandwort, sea violet, chickweed, and other low plants; on the coast; also dwarf willows
- N. plecta ..... *Galium verum*, *Asperula odorata*
- " festiva, h. ...violet, willow, fox-glove, &c.
- " rubi .....low plants
- T. piniperda.....Scotch, and other firs; resembles the "needles," on which it feeds
- T. gothica .....willow, hawthorn, oak, &c.; also dock, nettle, laurel, broom, lilac, &c.
- " leucographa plantain
- " rubricosa .....dock
- " instabilis .....sloe, willow, oak, dock, and other low plants
- " stabilis.....oak, elm, hawthorn, &c.
- " gracilis.....willow, willow, low plants
- T. cruda .....oak, nut; also other caterpillars
- A. litura .....meadow sweet, and other low plants; also oak, willow, alder
- C. vaccinii .....elm, oak, willow, and low plants
- D. rubiginea.....apple, dandelion, and other low plants
- C. xerampelina ash
- D. carpophaga...*Lychnis*, and *Silene inflata*, seeds
- " capsincola ...*Lychnis*, and *Silene*, seeds
- " cucubali .....*Lychnis*, *Silene inflata*, and *Cucubalus bacciferus*, seeds
- " albimacula ..*Silene nutans*, seeds; and s. *S. inflata*; in dry and hilly woods. When young, conceals itself in the seed-capsule, and afterwards at the root, crawling up, after sunset, to feed on the unripe seeds. In confinement will also eat seeds of *Silene maritima*, and *Lychnis dioica*
- " conspersa.....*Lychnis flos-cuculi*, and *Silene inflata*, seeds
- " compta.....garden pinks, and other *Caryophyllææ*, seeds
- " cæsia .....*Silene maritima*, *S. inflata*
- H. dysodea .. ..fl., and seed-heads of *Sonchus*, and *Lactuca*, (lettuce, garden and wild)
- " serena .....fl. of sow thistle, hawkweed, wild lettuce, &c.
- P. xanthomista...violet, harebell, &c., at night
- " flavocincta ...chickweed, groundsel, mint, everlasting pea, &c., plum, &c.
- D. templi ..... in stem, and r. of *Heracleum sphondylium*
- E. lichenea, s. ...from Nov., ragwort, and various low plants, on the coast
- A. Aprilina .....oak; hides in the bark crevices

## LARVÆ]

## JULY

- M. oxyacanthæ hawthorn, sloe  
 H. adusta, h. ...hawthorn, and sal-  
   low, when young; afterwards,  
   low plants  
   " glauca .....sallow, birch, bil-  
   berry, heath; will eat lettuce,  
   in confinement  
 — " peregrina .....Chenopodium, and  
   Salsola kali  
 — " chenopodii ...Chenopodium  
   " suasa .....plantain, lettuce,  
   knotgrass, &c.  
   " thalassina .....honeysuckle, sallow,  
   broom, knotgrass, &c.  
   " genistæ .....broom, chickweed,  
   Silene, knotgrass, &c.  
 X. lithoriza .....honeysuckle  
 C. perspicillaris Hypericum  
 C. exoleta .....scabious, campion,  
   rest harrow, Eryngium mariti-  
   mum, dock, turnip, asparagus,  
   &c.  
 X. rhizolitha ...oak  
   " semibrunnea willow, ash  
   " petrificata ...oak, lime, birch  
 C. verbasci .....mullein, figwort  
   " scrophulariæ figworts, mullein  
   " lychnitis .....seeds of white, and  
   black mullein  
   " gnaphalii .....golden rod  
   " umbratica ..... Sonchus, lettuce,  
   &c.; hides by day under leaves,  
   near the ground; feeds on the  
   upper leaves, and fl. at night;  
   very variable  
 H. marginata, e. rest harrow, pre-  
   ferring the fl.; also Arenaria,  
   and Hyoscamus; knotgrass, in  
   confinement  
   " peltigera .....rest harrow, Hyos-  
   camus niger, marigold, and  
   several coast plants  
   " armigera ..... wild mignonette,  
   preferring the fl.  
   " scutalis ..... Artemisia campes-  
   tris  
 A. myrtilli .....heath  
 H. arbuti .....Cerastium arvense,  
   forget-me-not, &c.  
 A. sulphuralis ...small convolvulus  
 A. luctuosa .....small convolvulus;  
   feeds by night  
 H. unca .....sedge (Carex)  
 B. parthenias ...birch; s. oak, and  
   beech  
 P. orichalcea ...Eupatorium canna-  
   binum  
   " chrysitis, h. ...thistle, Lappa, net-  
   tle, dead nettle, &c.  
   " festucæ .....reeds, sedges, and  
   grasses; near the sea  
   " gamma ..... nettle, hop, and  
   most low plants  
 G. libatrix ..... willow, sallow,  
   poplar  
 C. fraxini .....ash, poplars  
   " nupta ..... Salix fragilis, poplar,  
   &c.; often found hiding in the  
   crevices of the bark, or under  
   detached pieces  
 O. lunaris .....oak  
 H. proboscidalis, h. nettle  
   " crassalis .....heath  
 H. costæstrigalis thyme  
 P. punicealis ...Origanum vulgare,  
   between the leaves  
   " purpuralis ...Mentha arvensis,  
   between united leaves  
   " ostrinalis .....var. of P. purpuralis?  
 R. sanguinalis ...thyme, fl.  
 E. cingulalis ..... Salvia pratensis,  
   under the leaves  
 A. niveus, b. ...in a case, under the  
   leaves of Potamogeton  
 B. lupulinalis ...in stems of hop  
   " terrealis, h. ...golden rod, fl., &c.  
   " asinalis, e. ...madder, fl., and  
   young seeds  
 P. forficalis .....cabbage, horse-  
   radish, &c.  
 S. sticticalis .....Artemisia  
 S. lineolalis, b. the lichens on sloe,  
   Parmelia parietana, and P.  
   olivacea  
   " coarctalis ..... moss  
 N. genistella, b. furze; also Genista  
   Corsica. Isle of Wight, and  
   New Forest  
 P. adelphella ...poplar, willow  
 R. formosella ...elm, birch

## LARVÆ]

## JULY

- H. prasinana ...oak, &c.  
 A. prodromana *Potentilla anserina*,  
 and most low plants  
 P. sponsana .....beech, elm  
 " mixtana .....heath  
 " Caledoniana *Myrica gale*  
 " cristana .....dwarf shallows, and  
 hawthorn; between united leaves  
 " hastiana .....dwarf shallows  
 " aspersana .....*Potentilla*, and  
 meadow sweet  
 " Shepherdana hemp agrimony,  
 meadow sweet; in the tops  
 " comariana (?) strawberry  
 P. marginana ...teazle, and probably  
 seed-heads of *Compositæ*  
 S. euphorbiana...*Euphorbia paralis*,  
 heads  
 M. consequana...*Euphorbia paralis*  
 P. rugosana .....*Bryonia dioica*  
 B. uliginosana ...*Lythrum salicaria*;  
 in fens  
 P. myrtillana ...*Vaccinium*  
 G. nævana .....holly  
 P. immundana.. in leaves of birch,  
 and alder  
 E. nigricana.....in pea pods  
 " pisana .....in pea pods, and  
 vetches  
 S. dorsana .... in pods of *Vicia*  
*lutea*, and *Orobus*  
 " perlepidana ...in *Orobus* pods  
 C. cana .....thistle heads  
 " conterminana lettuce, fl., and  
 other *Compositæ*  
 T. mediana.....seeds of *Umbelliferæ*  
 E. curvistrigana fl. of *Lactuca muralis*  
 " ciliana .....seeds of cowslip  
 " anthemidana *Erigeron acre*, fl.  
 A. cnicana .....thistle stems  
 T. hyemana? ...oak  
 E. gelatella .....between willow, or  
 hawthorn leaves  
 P. radiella .....in a case, on grass  
 T. fuscipunctella on all kinds of waste  
 substances  
 N. scabiosellus, h. in seed-heads of  
*Scabiosa arvensis*; in the  
 autumn in its case, on various  
 low plants
- N. cupriacella, h. in seed-heads of  
 teazle, and *Scabiosa succisa*  
 S. pyrella .....hawthorn, apple,  
 pear, &c.  
 Y. viginipunctella *Sedum telephium*  
 C. pyraustella ...on *Thalictrum aquile-*  
*legifolium*, on the Continent  
 Y. sylvella, b. ...oak  
 D. costosella ...furze, and broom, fl.  
 " pallorella.....in leaves of *Centaurea*  
*scabiosa*  
 " umbellella ..furze  
 " conterminella shoots of willow  
 " ocellella .....willow  
 " ciliella .....most *Umbelliferæ*,  
 and *Angelica*  
 " emeritella ...in tansy leaves  
 " pulcherimella *Bunium flexuosum*,  
 fl.  
 " chærophyllivorella *Chærophyllum*  
 " nervosella ...parsnip, & *Ænanthe*  
*crocata*  
 " olerella, b. ...*Achillea millefolium*  
 G. hippophaella *Hippophae rhamnoides*,  
 between the terminal  
 leaves  
 " cuneatella ...willows  
 " longicornis? *Erica cinerea*  
 " acuminatella in thistle leaves  
 " costella .....*Solanum dulcamara*  
 " obsoletella ...in stems of *Chenopodium*  
 " atriplicella ...*Atriplex*, and *Chenopodium*  
 " solutella ?.....*Genista pilosa*  
 " paupella .....*Inula dysenterica*,  
 in fl.-heads  
 " inopella .....*Inula dysenterica*, in  
 fl.-heads  
 A. granitella.....*Inula dysenterica*  
 " autumnitella *Solanum dulcamara*  
 R. Erxlebenella *Tilia*  
 G. fischeriella ...in seeds of *Dactylis*  
*glomerata*, and other grasses  
 C. dentella .....seeds of *Chærophyllum*,  
 and *Angelica sylvestris*  
 P. obscurepunctella honeysuckle  
 T. resplendella...alder  
 G. alchimiella ...oak [more  
 " hemidactylella maple, and sycamore

## LARVÆ]

## JULY

- G. semifasciella maple  
 " populetella ...birch, aspen  
 " elongella .....in rolled-up leaves  
   of birch, and alder  
 " tringipennella plantain  
 " omissella, b. *Artemisia vulgaris*  
 " Hoffmanniella *Orobus niger*  
 C. Brogniartella oak  
 O. avellanella ...nut  
 " anglicella.....hawthorn, sloe  
 " betulævorella birch  
 " torquilella ...sloe  
 C. troglodytella *Inula dysenterica*,  
   and *Eupatorium cannabinum*  
 " siccifoliella .. hawthorn, apple,  
   birch  
 " limosipennella elm  
 " ardeæpennella, b. oak  
 L. Raschkiella...*Epilobium angustifolium*  
 " epilobiella ...*Epilobium hirsutum*  
 " decolorella ...in stems of *Epilobium montanum*, *E. parviflorum*,  
   *E. palustre*, *E. hirsutum*, &c.,  
   producing gall-like swellings  
 " subbistrigella in seed-pods of *Epilobium montanum*  
 C. Schrankella... *Epilobium alsinifolium*  
 A. Langiella.....*Circæa lutetiana*  
 A. modestella ...in capsule of *Stellaria holostea*  
 C. festaliella.....honeysuckle, raspberry, bramble  
 A. Pfeifferella ...dogwood  
 S. Brunnichella *Melissa clinipodium*  
 E. poella .....*Poa aquatica*  
 " Kilmunella ...*Carex*  
 " nigrella .....*Poa trivialis*, &c.  
 " subnigrella ...*Bromus erectus*  
 " Bedellella ...*Avena pratensis*  
 " subobscorella *Holcus mollis*  
 " zonariella.....*Aira cæspitosa*  
 " cerussella.....reed  
 " biatomella ...*Carex glauca*  
 T. marginea (emyella) in bramble  
 L. roborella .....oak  
 " hortella .....oak  
 " Amyotella ...oak, nut  
 " lantanella.....*Viburnum lantana*  
 L. irradiella .....oak  
 " Bremiella ...vetches  
 " lautella.....oak  
 " vaccinella ...whortleberry  
 " cavella .....birch  
 " pomifoliella...apple, hawthorn  
 " corylella .....nut, birch  
 " spinicolella ...sloe  
 " faginella .....beech  
 " torminella ...*Sorbus torminalis*  
 " salicolella.....sallow  
 " viminetella ...osier  
 " carpinicolella hornbeam  
 " ulmifoliella ...birch  
 " spinolella.....sallow, willow  
 " quercifoliella oak, willow  
 " Messaniella ...oak, evergreen oak,  
   chesnut, hornbeam  
 " corylifoliella hawthorn]  
 " Caledoniella hawthorn, birch  
 " viminiella ...osier, sallow  
 " alnifoliella ...alder  
 " Heegeriella ...oak  
 " Cramerella ...oak  
 " tenella .....hornbeam  
 " acerifoliella ...maple  
 " emberizæpennella honeysuckle  
 " Frolichiella ...alder  
 " Nicelliella ...alder  
 " stettinella.....alder  
 " Klemannella alder  
 " Schreberella elm  
 " tristrigella .. elm  
 " trifasciella ..honeysuckle  
 " scabiosæcolella in r. leaves of  
   *Scabiosa columbaria*  
 " comparella ...poplar  
 L. Clerckella ...sloe, apple, cherry,  
   hawthorn, &c.  
 " padifoliella ...sloe, birch, &c.  
 C. spartifoliella broom; under bark  
 " laburnella ...laburnum  
 " lotella .....*Lotus major*  
 B. aurimaculella... *Chrysanthemum*,  
   and ox eye  
 " ulmella.....oak  
 " cristatella.....yarrow  
 N. atricapitella oak  
 " anomalella ...rose  
 " perpygmæella hawthorn



## LARVÆ]

## JULY

- |                                 |                                       |
|---------------------------------|---------------------------------------|
| N. pomella .....apple           | N. atricolella ...apple, hawthorn     |
| " oxyacanthella hawthorn        | " arcuosella ...strawberry            |
| " viscerella .....elm           | " marginecolella elm                  |
| " catharticella buckthorn       | " glutinosella ...                    |
| " Septembrella Hypericum        | " splendidissimella bramble, and      |
| " cryptella .....Lotus          | dewberry; rarer in wild rasp-         |
| " trimaculella...poplar         | berry                                 |
| " floslactella ...nut, hornbeam | " luteella.....birch                  |
| " salicivorella...sallows       | " sorbiella .....mountain ash         |
| " myrtillella ...bilberry       | " centifoliella, b. ... dog rose, and |
| " microtheriella nut, hornbeam  | cabbage rose                          |
| " betulicolella...birch         | T. pulverosella...wild apple          |
| " ignobilella .. hawthorn       | P. acanthodactylus Bartsia, and rest  |
| " acetosella.....sorrel         | harrow                                |
| " plagicolella ...sloe          | " punctidactylus in seed-capsules     |
| " prunetella ...sloe            | of columbine                          |
| " tityrella .....beech          | " dichrodactylus tansy                |
| " malella.....wild apple        | A. polydactyla...honeysuckle, buds    |

## PUPÆ]

Many species are now rapidly "taking to earth," and a large number, besides those specified in the list, could be obtained by diligent searching. But at this period of the year, with

"Its glorious days of golden light,"

and

— "its virgin roses' blushes,  
Warm as when Aurora rushes  
Freshly from the God's embrace,  
With all her shame upon her face,"

greater attractions are presented by the numerous insects which may be obtained in the imago and larva states, especially as the search for many of the pupæ may be safely deferred till a later, and less busy period.

- |  |  |
|--|--|
| L. sinapis .....on stems of Vicia cracca, and Orobus tuberosus, in woods | V. Atalanta .....suspended, within a chamber formed by united leaves of nettle               |
| P. brassicæ .....on palings, walls, &c.                                  | " cardui .....on, or near thistles   |
| " rapæ .....on palings, walls, &c.                                       | S. Ægeria.....on grass stems, &c.  |
| " napi .....on palings, walls, &c.                                       | " Megæra .....on grass stems, &c.  |
| A. cardamines ...to April, on stems of grass, &c.                        | T. betulæ .....on sloe, and birch; generally on stunted bushes; placed lengthways, on a leaf |
| G. rhamni.....attached, by a thread, to leaves, and stems of buckthorn   | L. Argiolus .....spun up, closely adhering to the underside of a holly leaf                  |
| V. polychloros...under copings, and on palings, &c., near elms           | L. chrysothorax in a slight cocoon, amongst leaves, &c.                                      |
| " Io .....among nettle   |  |

## PUPÆ]

## JULY

- L. dispar .....in a slight cocoon, amongst leaves, &c.  
 " monacha .....in a web, in bark crevices of oak, birch, apple, beech, fir, &c.  
 O. antiqua ..... to Sept., in a web, on palings, &c.  
 T. cratægi.....in a compact, earthy cocoon, on, or near the surface of the ground, among hawthorn, sloe, &c.  
 E. lanestris ..... cocoon, on the ground, near hawthorn, sloe, &c.  
 B. castrensis.....in a cocoon, among, or near *Artemisia maritima*, &c.  
 E. erosaria .....under moss, on oak, birch, &c.  
 " angularia.....under moss, on oak, birch, beech, &c.  
 N. zonaria .....sub., on sand-hills  
 " hispidaria.....at oak  
 H. abruptaria ...spun up, on twigs, or between the forks, or beneath the branches, of lilac, rose, or privet  
 H. rupicaprararia to Jan., in a slight web, on the ground, among hawthorn, sloe, or oak  
 " leucophearia... to Jan., on the ground, near oak  
 " aurantiaria, e. sub., at hawthorn, birch, oak, &c.  
 " progemmaria to Jan., sub., at oak, birch, hornbeam, &c.  
 " defoliaria.....sub., at oak, hawthorn, sloe, hornbeam, nut, elm, &c.  
 C. brumata .....sub., at oak, &c.  
 O. dilutata .....sub., at oak, &c.  
 L. multistrigaria to Mar., sub., about *Galium*  
 E. decolorata ... to April, about *Lychnis dioica*  
 E. venosata ..... to April, about *Silene*, and *Lychnis*  
 A. badiata .....to Mar., in earthen cocoon, on the ground, beneath dog rose bushes [rose  
 " derivata .....to Mar., sub., at dog  
 C. russata .....spun up, on leaf of strawberry, birch, hawthorn, sallow, &c.  
 E. lineolata .....cocoon attached to *Galium verum*, on coast sand-hills, just under the surface  
 P. falcula .....between united birch leaves  
 P. Cassinea .....to Oct., sub., at oak; deep  
 C. reclusa .....spun up, among dead leaves of sallow, poplars, willow  
 D. cæruleocephala spun up, at hawthorn, and sloe; on a twig, or under bark  
 C. diluta .....amongst leaves, &c., of oak, and birch  
 N. geminipuncta in reeds; may be detected by small hole in the stem  
 " lutosa .....inside stems of common reed  
 H. petasitis .....at r. of *Petasitis vulgaris*; below plants which have a hole in the stem  
 " micacea, e. ...at r. of *Cyperacæ*, *Equisetum*, and dock  
 A. cursoria .....by raking sand-hills, on the coast, near *Euphorbia esula*, sandwort, sea violet, &c.  
 " agathina .....sub., about heath  
 " præcox, b. ...by raking sand-hills, on the coast, near dwarf willows, sandwort, sea violet, chickweed, &c.  
 N. xanthographa sub., at various trees, and on heaths, &c.  
 T. populeti .....to Feb., sub., at poplars, especially *Populus nigra*; deep  
 " miniosa .....to Feb., amongst fallen leaves, &c.  
 " munda .....to Mar., under moss, at base of oaks  
 A. litura .....sub., at r. of low plants  
 H. croceago.....sub., at oak, just below the surface  
 X. citrago.....at lime; generally between united leaves; the larva remains a long time before changing

## PUPÆ]

## JULY

- X. cerago ..... } sub., at sawlow  
 " silago ..... }  
 " aurago ..... in a cocoon, at  
 beech; the larva a long time  
 changing  
 " ferruginea ..... sub., at sawlow,  
 poplar, &c.  
 C. xerampelina, e. ... sub., at ash;  
 cocoon very tender, and brittle  
 T. retusa ..... sub., at sawlow  
 C. trapezina, b. at oak, birch, horn-  
 beam, &c.; among leaves on,  
 or near the surface  
 " diffinis, b. ... at elm; spun up, on  
 the trunk, or between leaves, or  
 amongst rubbish, at the r.  
 " affinis, b. .... at elm; spun up, on  
 the trunk, or between leaves, or  
 among rubbish, at the r.  
 D. capsophila .. sub., about *Silene*  
*maritima*  
 " capsincola ... sub., about *Silene*  
*maritima*  
 P. chi ..... sub., near low plants  
 " *Xanthomista* sub., on exposed  
 rocks, on Isle of Man coast  
 " flavocincta ... sub., near low plants  
 E. lichenea ..... sub., by *Sedum* acre,  
 &c.; on the coast  
 A. Aprilina, e. .... sub., at oak  
 H. protea ..... sub., at oak  
 C. solidaginis, b. sub., about bilberry  
 X. conformis ... at alder, and birch;  
 under moss, or in folded  
 leaves  
 C. chamomillæ... among, or near  
 chamomile, &c.  
 G. libatrix ..... among willow, sal-  
 low, and poplar; spun up, in  
 the leaves, at end of twigs  
 C. nupta, e. .... at *Salix fragilis*, and  
 poplar; among the leaves, or in  
 crevices of bark, or under loose  
 bark  
 " sponsa ..... at oak; among the  
 leaves, on the tree  
 H. derivalis ..... among sawlow, bram-  
 ble, and dead oak leaves  
 C. fascelinellus... in cocoons, just  
 under the sand, among *Triticum*  
*juncum*  
 H. costella ..... in cocoon, on leaves,  
 moss, &c., round oaks  
 H. scabrella ..... in canoe-shaped  
 cocoon, on leaves of hawthorn,  
 moss, &c.  
 P. rhododactylus on rose  
 " acanthodactylus on *Bartsia*, and  
 rest harrow, attached to the  
 stems  
 " hieracii ..... on *Hieracium um-*  
*bellatum*  
 " pilosellæ ..... on *Hieracium pilo-*  
*sella*  
 " phæodactylus on rest harrow  
 " pterodactylus on convolvulus  
 " spilodactylus..... on *Marrubium*  
*vulgare*  
 " tetradactylus on thyme  
 A. polydactyla... on honeysuckle

## IMAGOS]

The summer harvest of life now teems on every side, as with

“Purple, gold, and green, the living blossoms swarm.”

This is the great month for insects in the perfect state, though the very minute species are not so numerous as in June; still all the great divisions, and especially the Noctuæ, and the Tortrices, are well represented. During the hot months of summer, the cycle of insect-life is often so rapidly completed, while the commencement and duration of that cycle vary so much according to the temperature, that not unfrequently a single month includes the time-space in which a species passes through all the stages of its existence; and

## IMAGOS]

## JULY

five to six weeks the period for a brood to hatch from the egg, attain the imago state, deposit eggs, and die. Though woods and forests,

“So thick no bird betwixt their leaves could fly  
But she would smite her wings,”

are the most prolific, in the number of species they yield, barren-looking places,

“Where zephyrs wave the balmy wing,  
And fan the buxom air,”

will well repay a careful search. Each peculiar locality produces peculiar insects. While the dry land and level country should be made to yield their insect treasures, as they sally forth on floating gauze,

“No jewell'd queen  
So rich,”

marshes and mountains, moors and mosses, hills and heaths, woods and forests, cliffs and coast sands, ought all to be diligently explored, for “beauties unespied.” Tree trunks, palings, fences, and walls should not be forgotten. On the latter, if old and covered with lichen, *B. perla* will be sure to be found, and often also the rarer *B. glandifera*, much resembling in its mottled green, olive, black, and grey markings, the lichen on the wall upon which it fed when a larva. *B. abietaria* may be found resting on large larch trunks, in elevated districts, generally at no great height from the ground. They must be carefully approached, or they will be lost.

A large number of species may be now captured at light. Thatch-beating may, this month, be advantageously resumed. Heads of rushes should be examined from 9 to 10 o'clock at night, as many moths swarm at them, especially during the last fortnight in this month. Puddles, carrion, &c., attract some butterflies, especially that king of his tribe, the Emperor, who comes,

“flushed with a purple grace,”  
“Prouder than when blue Iris bends.”

Even a mass of the despised stinging nettle is often worth visiting, from the moths attracted to the “honey dew,” on the leaves. On dull days many *Noctuæ*, as well as *Geometers*, may sometimes be found, at rest, on stumps, stones, and leaves.

Although the Collector's “sugar” is the great attraction to which the *Noctuæ* are drawn,

“Swift, as with Dædalean wing,”

to many members of this family light is equally alluring. In fact, bright light seems to have a highly stimulating, dazzling, and no doubt, delightful effect upon nearly the whole of the *Lepidoptera*: almost all butterflies, and a large number of moths revel in the hottest sunshine; while brilliant, artificial light seems so highly exciting that many moths “a death of rapture dare” by rushing into the burning flame. Moreover, the *Noctuæ* are not alone open to the attraction of sweets; at least some members of the other great families of the *Lepidoptera* are equally so, whether in the form of “sugar,” of honey-scented flowers, or of ripe fruits. During this, the great month for captures of *Noctuæ*, the facts here briefly referred to should not be forgotten.

## IMAGOS]

## JULY

- P. Machaon .....fens, and marshes ; chiefly Cambridge, and Norfolk
- L. sinapis, e. s. woods ; this brood is seldom so abundant as the spring brood
- P. cratægi.....near woods, &c.; local
- " brassicæ, e. 2. gardens, &c.
- " rapæ, m. 2. ...gardens, &c.
- " napi, m. 2. ...gardens, &c.
- G. rhamnii, e. ...woods, lanes, &c.
- C. Edusa .....clover fields, railway banks, &c. ; some seasons this species is very abundant
- " Hyale .....clover fields, &c., more especially near the coast ; in some seasons abundant, in others not seen
- A. Paphia.....woods ; fond of flying among bramble fl.
- " Aglaia .....at fl. on hill-sides, coast sand-hills, &c.
- " Niobe .....hill-sides, in company with Aglaia or adippe ; has been taken in the New Forest, at the Devil's Gallop, Windermere, and in Kent, between Wye and Ashford
- " adippe .....woods ; fond of fl. of Centaurea, &c.
- M. Athalia .....woods, and heaths
- V. c-album.....gardens, hop-grounds, woods, lanes, &c. ; fond of fl., and fruits
- " urticæ .....gardens, fields, &c.
- " polychloros ...among elms, and at the sap flowing from Cossus-infected trees
- " Antiopa .....at fl., and at Cossus-infected trees, &c. ; s. not seen for many years
- " Io, e. ....woods, gardens, &c.
- " Atalanta, e. gardens, fallen fruit in orchards, and Cossus-infected trees
- " cardui, e.....attracted by thistles, &c. ; rests on dusty roads, and on the leads of tall buildings in the hot sunshine
- L. sibylla, b. ...woods, parks, forests, where honeysuckle abounds ; the flight is lower in the early morning, than later in the day
- A. Iris .....woods, &c. ; fond of flying over tops of oaks ; attracted by puddles, exuvæ, dead animals, &c. ; generally accompanied by T. quercus ; may be s. brought to earth by a sod, thrown up at it
- A. Galatea .....fields, &c. ; rests on grass stems, in dull weather, and at night
- E. epiphrou .....in marshy hollows, on mountain sides, Scotland
- " Medea, m. ...Northern moors, &c.
- S. Ægeria, e. 2. woods, & shady lanes
- " Semele, m. ...hills, dry pastures, heaths, coast sand-hills, &c.
- " Ianira .....fields, &c.
- " Tithonus .....hedges, &c.
- " hyperanthus...woods, &c.
- C. Davus .....Northern moors
- " Pamphilus, 2. fields, &c.
- T. quercus .....woods, &c. ; flies over the tops of oak, and ash, in the sunshine, and rests under the leaves at night, and in dull weather
- " w.-album.....flies over trees, in the sunshine, especially wythc elm ; is attracted by fl. of grass, and other fl. ; may be s. brought down by a clod
- " pruni .....woods
- " betutæ, e. ...woods ; at fl. ; in dull, or wet weather may be found hanging from the underside of leaves of sloe, and other bushes
- P. Hippothoe ...formerly in the Cambridge fens ; now supposed to be extinct in this country
- " Phlœas, s. ...fields, &c.
- L. Ægon .....rests, at night, on heath, &c.
- " Alexis .....fields, &c. ; rests on grass stems, &c., in dull, and windy weather, and at night

## IMAGOS]

## JULY

- L. *Corydon*, e....chalk downs, and limestone hills  
 " *Acis* ..... formerly near Leominster; now supposed to be extinct in this country  
 " *Argiolus*, e... among holly, and ivy; this brood is seldom so abundant as the spring brood  
 H. *comma*, e. ...hills, &c.  
 " *linea* ..... fields, and woods  
 " *Actæon*, m....if the season is forward; on the Dorset coast, flying with *H. linea*; does not continue fine long after it is out  
 A. *atropos* .....at rest, on palings, &c.  
 D. *euphorbiæ* ...has occurred on the coast, and at Killing, Ireland, among sea spurge, and cypress-leaved spurge  
 " *galii* .....on the sand-hills at Deal, and other parts of the coast, among bedstraw  
 S. *chrysidiformis* at Folkestone, and Eastbourne, and probably other places on the S.E. coast; flies from about 9 to 11, a.m., and 3 to 4, p.m.; "booms along like a burnet"  
 " *ichneumoniformis* by sweeping the fl. of rushes, &c., on slopes on the coast; hovers over fl.  
 " *muscæformis* on the coast, among sea pink  
 " *scolæformis* ...on birch trunks  
 " *bembeciformis* among osiers, salwows, &c.  
 Z. *æsculi* .....on trees, &c.  
 C. *ligniperda* ...on trees, and palings  
 H. *sylvinus*, e. ...on heaths, and grassy lanes, and banks; flies just before dusk  
 " *velleda* .....on walls, and in crevices of birch trunks  
 L. *asellus* .....has been beaten  
 Z. *minos* .....flies in the sunshine, and rests on fl.  
 N. *cucullatella* ...on trees, and palings  
 " *strigula* .....  
 " *centonalis*.....
- N. *albulalis* .....has been taken in young ash plantations, in Kent  
 N. *senex*, e. ....in wet places; flies at night  
 " *mundana* .....beaten from weeds, against loose stone walls  
 S. *irrorella* .....on lichen-covered trees  
 C. *miniata*.....beaten from trees  
 L. *mesomella* .. on lichen-covered trees  
 " *muscerda* ... in fens, among alder; flies in the evening  
 " *aureola* .....on larch trunks, high up; and may be beaten from trees  
 " *deplana* .....beaten from yew, and other trees  
 " *lurideola* .....comes to fl., rests among herbage, &c.  
 " *molybdeola* ...  
 " *complana*.....flies at dusk, and after dark  
 " *griseola* .....on lichen-covered trees; comes to fl.  
 " *stramineola* (var.) by moist wood-sides, and ditches  
 " *quadra* .. .....beaten from fir, and oak; comes to fl. of lime, &c.  
 " *rubricollis* ...flies in the sunshine, over trees, &c.  
 E. *grammica*.....heaths, &c.  
 " *cribrum* .....heaths, &c.  
 D. *pulchella* .....has been taken flying by day, in stubble fields, probably near the field forget-me-not, its food-plant  
 E. *jacobæe* .....gardens, fields, &c.; flies in the sunshine  
 C. *caia* .....gardens, &c.; at rest; very sluggish  
 L. *chrysorrhæa* at rest  
 " *auriflua*..... at rest, on hedges, trees, &c.  
 " *salicis*, e. ....on willows, and poplars  
 " *dispar* .....formerly found at large; now bred artificially  
 " *monacha* .....at rest  
 O. *cænosa*.....fens, and marshes

## IMAGOS]

## JULY

- O. gonostigma...very local  
 " antiqua.....♂ often seen flying about wildly just before rain
- B. neustria .....at rest  
 " castrensis .....at rest ; on the S.E. coast  
 " quercus (callunæ) heaths, &c.  
 " roboris (quercus) flies at dusk ; more frequently met with in the larva state
- O. potatoria .....at rest, among coarse grass, &c.
- O. sambucata, b. flies wildly at dusk, and soon after dark ; not always quiet, when boxed
- E. vespertaria ...flies from 7 to 9, or 10, a.m.  
 " apiciaria .....hedges, &c. ; flies soon after 7, a.m.  
 " advenaria .....among bilberry, and grass, in woods
- R. crataegata.....hedges, &c.
- A. prunaria .....woods ; flies in the sunshine, also at dusk
- M. margaritata...hedges, &c.
- E. fasciaria, h....beaten from fir trees ; flies at night
- P. syringaria ...gardens, &c. ; flies at dusk, over fl.
- S. illunaria, b....at rest, on trees, &c.  
 " illustraria, e. 2. the summer brood, or var. delunaria
- C. elinguarina, e. hedges, &c.
- E. erosaria .....at rest  
 " angularia.....on trees, &c.
- C. glabraria, e. on fir trees, &c.  
 " lichenaria.....on lichen-covered oaks
- B. repandata ... } gardens, &c. ; come  
 " rhomboidaria } to sugar. The  
 " perfumaria } whole of this  
 " abietaria, b. } genus may be  
 " roboraria } found at rest, on  
 " consortaria } tree trunks ; most  
 } of them skittish in  
 } presence of danger,  
 } so must be  
 } approached cautiously
- G. obscurata ...s. flies by day
- D. obfuscata..... on heaths, about Scotch mountains
- P. trepidaria..... flies by day ; on mountains, in Scotland
- M. cineraria.....
- P. cytisaria .....heaths, forests, and waste places, on the coast ; may be beaten from broom, furze, and heath
- G. papilionaria...comes to l. ; flies at dusk ; may be beaten from trees, in the day time ; has been found among brake fern  
 " smaragdaria...on the Kent, and Essex coasts
- I. vernaria, b. ... beaten from clematis, chiefly in elevated, and exposed situations
- P. baularia .....among oak ; flies at dusk
- H. thymiaria ...hedges, &c.
- H. Auroraria ...
- A. sylvata.....woods  
 " Blomeraria .. on wooded hill-sides, near wytch elms, at rest, on tree trunks
- E. heparata .....among alder
- V. cambricaria...at rest, on rocks
- A. rubricata ..... heaths, and coast sand-hills ; flies just before sunset  
 " scutulata .....hedges, &c.  
 " bisetata .....hedges, &c.  
 " contiguaria ...Conway, Bangor, &c.  
 " herbariata ...has been found in herbalists' shops  
 " rusticata .....Portland, and Northfleet,—very local ; resting flat, on ivy leaves ; flies at dusk  
 " dilutaria .....  
 " interjectaria...Plumstead marshes, and Folkestone  
 " holosericata...Bristol, and Thetford  
 " incanaria .....on palings, walls, &c., near gardens  
 " ornata .....grassy hills, &c.  
 " straminata ...  
 " mancuniata ...  
 " subsericeata... beaten from wild rose bushes, on hills  
 " immutata.....fens, &c.

## IMAGOS]

## JULY

- A. strigilata ..... Folkestone, among clematis  
 " emutaria ..... salt marshes of Kent, (Sheerness), Norfolk, (King's Lynn), and the New Forest; flies at dusk. The Sheerness specimens are more tinged with rose-colour, than the others  
 " aversata ..... woods, &c.  
 " inornata ..... at rest, on fir trunks; flies at dusk  
 " degeneraria ... at rest, on various plants, and on the rock, at Portland  
 " emarginata, b.  
 T. amataria ..... hedges, and waste places  
 C. exanthemaria woods  
 M. alternata .....  
 " liturata ..... fir woods  
 H. vauaria .... in gardens  
 S. plumaria ..... heaths, &c.  
 F. pinetaria ..... Scotch heaths; flies in the sunshine  
 " conspicuata ... on broom  
 M. euphorbiata, 2? woods  
 S. sacraria ..... has been taken at l., at sugar, and at fl.; and also flies by day  
 L. purpuraria ... on dry hills, in the North; flies by day  
 A. ononaria ..... among rest harrow  
 A. strigillaria ... on heaths  
 A. grossulariata in gardens, and hedges  
 " ulmata ..... woods, &c., near wytch elms  
 L. adustata ..... among spindle  
 L. marginata ... woods  
 L. ruficinctata ... woods  
 " salicata .....  
 " olivata ..... woods  
 E. tæniata ..... the Lake district, &c.  
 " unifasciata ... local  
 " bifasciata? ... in an old hedge  
 " ericetata ..... heaths; at fl.; flies by day  
 " blandiata ..... hills, &c.  
 E. centaureata ... on palings, &c.  
 " succenturiata beaten from hawthorn  
 " subfulvata ... at fl.  
 " arceuthata ... flies among juniper, and savine  
 " trisignata .....  
 " fraxinata ..... among ash  
 " innotata ..... at Wallasy  
 " constrictata ...  
 " subnotata ..... often on river banks  
 " campanulata at fl., in woods, &c.  
 " vulgata, 2. ... at rest  
 " expallidata ...  
 " absynthiata ...  
 " knautiata ..... among Knautia arvensis, very local  
 " tenuiata ..... beaten from sallows  
 " subciliata, e. beaten from maple  
 " sobrinata ..... beaten from juniper, and at fl.  
 " pumilata, 2. ...  
 T. firmata ..... among larch  
 Y. elutata ..... woods; flies high, when disturbed  
 M. rubiginata ...  
 " albicillata ...  
 M. hastata ..... flies in the sunshine, generally after 2 p.m.; may be beaten from birch, and other trees; very pugnacious  
 " tristata .....  
 " procellata ... among clematis  
 " unangulata ... beaten from hedge banks  
 " rivata .....  
 " sociata, e. ....  
 " montanata ... woods  
 C. munitata ..... fond of settling on underside of fallen trees  
 " quadrifasciaria on palings, &c.  
 C. bilineata ..... hedges  
 " fluviata ..... at l., at sugar, and at fl.; at Rannoch, &c.  
 P. tersata ..... among clematis  
 " lignata .....  
 S. vetulata, b. ... among buckthorn  
 " rhamnata ..... comes to fl.  
 " undulata ..... woods  
 C. picata ..... beaten from bushes



## IMAGOS]

## JULY

- C. sagittata .....in fens  
 " russata .....woods  
 " immanata.....  
 " reticulata .....the Lake District,  
 &c.  
 " prunata .....  
 " testata .....  
 " populata .....  
 " fulvata .....beaten from bushes  
 " pyraliata .....gardens, and fields  
 " dotata .....near woods  
 P. comitata .....  
 E. mensuraria ...  
 " bipunctaria ...on the chalk, and  
 limestone  
 " lineolata ...rests on coarse grasses,  
 on the coast  
 C. imbutata .....  
 L. griseata .....on the Norfolk coast,  
 among *Sisymbrium*  
 C. obliquaria ...among broom; does  
 not fly till between 10 and 11,  
 p.m.  
 T. chærophyllata in grassy places, in,  
 and near woods; flies in the sun-  
 shine  
 P. lacertula .....beaten from birch  
 D. furcula.....  
 " bifida.....  
 S. fagi .....at rest, on tree  
 trunks, in beech woods  
 P. bucephala ...at rest; at light  
 C. curtula, 2.....  
 P. palpina, b. ...comes to l.  
 N. camelina .....at light; hides on  
 fronds of fern, and in, and on  
 trees  
 " cucullina .....“comes out mostly  
 when the glass is near 80 deg.,  
 and a thunderstorm is imminent”  
 " dictæa, b.....at rest, at base of  
 willows, and large poplars  
 " dictæoides ...rests on birch  
 " tritophus .....  
 " ziczac, b. ....hides in bark  
 crevices of poplar  
 T. derasa .....  
 " batis .....flies over brambles,  
 at dusk  
 C. duplaris .....  
 C. fluctuosa .....this, and C. or do  
 not always travel quietly, when  
 boxed  
 " or, b. ....s. on aspens  
 B. glandifera.....on old walls  
 " algæ.....  
 " perla.....on old walls  
 D. Orion .....at rest, on oak trunks  
 A. tridens ..... } at rest, on trees,  
 " psi..... } palings, &c.  
 " leporina .....rests on tree trunks,  
 s. high up  
 " aceris .....on trunks of sycam-  
 ore, and palings, near  
 " strigosa .....at sugar  
 " ligustri, b. ...on ash trees  
 " rumicis.....  
 " auricoma .....  
 " myricæ.....heaths, &c. in the  
 N.  
 L. conigera .....in grassy places  
 " turca.....among grass  
 " lithargyria, h.  
 " obsoleta .....in wet places  
 " Loreyi .....  
 " putrescens ...among grass  
 " littoralis .....on coast sand-hills;  
 settles on tufts of *Ammophila*  
*arenaria*  
 " pudorina .....marshes, and fens  
 " comma.....  
 " straminea ...marshes, and fens  
 " impura.....  
 " pallens.....  
 " phragmitidis marshes, and fens  
 T. Bondii .....in wet places; rests  
 on stems of grass, at night  
 S. ulvæ.....marshes, &c.  
 N. despecta .....marshes, and fens  
 " elymi .....on coast sand-hills;  
 very sluggish; hides among  
*Elymus arenarius*, and *maram*  
 grass, from which it may be  
 shaken  
 " neurica.....in wet places  
 " geminipuncta in wet places  
 G. flavago.....in marshy spots, near  
 thistles  
 H. nictitans .....at ragwort, thistle,  
 &c., and among grass

## IMAGOS]

## JULY

- A. putris .....at r. of trees  
 X. rurea .....  
 " lithoxylea.....among grass  
 " sublustris.....  
 " polyodon.....  
 " hepatica .....  
 " scolopacina...damp, grassy places  
 A. Australis.....among grass, near  
 the S. coast; comes to l.  
 N. saponaria ...at sugar, and l.  
 C. graminis, e....on commons, &c.; s.  
 at ragwort, and thistle fl.  
 P. leucophæa ...among grass  
 C. cytherea .....dry, grassy places  
 C. exulis .....has been taken at  
 sugar  
 M. abjecta .....among coarse grass  
 " anceps .....marshes, and fens  
 " furva .....in grassy places  
 " brassicæ .....hides on palings,  
 walls, &c.  
 " persicariæ ...on palings, under  
 eaves, walls, &c.  
 " connexa .....  
 " gemina.....in grassy places  
 " unanimitis .....marshes, and fens  
 " ophiogramma marshes, &c.; s. at l.  
 " fibrosa .....in marshy places  
 " oculæa .....  
 M. strigilis .....  
 " fasciuncula ...at fl.  
 " literosa.....on the coast  
 " furuncula.....  
 " arcuosa.....flies at dusk, for a  
 short time, then settles on fl.,  
 and the foliage of its food-plant  
 P. captiuncula (expolita) at Darling-  
 ton  
 C. Haworthii ...  
 G. trilinea.....  
 H. palustris .....s. comes to l.  
 A. caliginosa ...  
 C. Morpheus ...  
 " alsines .....  
 " blanda .....  
 " cubicularis ...beaten from thatch;  
 flies in hay fields  
 R. tenebrosa.....  
 A. valligera .....at fl.; mostly on the  
 coast
- A. suffusa.....  
 " fennica .....  
 " saucia .....at l., sugar, and fl.  
 " segetum .....  
 " lunigera, e. ...  
 " exclamationis often in kitchen  
 gardens  
 " corticea .....  
 " cinerea.....  
 " ripæ.....under pieces of  
 wood, &c., near the coast  
 " cursoria .....by beating, on coast  
 sand-hills  
 " nigricans .....  
 " tritici .....  
 " aquilina .....  
 " porphyrea .. among heath  
 " præcox .....on sand-hills, by the  
 coast  
 " ravida .....  
 " pyrophila .....at fl.  
 " helvetina .....  
 " lucernea .....  
 " Ashworthii ...very local  
 T. ianthina .....  
 " fimbria .....at l., and sugar  
 " interjecta . ...  
 " subsequa .....at l., and sugar  
 " Orbona.....at l., and sugar  
 " pronuba .....at l., and sugar  
 N. depuncta.....  
 " augur .....  
 " plecta .....  
 " flammatra ...  
 " c.-nigrum.....comes to l.  
 " ditrapezium...New Forest, Birch-  
 wood, &c.  
 " triangulum ...  
 " rhomboidea...at l.  
 " brunnea .....  
 " festiva .....  
 " conflua.....  
 " Dahlii .....  
 " subrosea .....in fens  
 " rubi .....  
 " umbrosa .....at ragwort fl.  
 " baia .....  
 " sobrina .....at Rannoch  
 " neglecta, e. ...at sugared rags, on  
 heather

## IMAGOS]

## JULY

- N. xanthographa*  
*P. alpina* .....has been taken in Perthshire  
*O. suspecta* .....  
 " *upsilon* .....flies over willows  
*X. cerago* .....on leaves, and twigs of lime trees, at night  
*T. subtusa* .....comes to l.  
 " *retusa, e.* .....comes to l.  
*E. fulvago, e.* ...on heath fl.; Sherwood, and the Lake District  
*D. oo* .....comes to l.  
*C. trapezina* .....  
 " *diffinis* .....comes to l.  
 " *affinis* .....comes to l.  
*E. ochroleuca* ...at fl.; rests on knapweed, thistles, &c.  
*D. irregularis* ...at rest, on viper's bugloss, and in crevices of bark of trees  
 " *carophaga, b.* at dusk, at *Silene fl.* The whole genus are attracted by fl.  
 " *capsophila* ...  
 " *conspersa*.....  
 " *casia* ..... generally on the coast  
*H. dysodea, b.*...at fl. of red valerian  
 " *serena, b.*..... on trees, palings, &c., near kitchen gardens, &c.  
*P. chi* .....on trees  
*E. viminalis, b.* rests among shallows  
*P. meticulosa* ...  
*E. lucipara* .....  
*A. herbida* ..... woods, &c.; very local  
 " *occulta*.....at rest; flies early in the morning; unquiet when boxed  
 " *tincta* .....on trees, stumps, and palings; unquiet when boxed  
 " *advena, b.* ...at fl.; rests on stumps, and trees  
*H. adusta* .....  
 " *glauca* .....  
 " *dentina*.....on trees  
 " *chenopodii* ...at fl., and l.  
 " *oleracea* .....among herbage  
 " *pisi* .....  
*H. thalassini, b.*  
 " *contigua* .....  
 " *rectilinea* .....at rest, on stones, &c., on dull days  
*C. lychnitis* .....  
 " *asteris* .....  
 " *absynthii* .....  
 " *chamomillæ*...at rest  
 " *umbratica* ...at rest, on palings, and at fl.  
*H. marginata* ...  
 " *peltigera* .....may be started from herbage  
 " *dipsacea* .....flies over fl., in the sunshine  
*A. myrtilli* .....on heaths; flies in the sunshine  
*A. sulphuralis* ...at light; s. on fl. of knapweed, in the day time; flies quickly a little way, when disturbed  
*A. luctuosa* .....flies in the sunshine, over fl., in clover fields, &c.  
 " *solaris* .....  
*E. venustula* .....  
 " *fuscula* .....s. in fir woods  
*H. unca*.....marshes, and fens  
*M. ostrina*.....in sheltered spots, on sand-hills  
 " *paula?* .....at Freshwater, Isle of Wight  
*A. urticæ* ..... } among, or near  
 " *triplasia* ..... } nettle  
*P. orichalcea* ...on the coast  
 " *chrysis* .....among nettle  
 " *bractea* .....  
 " *iota* .....among *Glechoma hederacea*  
 " *v.-aureum* ...at *lychnis fl.*, &c.  
 " *gamma* .....flies in the sunshine  
 " *interrogationis* flies wildly; rests on rocks, and stumps, in dull weather  
*A. pyramidea* ...  
 " *tragopogonis* hides in windows  
*M. typica* .....rests on walls, &c.  
 " *maura* .....s. rests on inner surface of roofs of outhouses  
*T. pastinum* .....beaten from bushes  
 " *craccæ* .....

## IMAGOS]

## JULY

- S. anomala .....at heath fl., at night, and flies along hedge-rows; remains fine but a very few days after emergence
- C. nupta, e. ....at rest, on trees and walls; soon alarmed, when approached; comes to l.
- " promissa ... } in the New Forest,  
" sponsa ..... } Norfolk, &c.; all  
                          } the genus are rest-  
                          } less when boxed
- P. ænea .....flies in the sunshine
- M. salicalis .....among long grass, and marshes, in wood-paths, and young underwood
- H. proboscidalis among nettle
- " rostralis .....in gardens; at sugar
- " crassalis, b. ....on heaths, among bilberry
- H. albistrigalis...at rush fl., and s. sugar
- " costæstrigalis at rush fl., and s. sugar
- S. turfosalis .....in marshy places
- R. sericealis .....in marshes, and damp woods
- S. emortualis ...has been taken at sugar
- H. derivalis .....comes to l.
- " barbalis .....beaten from undergrowth
- " tarsipennalis woods, &c.
- " grisealis .....woods, &c.
- " cribralis .....in fens, &c.
- A. flexula .....has been beaten from hedges
- O. dentalis .....on the coast, among viper's bugloss
- P. fimbrialis .....comes to l.
- " farinalis .....in stables, corn stores, &c.
- " glaucinalis ...in thatch, and at l.
- A. pinguinalis ...on walls of stables, houses, granaries, &c.
- cuprealis .....occurs in houses
- C. angustalis.....
- P. punicealis.....edges of woods, &c.
- " purpuralis(2?) flies by day; rarely taken at light
- H. cespitalis.....in grassy places
- E. cingularis.....on grassy hill-sides, &c.
- E. octomaculis in woods
- A. nemoralis ...at Holme Bush, near Henfield, Sussex
- E. flammealis ...on sloping hills, and cliffs, near the sea, among fern; very local [places
- D. literalis ..... generally in dry
- N. ciliaris .....in fens, &c.
- S. punctalis .....among Iris fœtidissima
- C. lemnalis .. ..flies over duckweed-covered ponds, at dusk; comes to l.
- P. stratiotalis ...flies at dusk, among water-plants; comes to l.
- " nymphæalis... } rest among water-  
" stagnalis ..... } plants; fly at  
                          } dusk
- A. niveus .....at rest, on twigs, &c., in weedy ponds, and rivers, close to the water's edge, or flying slowly over the surface
- B. flavalis .....in chalk, and limestone districts, on the S. coast
- " hyalinalis.....in chalk, and limestone districts
- " verticalis .....among nettle
- " lancealis .....in damp woods, or lanes, near
- " terrealis .....Lynmouth, Conway
- " asinalis .....at light
- " urticalis .....among nettle
- E. crocealis .... among fleabane
- " verbascalis .. among Teucrium scorodonia
- " sambucalis ...among elder
- P. forficalis .....in gardens
- " margaritalis...fens, &c.
- " stramentalis...beaten from brake fern, and undergrowth, in woods, fens, &c.; comes to l.
- S. sticticalis .....among Artemisia; at l. and fl.
- " palealis.....among wild carrot, and Peucedanum, on the S.E. coast
- " cinctalis .....in clover fields; comes to l.

## IMAGOS]

## JULY

- S. alpinalis .....on the tops of mountains, in Perthshire, &c.  
 " lutealis .....in hedges  
 " olivalis .....in hedges  
 " prunalis ... .in hedges  
 L. pulveralis ...single specimens have occurred at Folkestone, Isle of Wight, and Ranworth  
 S. ambigualis ...s. at sugar, and at rest. Many of the genus, which are mostly moss, and lichen-feeders, may be found at rest on walls, palings, &c.  
 " basistrigalis ...at rest, on oak trunks; s. at sugar; has occurred among birch, and alder, in Tilgate Forest, Sussex  
 " Zelleri .....beaten from old willows, and hawthorns  
 " ulmella.....on trunks of wych elm  
 " cembræ .....on tree trunks, &c.  
 " murana.....among heath  
 " mercurella ...  
 " cratægella ...  
 " resinea .....on ash trunks; very local  
 " phæoleuca ...  
 " truncicolella...on fir trunks  
 " atomalis .....among heath  
 " gracilalis .....  
 " alpina .....  
 " pallida .....in fens, &c.  
 P. cerusellus.....in grassy places, among shingle  
 " alpinellus..... in sandy, grassy places, especially in fir woods; not a mountain species  
 C. verellus .....among grass, and moss  
 " falsellus .....common in England, more local in Scotland  
 " dumetellus ...local  
 " ericellus .....on moss, among heath; local  
 " sylvellus .....in fens, &c.; local  
 " hamellus .....in grassy places, among heath  
 " pascuellus.....damp meadows, and moors; local; s. at sugar  
 C. uliginosellus in fens; local  
 " furcatellus ...a mountain species in Britain, not below 2,000 ft.  
 " margaritellus damp, grassy places, in open woods, more especially in the Highlands  
 " myellus .....Rannoch, Braemar, &c.  
 " pinetellus ...best obtained at night, by searching dry banks  
 " latistriellus ...on coast sand-hills; local  
 " perlellus .....local  
 " Warringtonellus on mosses and moors, and on the coast; very local  
 " selasellus .....fens, and wet meadows  
 " tristellus .....in damp, mossy places  
 " fascelinellus...on the coast, near Yarmouth; at rest, on the sand  
 " inquinatellus among alder bushes, and on heaths; s. at sugar  
 " contaminellus dry pastures; rather local  
 " geniculellus...among thick grass  
 " culmellus .....common in fields  
 " hortuellus.....in grassy places  
 " paludellus ...in the Norfolk fens  
 C. cicatricellus...in wet places  
 " phragmitellus marshes, and fens  
 S. forficellus.....weedy ditches, &c.  
 " mucronellus...fens, &c.  
 " gigantellus ...marshes, &c.  
 A. lotella .....on coast sand-hills; flies at dusk  
 " farrella .. .....on the coast  
 I. carnella.....local  
 M. cribrella .....among thistles, often on hills  
 H. sinuella .....Brighton, &c.  
 " nimbella .....among Jasione montana, and thistles, and ragwort, on the coast  
 " nebullella ..... among Carduus nutans, &c.; very local  
 " binævella.....local  
 " senecionis, 2? ..... [coasts  
 N. achatinella ...on the S. and E.

## IMAGOS]

## JULY

- E. elutella ..... in grocers' ware-  
houses &c.; also in thatch  
 " semirufa .....local  
 " pinguis.....rests on ash trunks;  
comes to l.  
 " cinerosella ...local  
 C. bistriga .....local  
 P. interpunctella in corn, seed, and  
grocers' warehouses, &c.  
 N. genistella.....among furze; Isle of  
Wight, and New Forest  
 G. canella..... Folkestone, Hast-  
ings, &c.  
 P. betulella .....among birch, &c.  
 " carbonariella among burnt heath,  
and birch  
 " dilutella .....  
 " subornatella...  
 " obductella ...  
 " ornatella .....local  
 " abietella .....may be beaten from  
young fir trees  
 " roborella .....among oak  
 P. palumbella ...among heath  
 R. formosella ...at light  
 " consociella ...s. at sugar  
 " advenella .....among hawthorn  
 " marmorea.....among old sloe  
bushes  
 " suavella .....among sloe  
 " tumidella .....among oak  
 " rubrotribiella  
 O. ahenella .....  
 M. sociella .....near beehives  
 " anella .....on the coast  
 M. alveariella ...among beehives, to  
which the larva, which lives on  
the wax, is destructive  
 H. prasinana ...woods  
 " quercana.....woods; at sugar; and  
may be beaten from trees  
 S. Revayana ...woods, &c.  
 T. podana .....hedges, &c.  
 " piceana.....woods  
 " cratægana ...oak woods, in the S.  
 " xylosteania ...woods  
 " sorbiana .....woods  
 " rosana .....  
 " dumetana.....marshes, and fens  
 " diversana.....Kent, Surrey, Essex  
 T. cinnamomeana... Kent, Surrey,  
Hants, Essex, Norfolk, &c.  
 " heparana .....hedges  
 " ribeana.....hedges  
 " corylana .....woods  
 " unifasciana ...hedges  
 " semialbana ...on the chalk  
 " costana.....fens, and marshes  
 " viburnana ...boggy heaths, and  
moors  
 " icterana .....dry banks  
 " viridana .....  
 " adjunctana ...  
 " Branderiana Essex, Cambridge,  
Hants, &c.  
 D. Grotiana .....among oak, in woods  
 " gnomana .....woods  
 A. Gerningana...heaths, and moors  
 CE. Pilleriana ...South coast  
 L. Boscana .....among elm  
 P. mixtana, h. ...moors  
 " Caledoniana moors  
 " aspersana.....dry banks, Yorks,  
&c.  
 " Shepherdana fens  
 " lipsiana.....Witherslack, Ran-  
noch, &c.  
 T. caudana .....woods, and fens  
 " contaminana hawthorn hedges,  
&c.  
 D. lorquiniana ...fens  
 " Lœfflingiana...among oaks, in  
woods, and hedges  
 " Holmiana ...hedges  
 " Foskaleana ...maple hedges, &c.  
 " Conwayana ...  
 P. Lecheana.....woods  
 D. Hartmanniana among willows  
 " semifasciana among sallows  
 P. picana .....on birch trunks  
 " sororculana ... among birch, and  
willows  
 " prælongana...among birch  
 " ochroleucana among rose  
 " sellana .....chalk districts  
 " marginana ...damp woods, heaths,  
and fens  
 " carbonana ...woods, and fens  
 A. salicana .....among willow, and  
poplar

## IMAGOS]

## JULY

- S. lariciana* .....in larch woods  
 " *ocellana* .....among alder  
 " *neglectana* ...among willows  
 " *incarnatana* ...among *Rosa spinosissima*, on the coast  
 " *suffusana* .....hedges  
 " *rosæcolana* ...in gardens, among roses  
 " *roborana* .....woods  
*P. tripunctana* ...gardens, and hedges  
*A. Udmanniana* among bramble  
*S. achatana* ..... among hawthorn, and sloe  
*S. euphorbiana*...S. coast  
 " *bifasciana*.....among Scotch fir  
 " *abscisana* ...at Folkestone, among *Inula*, and thistles  
 " *littorana* .....banks, on the coast  
 " *cespitana* .....on the coast, and other sandy districts  
 " *conchana* ...meadows, & marshes  
 " *lacunana* .....a smoky-black var., with lustrous lines, is found in the Norfolk fens, and also a small var.  
 " *urticana* .....woods  
 " *micana* .....marshes  
 " *irriguana* .....grassy slopes of Scotch mountains  
 " *Doubledayana*... Ranworth, and Horning fens  
*M. Schulziana* ...heaths, and mosses  
 " *Ratzeburgiana* among spruce, and Scotch fir  
*E. mygindana* ...Northern heaths  
 " *rufana* .....  
*O. antiquana* ...corn fields  
 " *striana*.....dry banks, and rough pastures  
*E. fractifasciana* downs  
 " *quadrana* .....Kent, Surrey, &c.  
*C. cinctana* .....Folkestone  
 " *politana* ... ..heaths, &c.  
*S. nubilana* .....hawthorn hedges  
 " *Peterana* .....dry banks  
 " *subjectana* ...  
 " *virgaureana* ...  
 " *chrysantheana* dry banks  
 " *Wahlbomiana*  
 " *pasivana* .....on the coast  
*S. abrasana* .....  
 " *hybridana* ...among elm, and sloe  
 " *penziana* .....  
 " *Colquhounana* wild hills, on the Scotch, and Irish coast  
*S. ictericana*.....hay fields, and sand-hills  
*B. lanceolana* ...among rushes  
 " *furfurana* .....local  
*P. unguicana* ...heaths  
 " *biarcuana*.....among sallows  
 " *derasana* .....Southern woods  
 " *Mitterpacheriana* oak woods  
*G. ramana* .....among birch  
 " *misana* .....among willow; local  
 " *nigromaculana* among ragwort  
 " *campoliliana* among willow  
 " *minutana* .....on poplar  
 " *trimaculana*...among elm  
 " *Penklerriana*...among nut, & alder  
 " *geminana*.....moors, among *Vaccinium*  
 " *ravulana* .....Kent, and Essex  
*P. Demarniana*...Southern woods  
*H. cruciana* .....among willow  
*B. angustoriana* garden hedges  
*P. bilunana* .....  
 " *corticana* .....among oaks  
 " *occultana*.....among young firs  
 " *semifuscana*...among sallows  
*E. bimaculana* ...woods  
 " *cirsiana* .....in lanes  
 " *Brunnichiana*...in waste places, among coltsfoot  
 " *turbidana*.....Preston  
 " *foenana*.....on the coast, and in fens, among *Artemisia vulgaris*  
 " *nigrocostana* in lanes, among *Stachys* [mond, Yorks  
 " *signitana* .....Witherslack, Rich-  
 " *grandævana*...S. Shields, among coltsfoot, on ballast heaps; flies at dusk, and rests on the leaves  
 " *trigeminana*.....fields, and dry banks among ragwort  
 " *tetragonana*...among black briony  
 " *populana* .....among willow  
 " *obscurana* ...Darent  
*O. ulmana* .....Witherslack, Harrogate, Norfolk, Surrey, &c.

## IMAGOS]

## JULY

- S. spiniana .....hawthorn hedges  
 " ianthinana ...  
 " rufillana .....among wild carrot  
 C. ravulana .....Kent, and Essex  
 " hyrciniana .....among spruce  
 " ustomaculana N. of England, and  
 Scotland  
 " nanana .....among spruce  
 P. mercuriana ...Northern hills, and  
 mountains  
 R. Buoliana .....among Scotch fir  
 " pinicolana ...among Scotch fir  
 " pinivorana ...among Scotch fir  
 " sylvestrana ...Bournemouth, Kent  
 C. grossana .....among beech  
 E. nigricana, b. among peas  
 S. dorsana .....railway banks  
 " coniferana .. among Scotch fir  
 " Leplastrierana among wild cab-  
 bage, on the S.E. coast  
 " corollana .....among aspen; local  
 " internana .....Eastern counties,  
 &c., among furze [trefoils  
 " composana ..among clover, and  
 " redimitana ...among under-growth  
 " regiana .....among sycamore  
 " roseticolana ...among wild rose  
 " orobana .....Darlington, Scarboro'  
 D. politana .....dry banks, among  
 yarrow; Norfolk, Kent  
 " alpinana .....at river sides, among  
 tansy  
 " Petiverana ...among yarrow  
 " saturnana .....Isle of Wight, and  
 grassy places in the S., and  
 Scotland  
 " acuminatana railway banks  
 " herbosana, b. Scotland, and N. of  
 England [vulgaris  
 " simpliciana ... among Artemisia  
 " tanacetana ...Exeter  
 " consortana ...meadows  
 C. ulicetana .....among furze  
 " Juliana .....among oak  
 " microgrammana amongrest harrow  
 " hypericana ...among Hypericum  
 " parvulana .....Isle of Wight  
 " maritmana ...coast of Essex, and  
 Kent; among Artemisia mari-  
 tima  
 C. cana .....among thistles  
 " fulvana .....chalky districts, among  
 Centaurea scabiosa  
 " Hohenwarthiana among thistles  
 " Scopoliana ... among Centaurea  
 nigra  
 " cœcimaculana Mickleham  
 " æmulana .....Southend  
 " expallidana ...dry banks  
 " citrana .....Lancashire, and S.  
 coast  
 T. mediana .....near London, Folkes-  
 tone, Fulborne  
 S. vibrana .....among thistles; very  
 local  
 C. scintilulana ...marshes  
 E. dubitana ..... Farnham, Bristol,  
 Scotland  
 " atricapitana...among ragwort  
 " sodaliana ..... among Rhamnus  
 catharticus  
 " ambiguana ... among Rhamnus  
 frangula  
 " Degreyana ...Norfolk  
 " angustana ...on heaths, &c.  
 " vectisana .....Fleetwood, and Isle  
 of Wight, among sea-plantain  
 " rupicolana ...marshes  
 " flaviciliana ...S. downs  
 " subroseana ...woods, in the S.  
 " implicitana ...woods, in the S.  
 " anthemidana, 2. chalk districts  
 " pallidana .....cliffs  
 X. Zoegana ..... among scabious,  
 and knapweed  
 " hamana .....among thistles  
 C. tesserana, b. on the coast, &c.  
 " rutilana .....among juniper  
 A. sub-beumanniana in chalk-pits,  
 and dry fields  
 " zephyrana ...S. coast  
 " badiana .....railway banks, &c.,  
 among burdock  
 " cnicana .....among thistles  
 C. dipoltana .....on chalk, in the S.  
 " Smeathmanniana London district,  
 Darlington  
 " stramineana...chalky places  
 " alternana .....Folkestone  
 " inopiana .....among Inula



## IMAGOS]

## JULY

- A. osseana .....marshes  
P. betulina (anicanella) Hampstead  
" radiella, e. ...  
P. Verhuellella...flies in the sunshine,  
among hartstongue, and Asplen-  
ium  
X. argentimaculella  
P. Birdella .....in pasture fields,  
among grass  
" bisontella.....in heathy places  
" vaculella .....frequents houses  
S. chorargella ...Cumberland  
" picarella .....Manchester, and  
Newcastle  
" granella .....about granaries, and  
flour mills  
" cloacella .....  
" arcella .....
- T. imella ..... scarce, and local ;  
found where the fields are  
manured with furrrier's refuse  
" ferruginella ...  
" rusticella ... ..  
" tapetzella .....common, in houses  
" nigripunctella Witherslack, &c.  
" confusella.....Howth, Hartlepool  
" caprimulgella...Hackney, Hyde  
Park  
" misella .....in outhouses  
" pellationella ...common, in houses,  
its larva feeding on cloth, fur, &c.  
" fuscipunctella  
" pallescentella in warehouses, and  
poulterer's shops  
" ganomella ...woods, and hedges  
" merdella ...Darlington, Liverpool,  
Manchester  
" biseliella .....in houses, and mu-  
seums, its larva feeding on hair,  
fur, and feathers  
" simpliciella ...Mickleham, Dover  
" nigripunctella Yorks, &c.  
" semifulvella ..  
" sub-ammanella has occurred at  
Tor Wood, Stirling  
" perochraceella Rannoch  
L. luzella ..... Cambs]  
N. metaxella ...Witherslack, Yorks,  
A. viridella .....in hedges, and  
among oak
- N. Schiffermillerella ..... Southend,  
Dareth  
" minimella ...  
S. comptella .....among sloe  
" cæsiella .....among sloe  
" lutarella .....on hedges  
S. cratægella.....on hedges  
Y. vigintipunctella, e. Guildford, &c.  
" plumbella..... among Euonymus  
europæus  
" irrorella .....near Wandsworth  
" padella.....among hawthorn  
" cognatella ... among Euonymus  
europæus  
" evonymella ...among Prunus padus  
P. Curtisella .....among ash  
P. xylostella.....among Cruciferæ  
" porrectella ...in gardens  
" annulatella...Howth, Castle Eden,  
Scotland, Portland, &c.  
" Dalella.....on moors  
H. sequella .....on trunks of syc-  
amore and maple  
" vittella .....on trunks of elm,  
and beech  
Y. lucella .....among young oaks  
" horridella.....New Forest  
" asperella, e. formerly at Glanville's  
Wotton  
H. scabrella.....  
" nemorella ...among honeysuckle  
" harpella .....among honeysuckle  
O. sparganiella in fens, among Spar-  
ganium  
P. quercella .....among oak  
E. Allisella .....coasts of Cheshire,  
Lancashire, Norfolk, &c., among  
Artemisia vulgaris  
D. costosella ...among furze  
" liturella .....among Centaurea  
" assimilella ...among broom  
" nanatella .....among thistle  
" atomella .....among broom  
" arenella .....  
" propinquella, h.  
" subpropinquella, h.  
" Alstræmeriella, h. among Conium  
maculatum  
" cinifonella, h. Rannoch  
" vaccinella.....Lytham

## IMAGOS]

## JULY

- D. hypericella ...among Hypericum  
 " conterminella among willows  
 " anglicella.....among Anglica syl-  
 vestris  
 " carduella .....  
 " ocellella .....among willow  
 " appianella, h.  
 " pimpinella ...  
 " bipunctosella, e. New Forest, Isle  
 of Wight  
 " albipunctella, h.  
 " pulcherimella among Bunium  
 flexuosum  
 " cnicella.....  
 " Douglasella.....Fleetwood, Redcar,  
 Folkestone, Isle of Wight  
 " Weirella .....Preston, Lewisham,  
 Lewes  
 " ultimella .....marshes, &c.  
 P. gibbosella ...  
 G. cinerella .....  
 " rufescentella...marshes, &c.  
 " gerronella ...marshes, &c.  
 " vilella .....Gravesend, Worthing,  
 Folkestone  
 " malvella .....in gardens  
 " populella .....  
 " nigra.....  
 " temerella.....Lytham  
 " lentiginosella  
 " ericetella.....moors, and heaths  
 " mulinella.....among furze  
 " palustrella ...in fens  
 " sororculella ...among willow  
 " pelliella.....Manchester, West  
 Wickham  
 " alacella .....Leatherhead  
 " terella .....  
 " desertella.....sand-hills, on the  
 coast  
 " expolitella ...Darlington, Skid-  
 daw, Pentlands, &c.  
 " acuminatella  
 " artemisiella...coast sand-hills,  
 Manchester, &c.  
 " albipalpella...  
 " arundinetella Hackney, Cambs  
 senectella ...in lanes, &c.  
 " mundella.....coast sands  
 " similella .....  
 G. affinella .....  
 " boreella .....Scotland  
 " galbanella ...Rannoch  
 " basaltinella ...Cambs, Addington  
 " domesticella  
 " rhombella ..... among crab, in  
 hedges, &c.  
 " Lyellella.....Castle Eden, Wither-  
 slack, New Forest, &c.  
 " vulgella .....hedges, &c.  
 " fugitivella ...on trunks of elm,  
 and beech  
 " distinctella ...on the coast, and in  
 sandy places  
 " maculella .....  
 " fraternella ...  
 " muscosella ...  
 " maculiferella among Cerastium  
 semidecandrum  
 " leucamelanella Howth, Isle of  
 Man, Lizard  
 " Hubnerella ...  
 " marmorella ...coast sand-hills  
 " instabilella ...on the coast  
 " ocellatella ...Preston, Folkestone,  
 Lizard; comes to sugar  
 " atriplicella ..... South Shields,  
 Scarboro'  
 " sequacella ...  
 " leucateila.....  
 " albicapitella...  
 " nanella.....  
 " Mouffetella ...  
 " dodecella.....among fir trees  
 " tenebrella.....  
 " ligulella .....among Lotus major,  
 on railway banks, &c.  
 " vorticella .....railway banks, &c.  
 " tæniolella.....  
 " Sircomella ...railway banks, &c.  
 " coronilella ...Mickleham  
 " anthyllidella railway banks, and  
 coast sand-hills  
 " atrella .....among Hypericum  
 " bifractella ...Folkestone, Mickle-  
 lucidella .....in marshes [ham  
 " lutulentella ...near Bristol, Dart-  
 ford Heath, &c.  
 " gemmella.....Birkenhead, Bristol,  
 Manchester

## IMAGOS]

## JULY

- G. ericinella .....heaths  
 " inopella .....  
 " subocellella ...  
 " osseella .....flies at dusk, among  
 grass  
 " Knaggsiella ...  
 " umbrosella ...  
 " sangiella .....  
 " pinguinella ...  
 P. lappella .....  
 " Metzneriella  
 " carlinella .....  
 " neuropterella Deal, Mickleham  
 C. cytisella .....  
 A. spartiella.....among furze  
 " genistella.....Morecombe, Alkam,  
 Pembury  
 M. marginella ...Witherslack, New-  
 castle, Sanderstead  
 " juniperella .. Perthshire  
 N. verbascella .. near Norwich,  
 among *Verbascum pulverulentum*  
 " Durdhamella  
 S. parenthesesella  
 P. bicostella.....on moors, &c.  
 H. Christierninella, b. Castle Eden,  
 Darenth, Greenhithe, Seven-  
 oaks  
 D. sulphurella ...  
 " oliiviella .....Darenth, Tenterden,  
 Lewes, &c.  
 C. flavimaculella among *Angelica*  
*silvestris*  
 " trisignella ...  
 " stipella ..... Preston, Staleybridge,  
 Lake District, Yorks, Rannoch  
 " formosella ...Wanstead  
 " lunarella .....  
 " lambdella.....Charlton, Bristol  
 " subochreella Cambs, Lewes, &c.  
 " fuscescentella  
 " pseudo-spretella common in houses  
 C. Kindermanninella, in houses  
 E. fenestrella ...is found all the year  
 round, in houses, but is most  
 numerous about this season  
 B. grandipennella among furze  
 " fusco-æneella  
 " senescentella
- B. fuscocuprella ...on railway banks,  
 &c.  
 " cicadella ...has occurred at  
 Brandon  
 " torquatella ...Scotland  
 P. Leuwenhoekella  
 " Latreillella ...  
 A. granitella.....  
 G. Thrasionella...among rushes  
 " cladiella .....among rushes, in  
 fens, &c.  
 " Haworthella  
 " equitella, b. among *Sedum acre*  
 D. ocnerosomella among *Echium*  
*vulgare*; very local  
 A. ephippella ...local  
 " nitidella .....among hawthorn  
 " albistriella ...among sloe  
 " conjugella ...among wild moun-  
 tain ash  
 " semifuscella...in hedges, among  
 sloe, and hawthorn  
 " mendicella ...among sloe  
 " glaucinella ...among oak  
 " retinella .....among birch  
 " abdominella, b. on juniper, on  
 the coast, &c.  
 " dilectella .....  
 " Andereggiella Witherslack  
 " curvella .....among wild apple  
 " sorbiella .....among wild moun-  
 tain ash  
 " pygmæella.....among sallow  
 " Gœdartella ...among alder, and  
 birch  
 " Brochella.....among alder, and  
 birch  
 " aurulentella Sanderstead, Mickle-  
 ham, Tenterden  
 C. farinatella ...among Scotch fir  
 " Gysselinella...Rannoch  
 O. pinariella, 2. among Scotch fir  
 Z. saxifragæ .....Braemar  
 G. stigmatella ...among willow, &c.  
 " syringella.....in gardens, among  
 lilac  
 " omisella, e.  
 " auroguttella...  
 " Kollariella ...  
 C. Brogniartella

## IMAGOS]

## JULY

- O. torquilella ...among sloe  
 " Loganella .....
- C. Fabriciella ...on railway banks  
 " deauratella ...  
 " alcyonipennella among Centaurea nigra, in sheltered places  
 " Frischella ... Portland, Isle of Wight, and Dorset coast  
 " Wockeella ...  
 " ochreella .....
- " salicornella ...Fleetwood  
 " lixella .....on the coast, among grass  
 " vibicella .....
- " conspicuella  
 " pyrrhulipennella  
 " albicostella ...among furze  
 " vulnerariella  
 " anatipennella  
 " palliatella ...  
 " ibipennella ...  
 " currucipennella among willow  
 " niveicostella...  
 " discordella ...among Lotus major  
 " genistæcolella among Genista anglica  
 " saturatella ...among broom  
 " onosmella ...among Echium vulgare  
 " inflatella .....among Silene inflata  
 " therinella.....among thistles  
 " troglodytella among Eupatorium cannabinum  
 " lineolella .....on Ballota nigra  
 " murinipennella among Luzula sylvatica  
 " caespititiella...among rushes  
 " annulatella (Tengstromella) among Chenopodium  
 " salinella .....
- " apicella (cacuminatella) fens, and marshes  
 " argentulella..... among Achillea millefolium  
 " virgaureella ...  
 " hemerobiella  
 " juncicolella ...among heath  
 " laricella .....among larch  
 " albitarsella ... among Glechoma hederacea
- C. nigricella .....among hawthorn  
 " fuscadinella ...  
 " orbitella .....
- " vitisella .....
- " viminetella ...among willow  
 " solitariella ..... among Stellaria holostea  
 " lutipennella...among oak  
 " artemisicolella among Artemisia  
 " badiipennella among hawthorn  
 " limosipennella  
 " chalcogrammella among Cerastium arvense  
 " melilotella .. railway banks, &c.  
 " artemisiella ...
- S. pedella.....near Brandon, Suffolk
- C. Druriella .....
- " orichalcella, b.  
 " Lienigiella ...in fens, among reed
- B. præangustella on poplars, and willows  
 " pinicolella ...among Scotch fir
- O. v.-flavella ...in wine vaults, and cellars
- C. insecurella, e. at Stoat's Nest, near Croydon  
 " Illigerella.....  
 " chaerophyllella
- L. paludicolella  
 " lacteella .....
- " miscella .....
- " conturbatella  
 " Stephensella  
 " ochraceella ...among Epilobium  
 " phragmitella among Typha latifolia  
 " atra (Hellerella) among hawthorn  
 " rhamniiella ...among buckthorn
- C. Linneella.....  
 " bimaculella...Black Park, and Leith Hill
- H. Roesella.....formerly near London
- A. profugella ...Witherslack, Darlington, and Kemsing, Kent  
 " æratella .....
- E. Gleichenella  
 " magnificella...  
 " apicipunctella  
 " luticomella ...  
 " flavicomella...

## IMAGOS]

## JULY

- E. Kilmunella ...moors, marshes, and  
bogs, among coarse grass  
" stabilella .....  
" Gregsonella...  
" nigrella .....  
" perplexella ...  
" Paludum .....  
" humiliella ...  
" subobscurella  
" zonariella.....  
" cingilella .....  
" adscietella ...  
" cerussella..... among reeds, in  
marshes, &c.  
" rhyncosporella  
" eleochariella  
" biatomella ...  
" serricornella  
" triatomella ...in chalk pits  
" dispunctella...  
" collitella .....  
" pollinariella  
L. corylella .....among nut  
" spinicolella ...among sloe  
" spinolella.....  
" quercifoliella among oak  
" scopariella ...among broom  
" ulicolella .....among furze  
" alnifoliella ...among alder  
" trifasciella ...among honeysuckle  
P. suffusella.....among willow  
" salignella.....  
C. scitella .....  
" Wailesella ...among Genista  
O. salaciella .....among sorrel  
" crepusculella  
" spatulella ..... [lium  
B. maritimella ...among Aster tripo-  
frangulella ...among buckthorn  
N. quinquella ...  
" poteriella .....  
" angulifasciella  
N. centifoliella...  
T. immundella...  
B. quadrimaculella  
A. Bennetii.....Sheppey, and the  
Essex coast  
P. rhododactylus among rose  
" Bertrami, b.  
" ochrodactylus among tansy  
" isodactylus ...in marshes, among  
Senecio aquaticus  
" Zetterstedtii ... Darlington, Scar-  
boro', Lynmouth  
" acanthodactylus on heaths  
" lætus .....on the "Breck" sand  
of Norfolk and Suffolk  
" punctidactylus  
" parvidactylus  
" hieracii.....  
" pilosellæ .....Cambs, Mickleham  
" phæodactylus Cambs, Mickleham  
" serotinus .....  
" plagiodyctylus among Scabiosa  
columbaria  
" zophodactylus  
" lithodactylus among Inula dysen-  
terica  
" Liengianus ... among Artemisia  
vulgaris ; Ventnor, Deal  
" tephrodactylus  
" osteodactylus Witherslack, Scar-  
boro'  
" microdactylus among Eupatorium  
cannabinum  
" Paludum .....  
" brachydactylus Carlisle, Norfolk  
" galactodactylus among burdock  
" spilodactylus Isle of Wight  
" baliodactylus  
" tetradactylus among thyme  
" pentadactylus among Convolvulus  
sepium, and C. arvensis  
" dichrodactylus

# AUGUST

## OVA]

Those who wish for eggs of Butterflies, for purposes of preservation, &c., will find many species obtainable this month, while if the opportunity, now presented, be lost, very few will be found in succeeding months of the year. Where the food-plant of the species sought for is abundant, and the Imago is known to frequent the locality, much time may be sometimes saved by collecting conspicuous sprays of the plant into a bag, and looking for the eggs afterwards, at home, with the aid of a magnifying glass.

- L. sinapis, s. ...on Vicia, cracca, and  
Orobus tuberosus; long, stand-  
ing on end, curved, yellow-white
- P. Brassicæ .....on cabbage, &c.; in  
groups; conical, ridged, yellow
- " rapæ .....on Cruciferæ, migno-  
nette, and other garden plants
- " napi .....on Cruciferæ
- " Daplidice .....on wild mignonette,  
and weld
- C. Edusa, s. ....on white clover,  
lucerne, &c.
- A. Aglaia .....on dog, and sweet  
violet, and wild heartsease
- " Niobe .....on dog, and sweet  
violet
- " adippe .....on dog, and sweet  
violet
- " Latona .....on violet, and hearts-  
ease
- E. Medea..... on moorland poa,  
and other grasses; large, nearly  
globular, at first greenish-yellow,  
afterwards pinkish-grey, speck-  
led with claret-brown
- S. Semele, b. ...on Triticum repens
- T. quercus .....on oak twigs
- " w-album .....on wytch elm, also  
elm; on the twigs; whitish
- T. pruni .....on sloe twigs
- " betulæ .....to Mar., on twigs of  
sloe
- L. Ægon .....on Ornithopus per-  
pusillus; white. Do not hatch  
until about March
- " agestis .....on Erodium circ-  
tarium
- " Alexis.....on Lotus cornicu-  
latus
- " Corydon .....on Hippocrepis co-  
mosa; on chalk, and sandstone  
downs, and hills
- " argiolus .....on ivy; on the fl-  
stalks; white
- H. comma .....to Mar., on trefoil,  
and other Leguminosæ
- L. salicis .....on poplar, willow,  
&c.; covered with white  
down
- " dispar .....on the trunks of  
sloe, hawthorn, and various  
fruit trees; in a conical heap,  
covered with down
- " monacha .....to Mar., on oak,  
beech, fir, birch, apple, &c.
- B. neustria .....on hawthorn, sloe,  
fruit trees; in batches, round  
twigs, and branches

## OVA]

## AUGUST

- B. castrensis.....on *Artemisia maritima*, *Daucus maritimus*, &c.
- E. vespertaria ...on nut
- " apiciaria ..... to April, on poplar, willow, sallow
- C. elinguarina ...to Feb., on oak, honeysuckle, hawthorn, sloe; also heath, bilberry, &c.; brick-shaped, large, purplish-slate colour
- F. pinetaria .....on bilberry
- S. sacraria .....on dock, and chamomile; at first pale greenish-yellow, afterwards bright red
- A. citraria.....on wild carrot, trefoil; &c.; generally near the coast
- L. olivata, e. ...on *Galium Mollugo*; rather small, oval, plump; at first pale straw, then red, and at last a pale livid hue
- E. unifasciata ...on *Odontites rubra*
- E. subciliata ..... to April, on maple; at footstalk of leaf
- M. rubiginata ...on alder; large
- " montanata ...on primrose
- P. vitalbata .....on *Clematis vitalba*
- S. vetulata .....on buckthorn
- C. russata .....on strawberry, birch, hawthorn, sallow, &c.; singly, large, flattish, dingy yellow
- " immanata.....probably on alder, and other trees, and strawberry, bilberry, &c.; large, flat, yellow
- " prunata .....on currant, gooseberry, sloe, &c.; on the bark, large
- " testata .....to April, on heath, birch, sallow, poplar, &c.; singly, large
- " populata .....on bilberry, whortleberry, poplar; globular, large, yellow
- " fulvata .....on dog rose; rose-pink, large
- " pyraliata .....to Mar., on *Galium*, and hawthorn; large
- " dotata .....to April, on black, and red currant; large
- E. lineolata .....on *Galium verum*, on the coast; in clusters, oval; standing on the smaller end; yellow, changing to pale brown
- T. chaerophyllata on *Anthriscus sylvestris*, and *Bunium flexuosum*
- X. lithoxylea ...amongst grass; small, globular, pale yellow
- P. captiuncula ...on ——? At Darlington. Globular, pale straw colour
- C. Morpheus ...on dock, teasle, &c.
- " alsines .....on chickweed, &c.
- " cubicularis ...on grasses, pulse, and grain
- A. Puta .....on dandelion, lettuce, carrot, &c.
- N. depuncta ...on sorrel, and other low plants; globular, slightly flattened above, and ribbed, pale straw colour, in the centre a brown spot, and encircled at some distance with brown
- " xanthographa on plantain, &c.
- C. xerampelina, e. on ash; probably in the chinks of the twigs, and the buds, &c.; round, smooth, dirty-white
- T. subtusa.....to Mar., on poplar; upon the twigs
- C. trapezina .....on oak, and many other trees
- P. chi .....to Mar., on dock, hawthorn, sallow, and probably lettuce, sow thistle, tea tree, &c.; purplish-brown
- " xanthomista, e. on *Plantago maritima*, in exposed places, on the coast (notably the Isle of Man); and also, probably, on campion, violet, harebell, &c.
- E. viminalis .....on sallow
- M. typica ..... on dock, low plants, &c.; in clusters upon the leaves
- C. sponsa .....on oak; upon the twigs
- H. proboscidalis on nettle; rather large, pale yellow
- C. pinetellus ...amongst moss, on dry banks; oblong, oval, whitish

## LARVÆ]

## AUGUST

We now begin to find many of our larvæ commencing a life of feeding, which, on and off, will not terminate until May, or June, of the following year. These deliberate eaters appear in the lists with the contraction "h.," signifying that they hibernate. Most of these are now quite small, and few will repay the trouble and risk of keeping all the winter; for even with the food-plant in a growing state, large numbers of hibernating larvæ always die in confinement; they are, therefore, generally better left until the spring, unless special reasons exist for trying to rear them. Sometimes part of a brood, in confinement, will complete its change to the pupa, or even the perfect state, in the autumn, while the other part will not do so until the spring.

- P. Machaon.....Peucedanum palustre, and other Umbelliferæ; in fens
- P. cratægi, h. ...hawthorn, sloe, and orchard trees
- A. Paphia, h. ...dog, and sweet violet; in a slight web, on, or near the ground
- " Aglaia, h. ....dog, and sweet violet, and wild heartsease
- " Niobe, h. ....dog, and sweet violet, and wild heartsease
- " adippe, h. ...dog, and sweet violet
- " Latona.....dog, and sweet violet, and wild heartsease
- M. Artemis, h....scabious, plantain, woodbine; will also eat foxglove, wood sage, &c.
- " Athalia, h. ...narrow-leaved plantain, foxglove, wild germander
- V. c.-album.....nettle, elm, hop, sloe, currant
- " urticæ .....nettle
- L. sibylla, h. ...honeysuckle
- A. Iris, h. ....sallow, poplar
- A. Galatea, h. ...timothy, and other grasses
- E. Epiphron, h. Poa annua, Festuca ovina, and small rushes; in mountain bogs
- S. Semele, h. ...quakinggrass, couch grass, &c.; on dry hill-sides, and on sand-hills along the sea-shore; feeds by night; hides at the r., and under clods by day
- " Ianira, h....meadow grasses [&c.]
- " Tithonus, h. annual meadow grass,
- " hyperanthus, h. annual meadow, millet, and other grasses
- C. Davus, h. ....Rhynchospora alba
- " Pamphilus ...grasses
- P. Phlœas.....dock, ragwort, sorrel
- L. Boetica .....Collutea arborescens
- " Alexis, 2.....rest harrow, clover, trefoil, &c.
- " Adonis, b., 2. Hippocrepis comosa, &c.
- N. Lucina.....primrose, and cowslip; eats small holes in the leaves
- H. linea, h. ....grasses
- S. ocellatus .....willow, sallow, poplar, apple; will also eat sloe, peach, almond, &c.
- " populi .....poplar, sallow, willow; will also eat birch, laurel, laurustinus
- " tiliæ .....elm, lime, beech
- D. euphōrbix ...Euphorbia paralis, and E. cyparissias. Feeds exposed
- " galii .. .....Galium verum, and G. elatum. In their native haunts, on the sea shore, they feed from the beginning of this month, till the end of Oct. They seem to prefer the scrubby plants; are nearly always found in pairs; and may be traced from the frass, on the sand-hills. They vary very much in appearance
- C. celerio ..... Galium, vine
- " porcellus .....Galium; also willow herb, and vine
- " elpenor.....Galium palustre, G. uliginosum, and other Galiums; also willow herb, fuschia, vine



## LARVÆ]

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- M. stellatarum.....Galium Mollugo, growing on old walls, exposed to the sun  
 " fuciformis.....Lychnis, scabious, honeysuckle, Galium, &c.  
 " bombylifformis Scabiosa  
 S. muscæformis in stems of Statice armeria  
 Z. æsculi, h .....in the wood of ash, elm, pear, horse chesnut ; s. hawthorn, lime, box. The larvæ are generally in the highest branches of the tallest trees  
 H. hectus, h. ...in r. of brake fern  
 " lupulinus, h. in r. of dead nettles, &c.  
 " velleda, h. ...in r. of brake fern  
 " humuli, h. ...in r. of various plants, including Humulus (hop)  
 L. asellus .....oak, beech, poplar, &c.  
 Z. nubigena, h. thyme  
 " meliloti, h. ...Lotus corniculatus, vetches, &c.; partial to chalky soils  
 " trifolii, h. ....trefoil, vetch  
 " lonicera, h. ...clover, grasses  
 " filipendulæ, h. Lotus corniculatus, &c.  
 L. sericea, h. ...lichens  
 C. miniata, h. lichen, on oak (Lichen caninus) ; also withered sallow, oak, alder  
 L. mesomella, h. lichens ; will also eat sallow, and heath  
 " lurideola, h. ....lichens  
 " complana, h. lichens, on sloe, and fir  
 " griseola, h. ...lichens, on poplar ; Lichen caninus the supposed proper food ; will also eat withered sallow, &c.  
 " stramineola (var.) h. lichens, on sloe, oak, sallow  
 L. rubricollis ...lichens, on larch, &c. ; may be beaten from the tree  
 E. cribrum, h. ...heath, bilberry  
 C. dominula, h. Cynoglossum officinale, &c. ; on hilly places  
 C. plantaginis, h. violets, plantain, &c.  
 " caia, h. ....various plants, and bushes  
 " villica, h. ....chickweed, &c.  
 A. fuliginosa, 2. dock, nettle, plantain, grasses, &c.  
 " mendica .....sloe, plantain, &c.  
 " lubricepeda ...nettle, plantain, &c.  
 " menthrasti ...nettle, and various plants, and bushes  
 " urticæ .....willow herb, and low plants ; in damp places  
 L. salicis, h. ....poplar, willow, oak, &c.  
 O. pudibunda ...hop, beech, hawthorn, nut, oak, &c.  
 " cœnosa .....reed, and carex  
 " gonostigma, h. oak, nut, hawthorn, sloe, bramble, willow, sallow, beech, &c. In confinement this species may, by careful feeding on willow, or sallow, be often caused to pupate in the autumn, and even emerge  
 D. coryli .....beech, nut, birch, alder, oak, willow, ash, &c.  
 L. ilicifolia .....whortleberry, sallow  
 S. carpini .....sloe, bramble, heath, apple, sallow, hawthorn, meadow sweet, &c. ; generally gregarious ; may be s. found in hedges  
 E. advenaria ...dogwood ; will also eat wild rose [aspen  
 E. dolobraria ...oak, beech, birch,  
 S. lunaria .....sloe, oak, nut, elm, ash, hawthorn  
 O. bidentata .....oak, sallow, nut, ivy, ash, sloe, &c.  
 E. alniaria .....alder, birch, sallow, beech, &c.  
 " tiliaria .....oak, sallow, birch, alder, &c.  
 " angularia .....oak, birch, beech, &c.  
 A. betularia .....oak, elm, hawthorn, birch, beech, alder, mountain ash, rose, ivy

## LARVÆ]

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- H. abruptaria s. lilac, rose, privet  
 B. consortaria ...oak  
 T. consonaria ...beech, oak, birch  
 " crepuscularia larch, willow, poplar, elm, birch, alder, &c.  
 " extersaria, e...birch, beech, oak  
 " punctulata ...birch, alder  
 N. viridata .....hawthorn, bramble  
 P. baiularia, h... oak. A second brood will s. appear in confine  
 E. punctaria.....oak [ment  
 " trilineararia..... beech; generally dwarf, and pollard trees  
 " omicronaria...maple; s. beech  
 " orbicularia ...sallow, alder  
 " pendularia ...birch  
 H. auroraria, h. plantain  
 A. luteata.....maple  
 " sylvata .....alder  
 " Blomeraria ...wyth elm, in, or near hilly woods; remains on the under-side of the leaf  
 V. cambricaria...mountain ash  
 A. rubricata, h. —? will eat knotgrass, Lotus corniculatus, Medicago lupulina, Thalictrum minus, and the smaller trifoliums  
 " scutulata, h. Anthriscus sylvestris, fl., and dandelion, withered; will also eat knotgrass  
 " bisetata, h. ...dandelion; will also eat knotgrass, and withered bramble  
 " trigeminata, h. some low plant? will eat knotgrass  
 " contiguaria, h. Empetrium nigrum; will also eat hawthorn buds, and knotgrass  
 " rusticata, h. hawthorn; will also eat ivy, lilac, and withered bramble, and knotgrass; very local  
 " interjectaria, h. dandelion, scarlet pimpernel (withered)  
 " osseata, h. ...dandelion, &c.  
 " holosericata, h. sun cistus, withered; will also eat knotgrass  
 " circellata .....—? will eat knotgrass  
 A. ornata, s., h. thyme, marjorum; will eat mint  
 " promutata, h. Achillea millefolium, Artemisia vulgaris, Potentilla, reptans  
 " straminata, h, —? will eat knotgrass  
 " immutata, h. some marsh plant; will also eat knotgrass  
 " remutata, h. low plants? will eat knotgrass [knotgrass  
 " fumata, h. ...heath; will also eat  
 " strigilata, h. Clematis vitalba, Stachys sylvatica, &c.  
 " emutaria, h...Triticum repens; will also eat Medicago lupulina, Lotus corniculatus, Chenopodium, mint, and knotgrass  
 " inornata .....low plants; also, it is said, poplar, and willow  
 " degeneraria, h. —? will eat knotgrass, bramble, Cerastium, Veronica  
 " emarginata ...convolvulus, Galium  
 C. pusaria..... oak, nut, alder, birch, willow, &c.  
 C. temerata .....sloe, & wild cherry, and buckthorn?  
 " taminata .....wild cherry, willow? buckthorn?  
 N. pulveraria ...sallow, nut, privet  
 S. belgeria, h. ...heath  
 F. atomaria .....Centaurea, trefoils, &c.  
 " piniaria ..... Scotch fir, and larch; on the high branches  
 " conspicuata ...broom  
 M. euphorbiata...Euphorbia cyparissias  
 L. purpuraria?...dock, Polygonum  
 A. strigillaria, h. heath, broom  
 L. adustata .....spindle; rests along the stems  
 L. pectinitaria ..... alder, Galium Mollugo, and G. sextatile  
 E. affinitata .....Silene, and Lychnis, seeds  
 " alchemillata...Galeopsis, Silene, Lychnis  
 " albulata .....yellow rattle, seeds

## LARVÆ]

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- E. tæniata? .....has been obtained by beating holly
- E. liniariata .....in fl., and seed-vessels of yellow toadflax
- " centaureata ...fl., and seeds of ragwort, golden rod, Angelica, yarrow, Eupatorium cannabinum, Pimpinellæ, &c.
- " succenturiata, e. Achillea millefolium, Artemisia, and Valerian officinalis, seeds
- " subumbrata...Gentiana, Campanula, and other fl. ; in, and near beech woods
- " plumbeolata Melanpyrum pratense, fl.
- " isogrammata Clematis vitalba, fl.-buds
- " castigata .....golden rod, heath, nettle, Angelica sylvestris, &c.
- " virgaureata .....golden rod, fl.
- " fraxinata .....ash ; will eat laurustinus, fl.
- " innotata (?) e. Artemisia campestris, at Wallasy
- " nanata .....heath, fl.
- " subnotata.....Atriplex, and Chenopodium, fl., and seeds
- " campanulata seed capsules of Campanula trachelium, and other Campanulæ
- " minutata ..... heath, fl., and scabious ; s. a cannibal
- " togata, e.....spruce, in the buds, and shoots ; and, it is said, on the seeds of the Scotch fir
- " coronata ..... fl. of Clematis vitalba, wormwood, bramble, Eupatorium cannabinum, golden rod, wild angelica, &c.
- C. sparsata .....Lysimachia vulgaris, fl., and leaves
- L. hexapterata...sallow, poplar
- " viretata .....privet, and Actæa spicata
- " lobulata .....honeysuckle, willow, willow
- T. juniperata ...juniper
- Y. impluviata ...alder, willow ; in curled-up leaves
- M. ocellata .....Galium
- " albicillata.....bramble, raspberry
- M. hastata .....birch, Myrica gale ; within spun-up leaves
- " tristata .....Galium Mollugo
- " procellata ...Clematis vitalba
- " tersata, e. ...Clematis vitalba
- " unangulata ...chickweed
- A. sinuata.....Galium verum
- " rubidata .....Galium
- C. unidentaria, b. Galium ; will also eat Asperula odorata
- " quadrifasciaria hawthorn, white dead nettle, knapweed, and low plants
- C. fluviata ..... Polygonum persicaria ; will also eat groundsel, &c.
- P. lignata, b. ...Galium palustre, &c.
- C. psitticata ..... oak, lime, apple, rose ; probably also birch, hawthorn, willow
- " miata ..... oak, alder, birch, poplar, willow
- " picata ..... chickweed ; rests along the stems
- " corylata .....sloe, lime, nut
- " sagittata .....Thalictrum flavum, seeds, and withered leaves ; in confinement will eat other species of Thalictrum
- P. comitata .....Chenopodium
- E. palumbaria, h. broom
- C. obliquaria ...broom
- P. lacertula .....birch ; between united leaves
- D. bicuspis .....alder, beech, birch
- " furcula.....sallow, willow, poplar ; often rests on decayed leaves
- " bifida .....poplars
- " vinula, b.....willows, willow, poplars
- S. fagi .....beech, oak, birch, nut
- P. bucephala ...elm, oak, lime, beech, willow, nut, &c.
- C. curtula .....poplars, willow ; webbed in the leaves
- G. crenata .....poplar
- N. cucullina ...maple, sycamore

## LARVÆ]

## AUGUST

- N. dromedarius, e. birch, alder, nut  
 " tritophus .....birch, poplars  
 " trepida.....oak ; tightly grips its food  
 " Chaonia .....oak  
 " Dodonea .....oak, birch  
 T. derasa .....bramble, hawthorn  
 " batis .....bramble, raspberry  
 C. duplaris .....birch ; between united leaves  
 " or ..... poplars ; between leaves  
 " ocularis .....poplars  
 D. Orion .....oak, birch  
 A. tridens.....hawthorn, sloe, rose, willow, sallow, mountain ash, &c.  
 " psi.....hawthorn, poplar, pear, elm, lime, &c.  
 " leporina .....birch, poplar, alder, sallow  
 " aceris ..... sycamore, horse chesnut, maple, birch ; s. oak ; often on the loftiest branches ; clings closely to the leaf  
 " megacephala poplar  
 " strigosa .....hawthorn; especially in chalky districts  
 " alni ..... hawthorn, alder, willow, oak, lime, rose, elm, nut, beech, the chesnuts, birch, sycamore, poplar, sallow, bramble. Should be looked for, as it is probably difficult to dislodge, by beating. Has been found at rest on a leaf, palings, &c.  
 " ligustri.....ash, privet ; seems to prefer shaded trees  
 " rumicis.....bramble, plantain, knotgrass, and other low plants  
 " menyanthidis Menyanthes trifoliata, heath, bramble, sallow, sweet gale  
 " myricæ.....Myrica gale, sallow, birch, heath? thistle?  
 S. venosa .....Glyceria aquatica  
 L. obsoleta .....common reed ; concealed, by day, in hollow stems
- L. littoralis, h.... Ammophila arundinacea, on the coast ; burrows seven, or eight inches in the sand. Will also eat Carex  
 " comma.....Dactylis glomerata, and other grass ; also sorrel  
 " phragmitidis, h. common reed ; in the young stems  
 N. typhæ ..... in the stems of Typha latifolia  
 G. flavago.....inside stems of Lappa, thistles, elder, foxglove, &c., feeding on the pith  
 A. putris .....low plants [&c.  
 X. hepatica, h. grasses, chickweed,  
 D. pinastri .....dock, sorrel, &c.  
 X. conspicillaris Lotus corniculatus, and other low plants  
 L. exigua .....plantain  
 N. saponaria ...Silene, Lychnis, and other low plants  
 M. albicolon.....Atriplex, and Chenopodium ; on coast sands, &c. ; also lettuce, in gardens  
 " brassicæ.....cabbage, dock, Chenopodium, chrysanthemum, &c.  
 " persicariæ ... Polygonum persicaria, and other low plants ; also elder  
 A. basilinea, h. growing wheat ; on the immature grains ; after hibernation, in spring, on various plants  
 " gemina, h. ...grasses  
 H. palustris .....plantain, and other low plants  
 A. saucia .....plantain, dock, and other low plants  
 " segetum, h....in r. of turnips, &c.  
 " lunigera .....—? will eat knotgrass, &c.  
 " corticea, h. ...Chenopodium, &c.  
 " ripæ .....Cynoglossum officinale ; on the coast ; burrows 7 in. or 8 in. in the sand  
 " porphyrea, h. heath  
 " pyrophila.....grasses, heath, and other low plants  
 T. ianthina, h....primula, and other low plants ; also broom, &c.

## LARVÆ]

## AUGUST

- T. Orbona, h. ...low plants, and broom; when young, on sallow buds  
 " pronuba, h. ...dock, &c.  
 N. augur, h. ... low plants, hawthorn, sallow, &c.  
 " festiva, h. ...violet, sallow, fox-glove, &c.  
 " conflua, h. ...various low plants, including *Silene acaulis*  
 T. gothica .....sallow, hawthorn, oak, &c.; also dock, nettle, laurel, broom, lilac, &c.  
 D. irregularis ...*Echium vulgare*, *Silene otites*  
 " carpophaga ...*Lychnis*, and *Silene inflata*, the young seeds  
 " capsincola ...*Lychnis*, and *Silene*, seeds [inflata, seeds  
 " cucubali .....*Lychnis*, and *Silene*  
 " conspersa.....*Lychnis flos cuculi*, and *Silene inflata*, seeds  
 " cæsia, b. ....*Silene maritima*, *S. inflata*  
 H. dysodea .....fl., and seed-heads of *Sonchus*, and *Lactuca* (lettuce, garden, and wild)  
 " serena .....*Sonchus*, and wild lettuce  
 E. luciparia ..... brake fern, and *Polypodium felix-mas*; also sallow, nettle, primrose, plantain, dandelion, &c.  
 A. herbida, h. ...dock, and other low plants  
 " advena, h. ...lettuce, knotgrass, and various plants  
 H. adusta, h. .... hawthorn, and sallow, when young; afterwards, low plants  
 " glauca .....sallow, birch, bilberry, heath; will eat lettuce, in confinement  
 " peregrina.....*Chenopodium*, and *Salsola kali*  
 " chenopodii ...*Chenopodium*  
 " atriplicis .....*Chenopodium*, dock, *Polygonum persicaria*, &c.  
 " suasa ..... plantain, lettuce, knotgrass, &c.  
 L  
 H. oleracea .....elm, nettle, dock, cabbage, &c.  
 " pisi .....brake fern, broom, scabious, grass, sedge, sallow, birch, mountain ash, &c.  
 " thalassini .....honeysuckle, sallow, broom, knotgrass, &c.  
 " contigua .....birch, oak, nut, &c.  
 " genistæ.....broom, chickweed, *Silene*, *Polygonum*, &c.  
 " rectilinea, h. sallow, bramble, bilberry  
 X. lithoriza .....honeysuckle  
 C. perspicillaris *Hypericum*  
 C. lychnitis .....seeds of *Verbascum lychnitis*, and *V. nigrum*  
 " asteris .....golden rod, *Tripolium vulgare*, and China aster  
 " gnaphalii .....golden rod  
 " absynthii.....*Artemisia absinthium*  
 " chamomillæ, s. chamomile, fl.; also *Pyrethrum inodorum*, and *P. maritimum*  
 " umbratica ... *Sonchus*, lettuce, &c.; hides by day under leaves, near the ground; feeds on the upper leaves, and fl. at night  
 H. marginata ...rest harrow, preferring the fl.; also *Arenaria*, and *Hyoscamus*; knotgrass, in confinement  
 " peltigera ..... rest harrow, henbane, and several coast plants, preferring the fl.  
 " dipsacea ..... *Linaria*, fl.; also *Silene otites*, seeds; the pupa has been found among melilot  
 A. cordigera ...*Vaccinium*  
 " myrtilli, s., h. heath  
 A. sulphuralis ...small convolvulus  
 E. venustula.....*Tormentilla reptans*, fl.  
 " fuscula.....lavender grass (*Molinia cærulea*). May be found feeding at night, about half way up the blades of grass  
 B. argentula.....grasses  
 H. unca .....*Carex*  
 B. parthenias ...birch  
 A. urticæ, e. ...nettle

## LARVÆ]

## AUGUST

- A. triplasia .....nettle, hop  
 P. chrysis, h. ...Lappa, thistle, nettle, dead nettle, &c.  
 " festucae, b. ...Carex, reeds, and grasses; near the sea  
 " gamma ..... nettle, hop, and most low plants  
 C. alchymista ...oak  
 P. ænea... .....Polygala vulgaris  
 H. crassalis .....heath  
 H. costæstrigalis thyme  
 H. derivalis, h. sallow, bramble  
 " tarsipennalis, h. wild raspberry? will eat knotgrass, and sallow  
 " grisealis .....Sisymbrium Sophia, oak, &c.  
 " cribralis, h. ...sallow; afterwards, on Carex, and Luzula  
 E. cingulalis.....Salvia pratensis, under the leaves  
 B. lancealis .....Eupatorium cannabinum, Senecio, Sium latifolium, &c.  
 " fuscalis.....yellow rattle, seeds  
 " terrealis, h. ...golden rod, fl., &c.  
 " asinalis, b. ...madder, fl., and young seeds  
 E. catalaunalis...Linaria spuria  
 P. margaritalis...wild mustard, seeds; live under a web, and change in spring  
 S. palealis ... .....wild carrot, and Peucedanum; in a web, within a fl.-head of the umbels  
 L. pulveralis ...Mentha aquatica  
 S. coarctalis, b. moss  
 N. angustella ...fruit of spindle  
 G. canella, e. ...Salsola kali; mines the stems, when young; afterwards feeds on the unripe seeds  
 R. formosella ...elm, birch  
 M. sociella .....wax, in nest of humble bee  
 H. prasinana ...oak, &c.  
 " clorana..... willow, buds  
 A. prodromana Potentilla anserina, and most low plants  
 P. hastiana .....dwarf sallows  
 " tristana.....guelder rose [ash?]  
 A. Conwayana...fruit of privet, nut?
- P. Lecheana.....sallow, willow, oak, honeysuckle, &c.  
 P. prælongana ...birch  
 " sauciana (?) ...Vaccinium  
 S. euphorbiana...Euphorbia paralias, heads  
 M. rubiginosana? Scotch fir  
 " consequana ...Euphorbia paralias  
 E. fractifasciana Scabious, heads  
 P. biarcuana.....sallow  
 " myrtillana ...Vaccinium  
 " lundana, h. ....trefoils, and vetches  
 " derasana .....Rhamnus frangula  
 " diminutana ...sallows  
 " Mitterpacheriana elm, oak  
 G. nigromaculana ragwort  
 " campoliliana in sallow leaves  
 " obtusana .....nut  
 P. crenata .....sallows, willows  
 E. trigeminana ...ragwort  
 S. rufillana .....umbels of wild carrot  
 C. nemorivagana? Scotch fir  
 " vacciniana ...Vaccinium, and Berberis  
 R. duplana?.....Scotch fir  
 C. pomonana ...in apples, and pears  
 O. funebrana ...in plums  
 E. pisana .....in pea pods, and vetches  
 S. Weirana .....beech  
 " leguminana? alder  
 " orobana .....in pods of Vicia cracca, V. sylvatica, Orobus tuberosus, and Genista tinctoria  
 C. ulicetana .....seeds of furze  
 " cana .....thistle heads  
 " Hohenwarthiana knapweed, and thistle  
 " aspidiscana ...golden rod  
 X. Fabriciana ...nettle  
 " pariana.....apple, hawthorn  
 E. hybridellana thistle, and ragwort, seeds  
 " vectisana .....Plantago maritima  
 " ciliana .....seeds of cowslip  
 A. cnicana .....thistle stems  
 " Mussehliana? seeds of Linum catharticum  
 " maritimana ...in stems, and r. of Eryngium maritimum

## LARVÆ]

## AUGUST

- E. Steinkellneriella hawthorn, mountain ash, sloe, &c. ; between turned-down leaves
- P. calvella (fusca) h. in a case, on bramble ; 2 years feeding up
- T. fuscipunctella on all kinds of waste substances
- M. purpurella ? birch  
 " salopiella ? ...birch  
 " semipurpurella ? birch  
 " unimaculella ? birch  
 " sparmannella ? birch  
 " subpurpurella ? on various plants, in a flat case, of pieces of dried leaves
- A. fibulella .....in a flat case, on leaves of Veronica chamædrys
- N. scabiosellus, h. in seed-heads of Scabiosa arvensis; in the autumn, in its case, on various low plants  
 " capriacella, h. in seed-heads of teasle, and Scabiosa succisa
- A. funerella ..... — ?
- E. lobella .....under turned-down sloe leaves
- D. pallorella, b. in leaves of Centaurea scabiosa
- G. proximella ...in birch leaves  
 " scriptella .....maple  
 " æthiopella ? ...among burnt heath  
 " costella..... Solanum dulcamara  
 " triparella .....oak, between united leaves  
 " paupella ..... Inula dysenterica, in fl-heads  
 " intaminatella Lotus corniculatus
- M. ustulella, h. ...nut, birch, lime, maple, hornbeam, &c.
- B. chenopodiella...Chenopodium, and Atriplex  
 " torquatella ...birch, elm
- T. sericiella .....nut  
 " resplendella...alder
- A. conjugella ...mountain ash, in the berries
- G. stigmatella .....sallow, willow, poplar
- G. hemidactylella maple, and sycamore  
 " falconipennella alder  
 " phasianipennella Polygonum hydropiper, and sorrel  
 " imperialella...Symphytum officinale
- C. Brogniartella oak  
 " cuculipennella ash, privet
- O. avellanella ...nut  
 " guttella..... in turned-down leaves of apple
- C. albicostella ...on pods of furze  
 " artemisicolella, h. fl. of Artemisia vulgaris, and A. campestris  
 " inflatella .....Silene inflata, seeds  
 " siccifoliella .. hawthorn, apple, birch  
 " melilotella ...melilot, seeds  
 " Wilkinsonella birch
- B. somnulentella convolvulus
- C. Druriella .....hop  
 " orichalcella ...in leaves of Festuca arundinacea
- L. subbistrigella in seed-pods of Epilobium montanum
- E. serricornella Carex
- A. terminetella Circaea lutetiana
- A. Treitschkiella dogwood
- L. padifoliella ...sloe, birch, &c.
- P. suffusella .....poplars  
 " salignella ..willows
- C. scitella .....hawthorn, apple, &c.  
 " lotella .....Lotus major  
 " lathyrioliella in leaves of Lathyrus sylvestris  
 " orobiella .....Orobus tuberosus
- B. cidariella ...alder  
 " cratægifoliella hawthorn  
 " Demaryella ...birch  
 " Boyerella ...elm  
 " frangulella ...buckthorn  
 " hippocastanella lime
- N. minusculella pear ...
- P. isodactylus ...in shoots, and stems of Senecio aquaticus, &c.  
 " pterodactylus convolvulus  
 " monodactylus .....Convolvulus arvensis, and Calystegia sepium, &c.

## PUPÆ]

## AUGUST

Although pupæ, of some kind or other, may be found at any period of the year, the middle of the present month is the best time to commence the systematic work of digging, and otherwise searching, for species which have arrived at this stage. From about that time this work should be followed, until the winter, as a regular part of the Collector's operations, as it is one of the best means of securing many species otherwise difficult to be got. The insects thus obtained come to hand in the finest condition, and many curious varieties often appear. Although the digging at trees has been long recommended, some kinds are only to be found at the roots of the low plants upon which they have been feeding, or in their immediate neighbourhood. Wherever there is a good mass of the food-plant of a desiderated species, the pupa should be sought, or dug for, near, or among the roots, of course, avoiding the destruction of the plant, if it should be rare or local.

- P. Machaon .....to April, on stems of *Peucedanum palustre*; in fens  
 A. cardamines ...on stems of grass, &c.  
 V. urticæ .....among nettle  
 „ cardui .....on, or near thistles  
 L. Adonis, b. ...sub. at, or among *Hippocrepis comosa*  
 O. antiqua ... ..in a web, on palings, &c.  
 E. lanestris ..... cocoon, on the ground, near hawthorn, sloe, &c.  
 P. populi .....to Oct., spun up, against oak, poplar, &c.; near, or just beneath, the ground  
 E. versicolora ...to March, spun up, at birch  
 S. lunaria .....to April, at sloe, oak, nut, &c.  
 E. alniaria .....under moss, on tree trunks, or between leaves  
 „ tiliaria, b. ...spun up, between leaves, or grass, at r. of oak, birch, &c.  
 „ fuscantaria, b. suspended, within a curled-up leaf  
 H. pennaria .....sub., at oak  
 N. zonaria .....sub., on sand-hills  
 „ hispidaria ...at oak  
 A. prodromaria to Feb., sub., at oak, elm, &c.; just beneath the surface  
 E. punctaria... ..to April, fastened to leaf of oak, or birch  
 E. pendularia ...to April, fastened to leaf of birch  
 F. carbonaria ..... to April, among dead leaves of willow, and birch  
 H. rupicaprararia in a web, on the ground, among oak, sloe, &c.  
 „ leucopheararia on the ground, near oaks  
 „ aurantiaria ...sub., at hawthorn, birch, oak, &c.  
 „ progemmaria sub., at oak, birch, hornbeam, &c.  
 „ defoliaria .....sub., at oak, hawthorn, sloe, hornbeam, nut, elm, &c.  
 C. brumata .....sub., at oak, &c.  
 O. dilutata ..... sub., at oak, &c.  
 L. multistrigaria sub., about *Galium*  
 E. decolorata ...about *Lychnis dioica*  
 E. venosata ..... about *Silene*, and *Lychnis*  
 „ fraxinata, e. to April, on ash; under moss, and loose bark  
 „ vulgata.....to Mar., sub., about various plants, and trees  
 „ exigua .....to April, about oak, &c.  
 M. ocellata .....to May, among *Galium*; spun up, near the ground; larva s. remains during winter  
 A. badiata .....in earthen cocoon, on the ground, beneath dog rose bushes



## PUPÆ]

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- A. derivata .....sub., at dog rose  
 C. unidentaria, m. among bedstraw, and sweet woodruff, in a slight web, on the surface of the ground [broom  
 C. obliquaria ...to April, among  
 D. vinula, e. ...to May, spun up, on trunk of willows, poplars, and sallow; three or four feet from the ground  
 P. Cassinea .....sub., at oak; deep  
 N. carmelita.....to April, sub., at birch  
 D. cæruleocephala spun up, at hawthorn, and sloe; under bark, or on twig  
 C. ocellaris, e. ...at poplar; spun up, under moss, &c.; or between leaves  
 " ridens .....spun up, at oak, among rubbish; or under bark; s. among leaves, and falls with them; tender  
 A. alni .....to April, between leaves of various trees; or inside bramble sticks  
 N. typhæ, e.....in stems of *Typha latifolia*  
 G. flavago.....inside thistle, and burdock stems; about 3 in. from the ground  
 T. piniperda .....to Mar., at Scotch, and other firs, in open places in fir woods, and on the margin; in crevices of bark, or under moss, and fallen needles; rarely within 2 ft. of the tree, 1½ in. to 2 in. deep  
 T. gothica .....to Feb., at various trees; just beneath the surface  
 " leucographa } to Feb., at r. of  
 " rubricosa ... } low plants; below  
 " instabilis ... } the surface  
 " stabilis ..... } to Feb., at r. of  
 " opima ..... } various trees; just  
 " ..... } below the surface  
 " opima .....to Feb., at r. of *Rosa spinosissima*, and dwarf sallow; below the sand, on sand-hills, in the North  
 T. populeti .....to Feb., sub., at poplars; especially *Populus nigra*; deep  
 " gracilis .....to Feb., sub., at willows, sallows, and low plants  
 " miniosa .....among fallen oak leaves, &c.  
 " munda .....under moss, at base of oaks  
 " cruda .....to Feb., sub., at oak  
 O. lota ..... between leaves of willow, and sallow; or on the ground  
 " macilenta.....at r. of beech, and birch  
 S. satellitia .....sub., at oak  
 X. citrago, b. ... between united leaves of lime  
 " cerago, b. ... sub., among low plants, near sallow  
 " gilvago, b. ...sub., at wytch elm  
 " aurago ..... in a cocoon, at beech  
 " ferruginea ... sub., at sallow, poplar, &c.  
 C. xerampelina sub., at ash; cocoon, very tender, and brittle  
 D. templi .....sub., at r. of *Heraclium sphondylium*, &c.  
 M. oxyacanthæ ..in a cocoon, on the ground; among sloe; and hawthorn  
 A. Aprilina .....sub., at oak  
 C. vetusta .....among meadow, and marsh plants; on the surface  
 " exoleta ..... among scabious, campion, rest harrow, &c.  
 C. fraxini, b.....amongst the leaves of ash, and poplar  
 " nupta .....at *Salix fragilis*, and poplar; among the leaves; or in crevices of bark; or under loose bark  
 P. festucae .....conspicuous amongst rush, &c.; near the sea  
 P. acanthodactylus on *Bartsia*, and rest harrow  
 " dichrodactylus on tansy  
 A. polydactyla ..on honeysuckle

## IMAGOS]

## AUGUST

Many Moths, in their fresh "palmy state," make their appearance this month; while we may often see sunny banks, or fields glowing

"With open, velvet butterflies,  
That swing, and spread their peacock eyes,  
As if they cared no more to rise  
From off their beds of chamomile."

All kinds of flowers, especially in exposed situations, should be carefully examined, soon after sunset, for the Moths they attract. *A. saucia*, and other local species, are often found on garden flowers, and flowering shrubs. As the honey of most flowers has a stupifying effect on Moths, they may be easily boxed from the flower, or shaken into an umbrella first. Other species, which hover over flowers, either in the sunshine, or at early dusk, as *C. celerio*, and *S. convolvuli*, and also many Noctuæ, must be netted first, and immediately introduced into a wide-mouthed bottle charged with chloroform, bruised laurel, or cyanide of potassium. Some other natural attractions than flowers, are also worth noting. Newly cut-down birch trees, as well as exudations from the bark of standing ones, attract both Butterflies, and Moths; and Butterflies are also, sometimes, drawn to a particular spot by some white, or brightly coloured object.

But to the attractions which nature offers, the energetic Collector adds those of art,

"And with delusive baits betrays."

The sugar-pot should now be prepared, and liberally used. If, owing to the abundance of flowers, captures should prove rare, the flowers themselves should be sugared, especially thistles, and flowers presenting a large surface, as they will prove superior to tree trunks, &c. Our highest authority in English Entomology, Mr. Henry Doubleday, of Epping, says the sugar should always be applied to the trees before sunset, and when practicable it should be put on warm, as the scent is much more powerful than when it is applied cold. The greatest number of Moths will generally be found about three quarters of an hour after sunset, and in spring and autumn but few will be found after ten o'clock. Many species visit the sugar about an hour before sunrise, in the morning. Sugar is almost useless in the neighbourhood of lime trees, when they are in bloom, and also when there is much honey-dew. Neither should the allurements of light be forgotten. In a favourable situation this means of capture may be pursued far into the night, as some species do not respond to the call until a late hour of the night, or early hour in the morning. It is recommended that a bright light be placed near a slightly-open window, and a net used for the capture of specimens. A wag has suggested that the watcher may wile the idle time away by reading Young's "Night Thoughts," Bulwer's "Night and Morning," or the "Arabian (K)nights' Entertainments!"

Gas lamps often prove highly attractive to Moths, and many good species have been captured thereat, though it is not often that their condition is fine. Lamplighters in country towns may sometimes be bought over to box specimens for you, as they often find them when they clean the lamps; but you must give frequent calls upon the official to keep him up to his work, and the chances are in favour of your getting little else than a lot of rubbish, or

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## AUGUST

if any species are good they will probably be found to be much damaged by the rough treatment they have received. "Many species, especially the good ones, settle under the lamp, or on some part of the frame-work where they are not easily got at, or even seen, without climbing the lamp-post; many lie very close to the frame, so that a keen inspection is required to detect them. Many species viewed from below appear like dead leaves, bits of stick, mud, &c. The time to commence the operation of 'lamping' is about 10 p.m. Very few Moths come sooner; but they continue to appear till dawn. From two to three o'clock is a capital time."

Many species which are ordinarily single-brooded in this country, are double, or treble-brooded on the Continent, where the summer is longer and hotter; but sometimes, in this country, in a hot season, an additional brood of an insect will appear. Thus, in 1868 there was a third brood of *S. Megæra*. When this occurs, of course the times ordinarily set down for the appearance of a species should be somewhat advanced.

- P. Machaon*, s. ...fens, and marshes  
*L. sinapis*, 2. ...woods; the autumn brood is rather smaller than the spring brood  
*P. brassicæ*, 2. ...gardens, &c.  
 " *rapæ*, 2. ....gardens, &c.  
 " *napi*, 2. ....gardens, &c.  
 " *Daphidice*, 2. has been taken in lucerne fields  
*G. rhamnii*, h. ...in woods  
*C. Edusa*, h. ...lucerne, and clover fields, railway banks, &c. Fond of fl.  
 " *Hyale*, h. ...lucerne, and clover fields; more especially near the coast  
*A. Latona* .....fields, woods, &c.  
 " *Euphrosyne*, s. woods, &c.  
 " *Selene*, s. ...woods, &c.  
*V. polychloros*, h. about elms  
 " *Antiopa*, h. ...attracted by sugar, ivy bloom, and cossus-infected trees  
 " *Io*, h. ....woods, &c.; at fl.  
 " *Atalanta*, h. gardens, &c.; fond of fl., and fallen fruit  
 " *cardui*, h. ...at fl.; often rests on a hot dusty road, and on the lead roofs of churches, and other buildings, in the sunshine  
*E. Medea* .....  
*S. Ægeria*, 2. ...woods, and lanes  
 " *Megæra*, 2. ...at fl., in lanes, and on walls, and banks  
*T. rubi*, s. 2. ...in woods, &c.  
 " *betulæ* .....in woods, at fl.; in wet weather may be readily taken with the fingers, as may many other butterflies  
*P. Hippothoe* ...formerly in Cambridge fens  
 " *Phlœas*, s. ...fields, &c.  
*L. Boetica*.....has been recently taken in this country  
 " *Ægon* .....at rest, on heather, at night  
 " *agestis*, 2. ...on hills, &c.  
 " *Alexis*, e. 2. ....fields, and hills  
 " *Adonis*, 2. ...chalk downs, and limestone hills  
 " *Corydon*, b. chalk downs, and limestone hills  
 " *Argiolus*, 2. ...among holly, and ivy, and at fl.  
*S. Alveolus*, s. ...woods, &c.  
*T. Tages*, 2. ....dry heaths, commons, and hills  
*H. sylvanus*, 2. ...woods, and grassy hills  
 " *comma* .....hills, &c.  
 " *Actæon* .....on the Dorset coast  
*A. Atropos* .....at rest  
*S. convolvuli* ...at fl., at dusk  
*D. euphorbiæ* ...on the coast  
 " *galii* .....on the coast  
 " *lineata* .....  
*C. celerio* .....at fl., at dusk  
*H. sylvinus*, b. ....flies just before dusk

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- N. senex .....in wet places  
 S. irrorella .....
- L. muscerda .....in fens, &c., among alder ; flies in the evening  
 " pygmæola ...at Deal  
 " caniola, b. ... Cliffs of Howth ; flies at dusk ; in the dawn comes to sugar ; males may be attracted by a bred female  
 " stramineola (var.) by moist wood-sides, and ditches  
 " quadra.....beaten from fir, and oak
- D. pulchella..... in stubble fields, flying by day
- C. Hera ..... has occurred at sugar, at Exeter
- E. russula, s. ...heaths, &c.
- A. fuliginosa, e. s. a succession of broods, from the same pair
- L. chrysorrhæa at rest  
 " salicis ..... on willows, and poplars  
 " monacha .....comes to l.
- O. coenosa.....fens, and marshes  
 " gonostigma, s. at rest  
 " antiqua .....flies just before a storm
- T. cratægi .....the ♂ fly between 6 and 7 p.m., and probably again in the early morning. The ♀ are very sluggish. In confinement the moth emerges generally between 5 and 7 p.m.
- B. castrensis.....S.E. coast  
 " roboris.....flies at dusk  
 " quercus .....
- " trifolii .....near the coast
- E. apiciaria .....hedges, &c. ; flies soon after 7 a.m.
- R. cratægata ...hedges, &c.
- E. fasciaria, h....among fir ; flies at night
- P. syringaria, 2., s. gardens, &c. ; flies at dusk, over fl.
- S. illustraria, 2...the summer brood, or var. delunaria
- C. elinguarua ...hedges, &c.
- E. tiliaria .....comes to l.  
 " fuscantaria. e. comes to l.
- E. erosaria .....
- " angularia .....on trees, &c. ; comes to l.
- H. abruptaria, 2. in gardens and woods ; rests on trees, and palings ; comes to l.
- D. obfuscata..... on heaths, about Scotch mountains
- A. trigeminata, 2. in some hot summers many of the *Acidaliæ* are double-brooded
- " incanaria .....on palings, walls, &c., near gardens
- " ornata, 2.....in grassy places
- " promutata ...woods
- " mancuniata ...
- " subsericeata... beaten from wild rose
- " imitaria .....among *Rosa spinosissima*, at Portland
- " emutaria ..... salt marshes of Kent, Norfolk, and the New Forest ; flies at dusk. The Sheerness specimens are more tinged with rose-colour than the others
- C. exanthemaria woods
- S. plumaria .. ...
- M. euphorbiata, 2. ? woods
- S. saccharia.....flies by day ; has been taken at fl., at sugar, and at l.
- A. ononaria, 2. among, or near rest harrow
- A. citraria, 2. ...among wild carrot, chiefly on the coast
- " gilvaria..... ..wild in the net
- A. grossulariata gardens, and hedges
- L. marginata ...woods, and hedges
- O. filigrammaria
- L. olivata .....woods
- E. unifasciata ...
- " bifasciata ? ...in an old hedge, in a marsh
- " blandiata .....
- E. centaureata...at rest, on palings, &c.
- " subfulvata ...at fl.
- " pygmæata, s. 2.
- " pimpinellata, 2.

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- E. indigata, 2. ...on fir trunks  
 " constrictata ...  
 " nanata, 2. s. ...on heaths  
 " expallidata ...  
 " assimilata, 2.  
 " pumilata, 2.  
 T. simulata, 2. ...  
 " variata, 2., h. among larch  
 " firmata .....  
 M. rivata .....  
 " fluctuata, 2., in gardens, &c.  
 A. berberata, 2.  
 C. ferrugata, 2. woods  
 " unidentaria, e., 2.  
 P. lapidata .....at Rannoch  
 " lignata, e., 2. this brood is smaller,  
 and generally more abundant  
 than the first brood  
 " polygrammata, 2. damp meadows;  
 very local  
 " vitalbata .....  
 S. dubitata, h. ...at light  
 C. russata .....woods  
 " immanata ...  
 " silaceata, 2., h. among willow herb;  
 beaten from thatch. Double-  
 brooded only in the S.  
 E. mæniata .....beaten from broom;  
 at E. Grinstead, &c.  
 " lineolata, 2. ....rests on coarse  
 grasses; on the coast  
 A. plagiata, 2. ...  
 P. falcula, 2. ....beaten from birch  
 " hamula, s., 2. flies in the day time,  
 generally in the morning; beaten  
 from oak  
 " unguicula, s., 2., a day flyer; beaten  
 from beech  
 C. spinula, 2. ...rests on palings, &c.  
 P. bucephala ...at rest  
 C. anachoreata ...  
 " reclusa .....  
 N. camelina .....at light; hides on  
 fern fronds, and in, and on trees  
 " cucullina, s. ...comes out when a  
 thunder storm is imminent  
 " dictæa .....at rest, at base of  
 willows, and large poplars  
 " dromedarius, s.  
 " tritophus .....  
 N. ziczac ..... hides in bark  
 crevices of poplar  
 C. diluta .....  
 B. glandifera ...on walls  
 " algæ .....  
 " perla .....on walls  
 A. alni .....this rare species has  
 occurred at sugar, but is oftener  
 found in the larva state  
 " auricoma, h.  
 S. musculosa ...  
 L. albipuncta ...at fl.  
 " putrescens, b.  
 " straminea, b. marshes, and fens  
 " pallens, b. ...  
 N. despecta .....marshes, and fens  
 " fulva .....s. abundant in one  
 corner of a meadow  
 " neurica .....  
 " brevilinea ... at Horning Fen,  
 &c.; flies at dusk, among reed  
 mace  
 " cannæ .....a marsh species  
 " lutosa .....in marshes  
 H. nictitans .....at ragwort, & thistle  
 fl.; comes to l.  
 " petasitis .....among butter burr  
 " micacea .....comes to l.  
 X. polyodon .....  
 " scolopacina ...  
 D. pinastri .....  
 A. Australis .....among grass; comes  
 to l.  
 L. exigua .....most often taken at  
 gas lamps  
 N. saponaria ...  
 H. popularis .....  
 C. graminis .....on commons; s. at  
 ragwort, and thistle, fl.  
 C. Cytherea .....in dry, grassy places;  
 comes to l.  
 L. testacea .....  
 " Dumerili .....  
 " cespitis .....hides in grass, by  
 day; comes to l.  
 M. furva .....  
 " brassicæ .....rests on walls, &c.  
 A. gemina .....  
 " fibrosa .....in marshy places  
 " oculæ .....

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- M. literosa .....on the coast  
 C. Haworthii ...  
 A. caliginosa ...  
 C. cubicularis ...beaten from thatch;  
     flies in hay-fields  
 A. valligera .....at fl.; mostly on the  
     coast  
   " Puta, 2., h. ...  
   " suffusa, h. ...  
   " fennica .....  
   " saucia, h. ....at fl. ; comes to l.  
   " segetum .....  
   " lunigera .....  
   " exclamationis often in kitchen  
     gardens  
   " spinifera .....  
   " cursoria .....by beating, on coast  
     sand-hills  
   " nigricans ...  
   " tritici, b. ....  
   " aquilina, b. ...  
   " obelisca .....on ragwort fl.  
   " agathina .....beaten from heath  
     in the day time ; flies over the  
     fl., and rests on them, at night  
   " porphyrea ...among heath  
   " præcox.....on sand-hills, by the  
     coast  
   " ravidia, b. ...comes to l.  
   " pyrophila, b.  
   " Ashworthii ...  
 T. ianthina .....  
   " fimbria.....comes to l.  
   " interjecta ...  
   " subsequa .....comes to l.  
   " Orbona .....comes to l.  
   " pronuba .....comes to l.  
 N. glareosa, e....on heaths  
   " depuncta .....  
   " augur .....  
   " plecta, b.....  
   " C.-nigrum ...comes to l.  
   " rhomboidea...  
   " brunnea .....  
   " festiva .....  
   " conflua .....  
   " Dahlii .....  
   " rubi .....  
   " umbrosa .....at ragwort fl.  
   " Baia.....
- N. sobrina .....  
   " neglecta ..... on heaths, at sugared  
     rags  
   " xanthographa  
 P. alpina .....  
 O. suspecta .....  
 A. rufina, e.....  
   " pistacina, e....  
   " litura .. .....  
 X. citrigo, e. ...at l., and ivy ; this,  
     and the two following frequent  
     the leaves, and twigs of lime  
     trees, at night  
   " cerago .....  
   " silago .....  
   " aurago, e. ...at fl.  
   " gilvago .....  
   " ferruginea ...at fl.  
 C. xerampelina...at l., and at rest, on  
     ash trunks  
 T. subtusa, b. ...  
   " retusa .....comes to l.  
 E. fulvago .....in Sherwood Forest,  
     at heath fl.  
 D. oo.....comes to l.  
 C. trapezina .....  
   " pyralina .....  
   " diffinis .....comes to l.  
   " affinis .....comes to l.  
 E. ochroleuca ...at fl.; rests on knap-  
     weed, thistles, &c.  
 D. capsophila, s., 2.  
   " capsincola, 2.  
   " cucubali, 2. ? flies in the sunshine  
 P. chi .....on tree trunks  
   " xanthomista...  
   " flavocincta ...on walls, &c.  
 E. lutulenta .....at heath fl.  
   " nigra.....at fl.  
   " viminalis .....among sallows  
   " lichenea .....on the coast  
 M. bimaculosa ...  
 P. meticulosa ...  
 A. occulta.....at rest, early in the  
     morning ; unquiet when boxed  
   " nebulosa .....  
   " tincta .....on trees, stumps,  
     and palings ; unquiet when  
     boxed  
 H. satura .....

## IMAGOS]

## AUGUST

- H. peregrina ...  
 " chenopodii ...at fl., and l.  
 " suasa, s., 2...  
 C. solidaginis ...  
 C. vetusta, e., h. at fl.  
 " exoleta, e., h. at fl.  
 X. furcifera, h. ...at ivy; rests on tree trunks  
 H. peltigera .....may be started from herbage  
 armigera .....at ivy  
 " scutosa .....formerly nr. Sillloth  
 A. sulphuralis ...at l.; s. on fl. of knapweed, in the day time  
 A. luctuosa .....flies in the sunshine, over fl., in clover fields, &c.  
 A. urticae .....  
 " triplasia .....  
 P. orichalcea ...on the coast  
 " chrysitis, 2...among nettle  
 " bractea .....  
 " festucae .....in salt marshes; flies over *Lychnis* fl., &c.  
 " iota .....among ground ivy  
 " gamma.....flies in the sunshine  
 " ni, 2. ....  
 " interrogationis flies wildly; rests on rocks, and stumps, in dull weather  
 G. libatrix, h. ...in cellars, and on palings, trees, &c.  
 A. pyramidea ...  
 " tragopogonis hides in windows  
 " maura .....s. rests on inner surface of roofs of outhouses  
 S. anomala .....at heath, and flying along hedgerows, at night; remains fine but a very few days after emergence  
 C. fraxini .....  
 " nupta .....at rest, on trees and walls; soon alarmed, when approached; comes to l.  
 " promissa ... } in the New Forest,  
 " sponsa ..... } Norfolk, &c.; all the genus are somewhat restless when boxed, unless the box is capacious  
 H. rostralis, h. ....  
 H. albistrigalis at rush fl., and s. sugar  
 " costæstrigalis at rush fl., and s. sugar  
 H. derivialis .....comes to l.  
 A. flexula .....beaten from hedges  
 O. dentalis .... on the coast, among viper's bugloss  
 P. fimbrialis .....comes to l.  
 " farinalis .....in stables, &c.  
 " glaucinalis .. in thatch; and at l.  
 P. punicealis, 2. in grassy places; flies in the sunshine  
 " ostrinalis 2?   
 R. sanguinalis 2? flies at dusk  
 H. cespitalis 2?   
 E. cingulalis 2?.... on grassy hill-sides, &c.  
 " anguinalis 2? ...on grassy hill-sides, &c.  
 C. lemnalis ....among the weeds of duckweed-covered ponds; flies at dusk; comes to l.  
 P. stratiotalis ...among water plants; flies at dusk; comes to l.  
 A. niveus, b. ...at rest, on twigs, &c. in weedy ponds and rivers, close to the water's edge, or flying slowly over the surface  
 B. flavalis .....in chalk, and limestone districts, on the S. coast  
 P. forficalis 2?...gardens  
 " stramentalis...beaten from undergrowth, in woods, fens, &c.  
 S. sticticalis .....at l., and fl.  
 " palealis.....among wild carrot, and *Peucedanum*, on the S.E. coast  
 " cinctalis .....clover fields; comes to l.  
 S. alpinalis .....on the tops of mountains, in Perthshire, &c.  
 " lutealis.....in hedges  
 " ferrugalis .....beaten from hedges; flies at dusk; comes to fl., and sugar  
 " decrepitalis ...  
 S. Zelleri .....beaten out of old willows, and hawthorns

## IMAGOS]

## AUGUST

- S. cembræ .....  
 " murana .....among heath  
 " lineola .....among old, lichen-covered sloe, and hawthorn bushes  
 " cratægella ... [local  
 " resinea .....on ash trunks, very  
 " phæoleuca ...  
 " truncicolella on fir trunks  
 " coarctalis (angustea) on mossy walls  
 " alpina .....  
 " pallida ..... in fens, &c.  
 P. alpinellus.....in sandy, grassy places, especially in fir woods; not a mountain species  
 E. ocella, e., h. comes to l.  
 C. verellus .....  
 " falsellus ..... common in England, more local in Scotland  
 " pratellus, 2. ....s. at sugar  
 " dumetellus ...  
 " ericellus .. ...on moors, among heath; local  
 " sylvellus (adipellus) in fens, &c.  
 " hamellus ..... in grassy places, among heath  
 " pascuellus ...damp meadows, and moors; local; s. at sugar  
 " furcatellus ...a mountain species, in Britain  
 " margaritellus damp, grassy places, in open woods  
 " pinetellus ..... best obtained at night, by searching dry banks  
 " latistriellus ...on coast sand-hills; local  
 " perlellus .....  
 " Warringtonellus on mosses, and moors, and on the coast; very local  
 " selasellus ..... fens, and wet meadows  
 " tristellus .....  
 " fascinelinus...on the coast, near Yarmouth; at rest, on the sand  
 " inquinatellus among alder bushes, and on heaths; s. at sugar  
 " contaminellus dry pastures; rather local  
 C. geniculellus...  
 M. cribrella.....among thistles; often on hills  
 T. pryorella .....  
 H. nimbella .....among Jasione montana, and thistles, and ragwort; on the coast  
 " nebulella ..... among Carduus nutans, &c.; very local  
 " binævella.....  
 E. pinguis.....rests on ash trunks; comes to l.  
 P. obductella ...  
 " ornatella .....  
 " abietella .....may be beaten from young fir trees  
 " roborella .....  
 P. palumbella ...among heath  
 R. consociella ...s. at sugar  
 " advenella .....  
 " tumidella .....  
 O. ahenella .....  
 M. sociella .....  
 " anella .....  
 G. cerella .....  
 S. Revayana, h. woods  
 T. rosana .....  
 " corylana .....woods  
 " costana.....fens, and marshes  
 " viburnana.....boggy heaths, and moors  
 " icterana .....dry banks  
 " adjunctana ...  
 D. grotiana .....among oak, in woods  
 A. Gerningana...heaths, and moors  
 L. literana .....on oak trunks  
 P. sponsana .....woods  
 " Schalleriana...on moors, and fens; among fallow  
 " comparana ...  
 " Caledoniana Northern moors  
 " variegana .....hedges  
 " cristana .....among dwarf fallows  
 " Hastiana .....among fallows  
 " maccana .....Rannoch  
 " ferrugana .....woods  
 " aspersiona ...Yorks coast, &c.  
 " Shepherdana fens  
 " comariana ...boggy heaths, and fens



## IMAGOS]

## AUGUST

- T. caudana .....woods, and fens  
 " contaminana hawthorn hedges, &c.  
 D. Lorquiniana fens  
 P. marginana ...damp woods, heaths, and fens  
 S. aceriana .....among poplars  
 " dealbana .....in oak woods  
 " rosæcolana ...in gardens, among roses  
 S. euphorbiana South coast  
 " bifasciana ...among Scotch fir  
 " abscisana .....at Folkestone, among Inula, and thistles  
 " lacunana .....  
 " urticana .....woods  
 M. Schulziana ...heaths, and mosses  
 " Ratzeburgiana among spruce, and Scotch fir  
 P. inornatana (subarcuana) in fens; local  
 " paludana .....in fens; local  
 " comptana.....chalk downs, &c.  
 " Lundana .....  
 G. nisana ..... among willow; local  
 " trimaculana ...among elm  
 " nævana.....among holly  
 P. immundana ...woods  
 H. augustana ...Durham, Scotland  
 B. angustoriana garden hedges  
 P. corticana .....among oaks  
 " profundana ...among oaks  
 " ophthalmicana among aspens  
 " occultana .....among young fir  
 " Solandriana...among alder, and poplar  
 " semifuscana.. among willows  
 E. bimaculana ...woods  
 " Brunnichiana  
 " tetragonana ...among black briony  
 O. ulmana..... Yorks, Norfolk, Surrey, &c.  
 S. rufillana .....among wild carrot  
 C. Hercyniana...among spruce  
 R. pinicolana ...among Scotch fir  
 " pinivorana ...among Scotch fir  
 C. splendana ...among oak  
 S. composana ...among clover, and trefoils  
 " orobana .....Scarboro', &c.  
 D. alpinana .....at river sides, among tansy  
 " Petiverana ...among yarrow  
 " acuminatana railway banks, &c.  
 " simpliciana ... among Artemisia vulgaris  
 C. ulicetana .....among furze  
 " cana .....among thistles  
 " Hohenwarthiana among thistles  
 " Scopoliانا ... among Centaurea nigra  
 " æmulana .....Southend  
 " pupillana ...on the coast, among Artemisia  
 C. scintillulana marshes  
 E. dubitana .....  
 " angustana ...on heaths, &c.  
 " roseana .....Gravesend  
 " implicitana ...woods, in the S.  
 " anthemidana chalk districts  
 X. Zoegana ..... among Centaurea nigra  
 C. rutilana .....among juniper  
 C. dipoltana .....on chalk, in the S.  
 A. osseana .....marshes  
 P. Birdella .....  
 S. chorargella ...Cumberland, Epping, and New Forest  
 " emortuella ... Cheshire, Epping, Gloucestershire, &c.  
 " cloacella... ..  
 " arcella .....  
 T. rusticella .....  
 " monachella ...Cambs  
 " confusella ...Howth, Hartlepool  
 " misella .....in outhouses  
 " pellationella ...common, in houses  
 " fuscipunctella  
 " pallescentella in warehouses, and poulterer's shops  
 " nigripunctella .....York, Bristol, Lewes  
 " ruricolella ...  
 S. comptella ...among sloe  
 S. pyrella .....in hawthorn hedges  
 Y. viginipunctella Guildford, Beckenham  
 " plumbella ...among Eunonymus europeus  
 " padella .....among hawthorn

## IMAGOS]

## AUGUST

- Y. evonymella ... among Prunus padus  
 P. porrectella ...  
 " annulatella ... Howth, Castle Eden,  
     Scotland, Portland, &c.  
 " Dalella ..... on moors  
 H. sequella ..... on trunks of sycamore,  
     and maple  
 " vittella ..... on trunks of elm,  
     and beech  
 " radiatella ... among oak  
 " costella .....  
 Y. sylvella ..... among young oak  
 " alpella ..... among oak  
 " lucella .....  
 " asperella ..... among apple  
 H. scabrella ..... among crab apple ;  
     on tansy fl., at dusk  
 " nemorella ..... among honeysuckle  
 P. caudella, h. ... among Eunonymus  
     europæus  
 O. sparganella ...  
 P. quercella ..... among oak  
 D. costosella ... among furze  
 " liturella ..... among Centaurea  
 " pallorella, h.  
 " umbellella ... among furze  
 " assimilella ... among broom  
 " nanatella .....  
 " atomella .....  
 " arenella .....  
 " propinquella, h.  
 " subpropinquella, h.  
 " Alstræmeriella, h. among Conium  
     maculatum  
 " ciniflonella, h. Rannoch  
 " vaccinella, h.  
 " capreolella ...  
 " hypericella ...  
 " conterminella, h. among sallows  
 " angelicella ... among Angelica  
     sylvestris  
 " carduella ..... among thistles  
 " ocellella ..... among sallow  
 " Yeatesiella ... in fens, &c.  
 " applanella, h.  
 " ciliella, h. ...  
 " rotundella ... Howth, Lancashire,  
     Folkestone, &c.  
 " depressella ... Fleetwood, Essex,  
     Folkestone, &c.
- D. pimpinella ...  
 " albipunctella, h.  
 " emeritella ...  
 " pulcherimella among Bunium  
     flexuosum  
 " Douglasella ... Fleetwood, Redcar,  
     Folkestone, Isle of Wight, &c.  
 " Weirella ..... Preston, Lewisham,  
     Lewes  
 " chærophyllivorella, h.  
 " ultimella ..... marshes, &c.  
 " nervosella ...  
 " badiella .....  
 " discipunctella  
 " heraciella, h.  
 " olerella ..... near Hazlemere ;  
     beaten from thatch  
 P. gibbosella ... Manchester, Hain-  
     ault  
 G. rufescentella marshes, &c.  
 " vilella ..... Gravesend, Wor-  
     thing, Folkestone, &c.  
 " hippophaella near Deal  
 " populella ..... Yorks, Birkenhead,  
     Bristol, &c.  
 " lentiginosella Preston, Epping, &c.  
 " velocella ..... Witherslack, Cambs  
 " fumatella ..... New Brighton, Bir-  
     kenhead, Dawlish  
 " ericetella ..... moors, and heaths  
 " mulinella ..... among furze, and  
     broom  
 " desertella ..... sand-hills, on the  
     coast  
 " acuminatella among thistles  
 " artemisiella ... coast sand-hills,  
     Manchester, &c.  
 " senectella ..... in lanes, &c.  
 " mundella ..... coast sands  
 " similella .....  
 " domesticella  
 " rhombella ... among crab, in  
     hedges, &c.  
 " Lyellella ..... Castle Eden, Wither-  
     slack, New Forest, Worthing  
 " distinctella ... Lytham, Croydon,  
     Portland  
 " costella ..... among Solanum  
     dulcamara  
 " maculella .....

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- G. tricolorella ...  
 " fraternella ...Manchester, Yorks,  
 &c.  
 " vicinella .....Belfast, Brighton  
 " junctella .....Witherslack, Lake  
 District, &c.  
 " Hubnerella ...Carlisle, nr. Wake-  
 field, Manchester, &c.  
 " marmorella ...coast sand-hills  
 " instabilella ...on the coast  
 " ocellatella ...Folkestone, Preston,  
 the Lizard; s. at sugar  
 " atriplicella, 2. S. Shields, Scar-  
 boro'  
 " sequacella ...  
 " albicapitella...  
 " tæniollella.....  
 " immaculella...W. Wickham  
 " anthyllidella...railway banks, and  
 coast sand-hills  
 " atrella .....Witherslack, Dar-  
 lington, West Wickham  
 " bifractella ...Folkestone, Mickle-  
 ham, Bristol  
 " gemmella.....Birkenhead, Bristol,  
 Manchester  
 " næviferella ...among Chenopo-  
 -dium  
 " Hermannella Cambs, Yorks, &c.  
 " pictella .....coast sand-hills  
 " brizella..... near Dawlish,  
 Brighton, Southend  
 " ericinella .....heaths  
 " paupella ..... near Lewisham,  
 Folkestone, Lewes  
 " inopella .....near Bristol, Folkes-  
 tone, Lewes  
 " Knaggsiella...  
 P. Metzneriella Darlington, Scar-  
 boro', &c.  
 " neuropterella Deal, Mickleham  
 C. cytisella .....  
 " striatella ..... Cambs, Brighton,  
 Lewisham  
 C. conscriptella Witherslack  
 A. spartiella .....among furze  
 M. marginella ...among juniper  
 A. palpella .....Hainault, Ripley  
 N. Durdhamella Bristol, Darenth,  
 Deal
- Æ. flavimaculella among Angelica  
 sylvestris  
 " lunarella ..... Cambs, Lewes,  
 Lewisham, &c.  
 " subaquilella...Yorks, Lake District  
 " fuscoarella... West Wickham, &c.  
 " fuscescentella  
 " pseudospretella common in houses  
 CÆ. Kindermannella in houses  
 A. granitella ...Cambs, Witherslack,  
 Darlington  
 " autumnitella, h. among Solanum  
 dulcamara  
 " betulella .....Castle Eden, and  
 High Force; beaten out  
 R. Erxlebenella among lime under-  
 wood  
 G. equitella .....among Sedum acre  
 " Fischeriella ...  
 A. nitidella .....among hawthorn  
 " semitestacella among beech  
 " spiniella ..... among mountain  
 ash, on moors  
 " semifuscella...in hedges, among  
 sloe, and hawthorn  
 " Andereggiella  
 " auralentella...Sanderstead, Mickle-  
 ham, Tenderden  
 O. pinariella, 2. among Scotch fir  
 Z. hepariella, h. Darlington, Lake  
 District, &c.  
 " insignipennella to April (probably  
 ♀ of hepariella)  
 G. alchimiella ...  
 " stigmatella, h. among willow, and  
 poplar  
 " stramineella, h. Castle Eden, Lake  
 District, Stirlingshire  
 " tringipennella among Plantago  
 lanceolata  
 " syringella.....in gardens, among  
 lilac  
 " omisella ..... among Artemisia  
 vulgaris  
 " auroguttella... among Hypericum  
 quadrangulum  
 " ononiella .....Cambs, Mickleham  
 " Hoffmannella at Richmond, Yorks  
 C. Brogniartella Yorks, Lake District,  
 Cambs

## IMAGOS]

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- C. cuculipennella, h. among privet  
 O. avellanella ...among nut  
 " anglicella.....among hawthorn  
 " betulævorella among birch  
 " torquilella ...among sloe  
 G. atriplicivorella Isle of Wight  
 C. alcyonipennella in sheltered places,  
 among *Centaurea nigra*  
 " ochreella .....  
 " salicornella ...Fleetwood  
 " binotapennella near Brighton  
 " anapennella  
 " discordella ...among *Lotus major*  
 " trogloditella Yorks, Cambs, Castle  
 Eden, &c.  
 " squamosella...near Mickleham  
 " annulatella (*Tengstromella*) among  
*Chenopodium*  
 " salinella .....Yorks, and near  
 Brighton  
 " apicella (*cacuminatella*) fens, and  
 marshes  
 " virgaureella ...Grange, Scarboro',  
 Devon  
 " griphipennella among rose  
 B. somnulentella  
 B. præangustella on poplars, and sal-  
 lows  
 O. v.-flavella ...in wine vaults, and  
 cellars  
 C. insecurella ...at Stoa's Nest, near  
 Croydon  
 " chærophyllella  
 L. paludicolella Lake District, Yorks,  
 Cambs, Darlington  
 " lacteella .....Yorks, Lake Dis-  
 trict  
 " miscella .....Witherslack, Yorks,  
 Castle Eden  
 " Raschkiella ...Box Hill  
 " Stephensiella Hainault Forest  
 " epilobiella, h.  
 " ochraceella ...among *Epilobium*  
 " decolorella ...among *Epilobium*  
 " subbistrigella, h. ...Witherslack,  
 Worthing, Devon  
 C. Linneella ...in parks, &c., among  
 old lime trees  
 " Schrankella.....Witherslack,  
 Scarboro', Scotland  
 H. Roesella.....formerly near London  
 A. Langiella ...Devon, Lake District  
 C. festaliella..... among blackberry  
 S. Brunnichella in chalk-pits, among  
*Clinopodium vulgare*  
 E. luticomella ...  
 " poella .....among *Poa aquatica*  
 " Kilmunella ...moors, marshes, and  
 bogs; among coarse grass  
 " nigrella .....  
 " subnigrella ... Scarboro', Bristol,  
 Mickleham  
 " Bedellella ...  
 " subobscurella Darlington, Scarboro'  
 " zonariella.....  
 " Megerlella ...  
 " cerussella.....  
 " biatomella ... Witherslack, Dar-  
 lington, Cambs  
 " cygnipennella  
 T. marginea .....among blackberry  
 L. roborella, 2....most of these second  
 appearances of the genus *Litho-*  
*colletis* do not occur in the North  
 " hortella .....very local  
 " Amyotella ...  
 " lantanella.....among guelder rose  
 " quinqueguttella among dwarf sal-  
 lows  
 " irradiella .....among oak  
 " Bremiella ...  
 " lautella.....among oak  
 " vacciniella ...Yorks, Scotland, &c.  
 " cavella .....West Wickham  
 " pomifoliella .. among hawthorn,  
 and apple  
 " spinicolella ...among sloe  
 " faginella .....among beech  
 " torminella ...Manchester, Lewis-  
 ham  
 " salicicolella ...among willow  
 " viminetella ...Witherslack, Man-  
 chester, &c.  
 " carpinicolella among hornbeam;  
 local  
 " ulmifoliella ...among birch  
 " spinolella .....among willow  
 " quercifoliella among oak  
 " Messaniella... among evergreen oak  
 " corylifoliella among hawthorn

## IMAGOS]

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- L. Caledoniella Lake District, Darlington, Yorks, Scotland  
 " viminiella.....among willow  
 " ulicicolella ...among furze  
 " alnifoliella ...among alder  
 " Heegerella ...among oak  
 " Cramerella ...among oak  
 " tenella ..... Epping, Windermere  
 " sylvella (acerifoliella) among maple  
 " emberizapennella Yorks, Lake District, &c.  
 " Frolichella ...among alder  
 " Dunningiella Darlington, Lake District, Yorks  
 " Nicelliella ...among nut  
 " Stettinella ...among alder  
 " Kleemanella Scarboro', Harrogate, Preston  
 " Schreberella...among elm  
 " tristrigella \* ...among elm  
 " trifasciella ...among honeysuckle  
 " scabiosæcolella  
 " comparella ...London District  
 L. Clerckella, h. among sloe, and fruit trees  
 P. salignella .....among willows, near London  
 C. spartifoliella among broom  
 " laburnella ...among laburnum  
 O. reliquella, b.  
 B. aurimaculella... among Chrysanthemum leucanthemum  
 " ulmella .....among oak  
 " cristatella .....among yarrow  
 N. atricapitella among oak  
 " ruficapitella ...among oak  
 " anomelella ...among rose  
 " tiliæella, b. ...  
 " perpygmæella among hawthorn  
 " pomella .....Darlington, Richmond, Yorks, Lewisham, &c.  
 " oxyacanthella among hawthorn  
 " viscerella .....Richmond, Yorks, Darlington  
 " catharticella...Yorks, &c.  
 " Septembrella among Hypericum  
 " cryptella .....Scarboro', Darlington, Manchester [boro'  
 " Headleyella...Mickleham, Scarboro', W. Wickham, Manchester  
 N. trimaculella...Darlington, Yorks  
 " floslactella ...among nut  
 " salicivorella ...among willow  
 " myrtillella ...Witherslack, Yorks, Manchester  
 " microtheriella ...among nut, and hornbeam  
 " betulicolella... Darlington, Scarboro', W. Wickham, Manchester  
 " ignobilella ...among hawthorn  
 " acetosella .....Witherslack, Isle of Wight, near Dublin  
 " plagicolella ...among sloe [ter  
 " prunetella ...Scarboro', Manchester  
 " tityrella .....among beech  
 " malella.....among wild apple  
 " atricolella ...Darlington, Manchester, Lewisham [boro'  
 " arcuosella.....Darlington, Scarboro', W. Wickham, Manchester  
 " marginecolella among elm ; local  
 " glutinosella ...Yorks, Darlington  
 " aurella .....among blackberry  
 " splendidissima among bramble, dewberry, and wild raspberry  
 " luteella.....  
 " ulmivorella ...among elm  
 T. atrifrontella...Lewisham  
 " squamatella...Charlton, Bristol  
 " immundella...among broom  
 P. rhododactylus among rose  
 " isodactylus ..... among Senecio aquaticus  
 " acanthodactylus on heaths  
 " punctidactylus..... Lake District, Birkenhead, Bristol, Farnham  
 " hieracii.....  
 " pilosellæ .....Cambs, Mickleham  
 " zophodactylus  
 " fuscodactylus  
 " lithodactylus among Inula dysenterica  
 " pterodactylus among convolvulus  
 " osteodactylus Scarboro', Witherslack  
 " baliodactylus, b. Bristol, Lewes, Mickleham  
 " tetradactylus among thyme  
 " pentadactylus among Convolvulus sepium, and arvensis  
 A. polydactyla, h. among honeysuckle

# SEPTEMBER

## OVA]

With fewer distractions, in the shape of freshly emerged Imagos, this month, more attention may be given to the search for eggs, especially when it is found so many species are now obtainable in that condition. When eggs have been obtained, they should not be kept "coddled up" in a close warm place, but should be secured on, or near, the food-plant, fully exposed to the weather, otherwise there will be great danger of their drying up.

- C. Edusa, s. .... on white clover, lucerne, &c.
- A. Latona.....on violet, and hearts-ease
- T. quercus .....on oak twigs
- " w.-album .....on wyth elm; also elm; on the twigs
- " pruni..... on sloe twigs
- " betulæ .....on sloe twigs
- L. Ægon .....on Ornithopus perpusillus; white
- " Alexis .....on rest harrow, trefoil, &c.
- H. comma ..... on trefoil, and other Leguminosæ
- L. dispar .....on sloe, hawthorn, fruit trees; on the trunks, in a heap, covered with down
- " monacha .....on oak, beech, fir, apple, birch, &c.
- T. cratægi.....to Mar., on hawthorn, sloe, &c.; on roadside hedges; pale-brown, thickly covered with dark-coloured down
- B. neustria .....on hawthorn, sloe, fruit-trees; in batches, round the twigs, and branches
- " castrensis .....on Artemisia maritima, Daucus maritimus, &c.
- C. elinguaris ...on oak, honeysuckle, hawthorn, sloe; also heath, bilberry, &c.
- E. vespertaria ...on nut
- " apiciaria .. .on poplar, willow, sallow
- E. alniaria ..... to May, on alder, birch, sallow, beech, &c.; brick-shaped, like all the Ennomos
- E. tiliaria .....to May, on oak, sallow, birch, alder, &c.; purplish
- " fuscantaria ... to May, on ash, privet; upon the twigs, in small batches
- F. pinetaria .....on bilberry
- O. filigrammaria to Feb., on sallow
- E. subciliata.....on maple; at foot-stalk of leaf
- M. rubiginata ...on alder; large
- L. lignata.....on Galium palustre, &c.
- S. vetulata ..... on buckthorn
- C. immanata ...probably on alder, and other trees, and strawberry, bilberry, &c.
- " prunata .....on currant, goose-berry, sloe, &c.; on the bark; large
- " testata .....on heath, birch, sallow, poplar, &c.; singly, large
- " populata .....on bilberry, whortle-berry, poplar; globular, large, yellow
- " fulvata .....on dog rose; rose-pink, large
- " pyraliata .....on Galium, and hawthorn
- " dotata .....on black, and red currant; large
- T. chærophyllata on Bunium flexuosum
- D. cæruleocephala on hawthorn, sloe; ragged
- B. glandifera ...on wall-lichens
- " perla.....on wall-lichens
- L. pallens..... on Deschampsia cæspitosa

## OVA]

## SEPTEMBER

- N. lutosa ...on stems of common reed  
 G. flavago .....to April, on stems  
 of marsh thistles, burdock, &c. ;  
 in heaps  
 T. fimbria.....on primrose, broom,  
 and various trees  
 N. xanthographa on plantain, &c.  
 A. rufina .....on oak. Oval with  
 a slight peak rising from the  
 centre, ribbed rather coarsely  
 from base to centre ; dirty-pink,  
 brown round the base, and a  
 conspicuous brown central spot  
 C. xerampelina...on ash ; probably  
 in the chinks of the twigs, and  
 the buds ; round, smooth, dirty-  
 white  
 T. subtusa.....poplar ; upon twigs  
 " retusa .....to Mar., on willow,  
 willow, poplar ; upon the axils  
 of the leaves  
 P. chi .....on dock, hawthorn,  
 willow ; and probably lettuce,  
 sow thistle, "tea tree," &c.  
 " flavocincta ...to March, on dock,  
 chickweed, groundsel, mint, &c. ;  
 in gardens, on everlasting pea,  
 plum, &c.  
 M. oxyacanthæ on hawthorn, sloe ;  
 rather large, distinctly ribbed  
 P. empyrea .....on pilewort, on the  
 leaf-stalks  
 H. proboscidalis on nettle ; rather  
 large, pale-yellow

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"while, deep and wide,

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Although a large number thus found this month speedily pupate, still a good many which may be obtained by beating and sweeping, hibernate, some being very small ; and unless the Collector is able to provide something approaching the natural conditions of larval life, they are best left until the spring. Their re-appearance at that season is duly recorded in the lists.

C. reclusa regularly appears twice a-year, in confinement ; but when at large, its habits do not appear so regular. L. roboris will occasionally feed all the winter, if tolerably mild, and many other species will at times have a nibble, if the food-plant is handy. The eggs of C. xerampelina occasionally hatch this month, though generally later. The young larvæ feed only by night, on ash, though they will sometimes eat hawthorn, and guelder rose. Now is the time when we find

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## LARVÆ]

## SEPTEMBER

- L. sinapis ..... *Vicia cracca*, and *Orobus tuberosus*
- P. brassicæ ..... cabbage, &c.
- " rapæ ..... *Cruciferæ*, &c.
- " napi ..... *Cruciferæ*
- " Daplidice ..... wild mignonette, and weld
- V. polychloros, s., h. ground shoots of elm; will also eat osier, sallow, aspen, and fruit trees. The eggs of this species are s. laid about this time, and hatch, and the young larvæ hibernate. It is, however, generally supposed that none of the Vanessæ pair until the spring
- " cardui ..... thistles; will also eat nettle
- E. epiphron, h. probably on *Nardus stricta*, and small rushes; in mountain bogs
- " Medea, h. ... moorland poa, and other grasses
- S. Ægeria, h. ... grasses
- " Megæra, h. ... grasses
- " Semele, h. .... quaking grass, couch grass, &c.; on dry hill-sides, &c.
- " Ianira, h. .... meadow grasses
- " Tithonus, h. .... annual meadow grass, &c.
- " hyperanthus, h. annual meadow, millet, and other grasses
- C. Davus, h. ... *Rhyncospora alba*
- P. Hippothoe, h. great water dock
- " Phlœa, h. ... dock, ragwort, sorrel
- L. Bœtica ..... *Colluta arborescens*
- " aegestis, h. *Erodium circuitarium*
- " Argiolus ..... ivy, fl. The eggs of this, the second brood, are laid on the fl.-stalks; the young larvæ burrow in the unexpanded fl.-buds, feed up in the blossom, and spin up on the underside of a leaf; the butterfly appearing in April, or beginning of May
- N. Lucina ..... *Primula*
- T. Tages, h. .... *Lotus corniculatus*
- H. Paniscus ..... plantain, in rolled-up leaves
- H. linea, h. .... grasses, in rolled-up blades
- S. populi ..... poplar, sallow, willow, &c.
- " tilia ..... elm, lime, beech
- Å. Atropos ..... potato leaves; will also eat "tea tree," jasmine, ash, woody nightshade, snow-berry, *Lycium barbarum*, elder, thorn-apple, spindle, sweet pea, &c.; hides under sods
- S. ligustri ..... privet, lilac, ash, holly, mountain ash, laurestinus, guelder rose, evergreen oak, &c.
- D. euphorbiæ ... *Euphorbia paralias* and *cyparissias*
- " gallii ..... *Galium verum*, and *G. elatum*. (See last month's note.) This species is s. found on the sand-hills at Deal, from the first battery Southwards, as far as the large sand-hills extend, and from the sea Westward, for two or three hundred yards
- C. celerio ..... *Galium*, and vine
- " nerii ..... oleander
- M. stellatarum ... *Galium Mollugo*, growing on old walls, exposed to the sun
- S. formicæformis, h. in osier stumps
- " muscæformis in stems of *Statice armeria*
- " bembeciformis, h. in the stems of poplar, and sallow
- " apiformis, h. in poplar stems, & r.
- Z. æsculi, h. .... in the wood of ash, elm, pear, horse chesnut, &c.
- C. ligniperda ... in the trunks of large trees of ash, willow, elm, &c.; feeding on the wood, seldom higher than 5 ft. from the ground. They may be found during this month, or the next, full-fed, under the bark which is an inch or two under the ground. If it is desired to feed them up, care must be taken not to put them into a wooden, or even a brick receptacle, as they will be

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## SEPTEMBER

- sure to eat, or force their way out. They are best kept in large flower pots, wide-mouthed bottles, or tin boxes, and supplied with fresh-cut, but not wet, chips, and sawdust of their food, or with decayed pieces, and covered with glass, or wire gauze, well secured. Keep a sharp look-out for mildew
- H. hectus, h. ...in r. of brake fern  
 " lupulinus, h. ...in r. of dead nettle, &c.  
 " velleda, h. ...in r. of brake fern  
 " humuli, h. ...in r. of various plants  
 L. asellus .....oak, beech, poplar  
 " testudo .....oak  
 S. phegea, h. ...doubtful native. On the Continent it feeds from this month to May, on dandelion, scabious, plantain, &c.; pupa under moss, and dried leaves  
 L. aureola, h. ...lichens, on oak, larch, &c.  
 " lurideola, h. ....lichens  
 " rubricollis .....lichens, on larch, &c.  
 E. cribrum, h. ...heath, bilberry  
 C. Hera, h. ....doubtful native. On the Continent it feeds from this month to May, on *Echium vulgare*, and various low plants  
 " dominula, h. *Cynoglossum officinale*, &c., on hilly places  
 E. russula, h. ...plantain, heath, &c.  
 C. plantaginis, h. violets, plantain, &c.  
 " caia, h. ...nettle, and various plants  
 " villica, h. ....chickweed, furze, sloe, and other plants  
 A. fuliginosa, h. dock, nettle, plantain, &c.  
 L. chryorrhæa, h. ....hawthorn, sloe, blackberry, &c.  
 " auriflua, h. ....sloe, hawthorn, oak, sawlow, &c.  
 " salicis, h. ....poplar, willow, &c.  
 O. pudibunda ...hop, beech, hawthorn, nut, oak, &c.  
 " fascelina, h. ....on hedges, dwarf sallows, furze fl., heath, broom, and various trees, and plants  
 O. gonostigma, h. oak, sawlow, nut, hawthorn, sloe, bramble, beech, &c.  
 " antiqua.....various trees, and shrubs  
 D. coryli .....beech, nut, birch, alder, oak, willow. Sometimes, in confinement, the larvæ feed up, and emerge this month  
 B. rubi, h. ....bramble, heath, &c.; generally hibernates full-bred; s. buries in the ground, until the spring  
 " roboris, h. .. hawthorn, dogwood, bramble, broom, heath, ivy, &c.  
 " quercus, h. ...bilberry, &c.; dogwood preferred  
 " trifolii, h. ...trefoil, clover, broom, furze, &c.  
 O. potatoria, h. coarse grasses  
 L. quercifolia, h. bramble, sloe, sawlow, willow, plum, &c.  
 O. sambucata, h. ivy, elder, holly, bramble, and other trees, and plants  
 R. cratægata, h. hawthorn, sloe  
 V. maculata .....nettle, and other plants  
 M. margaritata, h. oak, beech, birch, hornbeam, &c.  
 E. fasciaria, h. ....Scotch fir; rests closely pressed upon a twig  
 E. dolobraria ...oak, beech, birch, aspen  
 P. syringaria, h. lilac, privet, honeysuckle, elder  
 S. illunaria .....willow, ash, hawthorn, oak, plum, &c.  
 " illustraria .....oak, birch, ash, beech, maple  
 O. bidentata .....oak, sawlow, nut, ivy, ash, sloe, &c.  
 A. betularia .....oak, elm, hawthorn, birch, beech, alder, mountain ash  
 C. lichenaria, h. lichens, on oak, park palings, &c.  
 B. rhomboidaria, h. ivy, birch, oak, plum, rose, lilac, elder, &c.

## LARVÆ]

## SEPTEMBER

- B. abietaria, h. larch, spruce, Scotch fir; has been found on whortleberry; will also eat birch, and oak
- " cinctaria .....heath. In confinement the impregnated females deposited their eggs, by preference, on willow catkins
- " roboraria, h. oak; h. on a twig, which it much resembles
- T. crepuscularia larch, willow, poplar, elm, birch, alder, &c.
- " extersaria.....birch, beech, oak
- G. obscurata, h. thyme, sun cistus, Potentilla reptans, Poterium sanguisorba, &c. Feeds at night; hides by day under r., stones, &c.
- D. obfusca, h. heath, vetch, &c.
- G. papilionaria, h. nut, birch, alder, beech, &c.; about the m. of this month, in the N., the larva fastens itself to a twig, for the winter
- I. vernaria, h. ...Clematis vitalba
- " lactaria .....oak, birch
- P. baiularia, h. oak
- E. porata .....oak
- " punctaria.....oak
- " trilineararia ...beech
- " omicronaria ...maple; s. beech
- H. auroraria, h. plantain
- A. luteata .....maple
- " Blomeraria ...wytch elm; in, or near hilly woods; remains, on the under-side of the leaves
- E. heparata ..... alder
- V. cambricaria...mountain ash
- A. rubricata, h.—? will eat knotgrass, Lotus corniculatus, Medicago lupulina, Thalictrum minus, and the smaller Trifolium
- " scutulata, h....Anthriscus sylvestris, fl., and dandelion, preferring the withered leaves
- " bisetata, h. dandelion; will also eat knotgrass, and withered bramble
- " contiguaria, h. Empetrium nigrum; will also eat hawthorn buds, and knotgrass
- A. rusticata, h....hawthorn; will also eat ivy, lilac, and withered bramble
- " osseata, h. ...dandelion, &c.
- " interjectaria, h. dandelion, scarlet pimpernel, withered
- " holosericata, h. sun cistus, withered
- " incanaria .....dandelion, groundsel; will also eat knotgrass
- " ornata, s., h. thyme, marjoram; will also eat mint
- " promutata, h. yarrow, mugwort, creeping cinquefoil
- " immutata, h. some marsh plant; common in fens; will also eat knotgrass
- " strigilata, h....Stachys sylvatica
- " emutaria, h....Triticum repens; in salt marshes, on the coast; will also eat Medicago lupulina, Lotus corniculatus, Chenopodium, mint, knotgrass
- " aversata, h. ....primrose, gooseberry, nut, Geum urbanum, &c.
- " degeneraria, h. —? will eat bramble, knotgrass, Cerastium, Veronica. Occurs at Portland
- T. amataria, h.... dock, Polygonum, and various plants; may be found on the underside of the leaves, adhering to the veins
- C. pusaria.....oak, nut, alder, birch, willow, &c.
- " rotundaria ...birch, willow
- C. temerata .....sloe, and wild cherry, and buckthorn?
- M. alternata, b. willow, sloe
- " notata, b. ...willow
- " liturata.....larch, and Scotch fir
- S. belgiaria, h....heath
- F. atomaria, h....Centaurea, trefoils, &c.
- " piniaria .....Scotch fir, and larch
- " conspicuata ...broom
- M. euphorbiata... Euphorbia cyparissias
- S. dealbata, h.... grasses
- S. sacraria .....dock, chamomile, and other Compositæ; will also eat knotgrass

## LARVÆ]

## SEPTEMBER

- A. ononaria .....rest harrow [&c.  
 A. gilvaria, h. Achillea millefolium,  
 A. ulmata.....wytch elm [lars  
 L. marginata ..sallow, willow, pop-  
 P. hippocastanaria, h. heath  
 L. cæsiata, h. ... bilberry, whortle-  
 berry, heath  
 " pectinaria ...Galium Mollugo, G.  
 sexatile; very sluggish  
 E. alchemillata...Galeopsis ladanum,  
 G. tetrahit, Silene, Lychnis  
 " unifasciata ...Odontites rubra  
 " blandiata .....eyebright  
 E. centaureata ...ragwort, Angelica,  
 golden rod, &c.  
 " succentureata... Achillea millefo-  
 lium, Artemisia, and Valerian  
 officinalis, seeds  
 " subfulvata..... Achillea millefo-  
 lium, and chrysanthemum  
 " subumbrata ...Gentiana, Campan-  
 ula, and other fl., in, and near  
 beech woods  
 " helveticata ...juniper  
 " satyrata .....Galium, scabious,  
 and other fl., in, and near beech  
 woods  
 " castigata .....golden rod, heath,  
 nettle, Angelica, &c.  
 " trisignata .....Angelica sylvestris,  
 fl., and seeds  
 " virgaureata ...golden rod, fl.  
 " albipunctata...fl., and seeds of An-  
 gelica sylvestris, Heracleum  
 sphondylium, and Lythrium  
 salicaria  
 " pimpinellata Pimpinellata magna,  
 and P. saxifraga (seeds); also  
 angelica  
 " fraxinata .....ash; will eat fl. of  
 laurestinus  
 " innotata? .....Artemisia campes-  
 tris; at Wallasy  
 " constrictata...thyme  
 " nanata, h. ...heath, fl.  
 " subnotata.....Atriplex, & Cheno-  
 podium, fl., and seeds  
 " companulata ...seed-capsules, of  
 Campanula trachelium, and  
 other Campanulæ  
 E. vulgata, 2. ...hawthorn, willow,  
 golden rod, ragwort, &c.  
 " expallidata ...golden rod, fl.; will  
 also eat Michaelmas daisy, &c.  
 " absynthiata ...fl., and seeds of rag-  
 wort, Eupatorium cannabinum,  
 Artemisia vulgaris, Achillea  
 millefolium, golden rod, &c.  
 " minutata, h. heath, fl., and sca-  
 bious; s. a cannibal  
 " knautiata.....Knautia arvensis,  
 fl., and seeds  
 " assimilata ...black currant (on  
 underside of the leaves), and  
 hop (on the leaves, and ♀ fl.)  
 " exiguata .....hawthorn, black  
 currant, barberry, ash, alder,  
 willow, &c.  
 C. sparsata .....Lysimachia vul-  
 garis, fl., and leaves  
 L. sexalata .....sallow, willow  
 T. juniperata ...juniper  
 Y. ruberata ..sallow, alder, bil-  
 berry, &c.  
 " impluviata ...alder, willow; in  
 curled-up leaves; does not  
 change into a pupa until Dec.  
 M. albicillata ...bramble, raspberry  
 M. tristata .....Galium Mollugo  
 " procollata ...Clematis vitalba  
 " rivata? .....Galium Mollugo  
 " sociata .....Galium Mollugo  
 " galiata, b. ...Galium sexatile  
 " fluctuata, b. ....cabbage, horse  
 radish, nasturtium, &c.  
 A. berberata, e. barberry  
 C. munitata, h. groundsel  
 " propugnata .....primrose? Cruci-  
 feræ? &c.  
 " ferrugata .....Nepeta glechoma,  
 Galium, chick weed  
 P. tersata .....Clematis vitalba  
 " lignata, h. ...Galium palustre, &c.  
 S. undulata .....sallow, poplars;  
 between leaves  
 C. corylata .....sloe, lime, nut  
 " suffumata, h. Galium Mollugo, and  
 ragwort  
 " silaceata .....willow herb (Epilo-  
 bium), and Circæa lutetiana

## LARVÆ]

## SEPTEMBER

- P. comitata .....Chenopodium  
 E. lineolata .....Galium verum, on  
 the coast; will also eat G.  
 sexatile, and G. Mollugo  
 C. obliquaria ...broom  
 P. lacertula ..... birch; between  
 united leaves  
 " hamula.....oak, birch  
 " unguicula.....beech  
 D. bicuspis .....alder, beech, birch  
 " furcula .....sallow, willow,  
 poplar  
 " bifida .....poplars [nut  
 S. fagi .....beech, oak, birch,  
 C. bucephala ...elm, oak, lime,  
 beech, willow, nut, &c.  
 C. curtula .....poplars, willow  
 " reclusa .....between united leaves  
 of willows, poplars, willows  
 P. palpina ..... willows, willows,  
 poplars, birch  
 N. camelina ... ..oak, beech, birch,  
 maple, nut, alder, hawthorn,  
 aspen, willow, apple  
 " cucullina .....maple, sycamore  
 " dictæa .....poplars, willow, wil-  
 low  
 " dictæoides ...birch  
 " dromedarius...birch, alder, nut  
 " trilophus .....birch, poplars  
 " ziczac .....poplars, willow, wil-  
 low, alder; more frequently  
 found than the imago  
 " Dodonea .....oak, birch  
 T. derasa .....bramble, hawthorn,  
 batis ..... bramble, raspberry  
 C. duplaris .....birch; between  
 united leaves  
 " fluctuosa .....birch; between  
 united leaves  
 " ocularis .....poplars  
 B. glandifera, h....lichens on walls;  
 local. This species, and the  
 next, build a cocoon of silk and  
 earth, mortar, or crumbled  
 stone, like a blister on paint,  
 in which they live, except  
 when they come out to feed,  
 in the night, or early morning,  
 especially in wet weather  
 B. perla, h. ....lichens, on walls  
 D. Orion .....oak, birch  
 A. tridens.....hawthorn, sloe, rose,  
 willow, willow, mountain ash,  
 &c.  
 " psi..... hawthorn, poplar,  
 pear, elm, lime, &c.  
 " leporina .....birch, poplar, alder,  
 willow  
 " aceris ..... sycamore, horse  
 chesnut, maple, birch, s. oak  
 " strigosa, b. ...hawthorn; especially  
 in chalky districts  
 " alni ..... alder, oak, lime,  
 elm, beech, birch, sycamore,  
 poplar, nut, willow, willow,  
 hawthorn, bramble, Spanish  
 chesnut, horse chesnut, rose.  
 Has been found, at rest, on  
 palings, &c.  
 " ligustri.....ash, privet; seems  
 to prefer shaded trees  
 " auricoma, s., 2.? ..... bramble,  
 bilberry, birch, oak  
 " myricæ..... Myrica gale, heath?  
 thistle? willow, birch  
 S. venosa .....Glyceria aquatica  
 L. obsoleta .....common reed, in  
 marshes, and fens; concealed,  
 by day, in hollow stems  
 S. ulvæ, h. ....common reed; in  
 marshes, and fens  
 X. hepatica, h. grasses, chickweed,  
 &c.  
 D. pinastris .....dock, sorrel, &c.  
 L. exigua .....plantain  
 C. cytherea, h.....grass; in stony  
 places  
 M. brassicæ .....cabbage, dock,  
 Chenopodium, chrysanthemum,  
 &c.  
 " persicariæ ...Polygonum persi-  
 caria, and other low plants;  
 also elder  
 A. gemina, h. ...grasses  
 " unanimitis, h. grasses  
 C. Morpheus .....Sedum telephium,  
 willow, bramble, docks, teasle,  
 &c.  
 " alsines, h. ...chickweed, &c.

## LARVÆ]

## SEPTEMBER

- C. cubicularis, h. grasses, pulse, grain  
 R. tenebrosa, h. violets, knotgrass, and other low plants  
 A. Puta .....dandelion, lettuce, carrot r., knotgrass, &c.  
 " segetum, h. ...in r. of turnips, and other Cruciferæ, &c.  
 " lunigera .....? will eat knotgrass, &c.  
 " exclamtionis, h. r. of cabbage, grass, turnips, &c.  
 " corticea, h. ...Chenopodium, &c.  
 " cinerea, h. ...r. of low plants  
 " ripæ .....Cynoglossum officinale, on the coast; burrows 7 or 8 in. in the sand  
 " Ashworthii, h. fescuegrass, hawkweed, sun cistus, thyme, heath, harebell, &c.  
 N. augur, h. ....low plants, hawthorn, sallow, &c.  
 " nigrum, h. ...pea stems, and low plants  
 " rhomboidea, h. chickweed, sallow  
 " festiva, h. ...violet, sallow, foxglove, &c.  
 " Dahlii, h. ...various low plants  
 " umbrosa, h. ....dock  
 D. carpophaga, s. ... Lychnis, and Silena inflata, the young seeds  
 " capsophila ... Silene maritima, and S. inflata  
 " capsincola ...Lychnis, and Silene, seeds  
 " conspersa..... Lychnis flos cuculi, and Silene inflata, seeds  
 E. lucipara .....brake fern, & Poly-podium filix-mas; also sallow, nettle, primrose, plantain, dandelion, &c.  
 A. nebulosa, h. birch, sallow, hawthorn, &c.  
 " tincta, h. .... birch, grass, and low plants  
 " advena, h. ... lettuce, knotgrass, and various plants  
 H. adusta, h. ...sallow; also low plants, and hawthorn; the larva hibernates full-fed  
 " chenopodii ...Chenopodium  
 H. atriplicis ...Chenopodium, dock, Polygonum persicaria, &c.  
 " oleracea .....elm, nettle, dock, cabbage, &c.  
 " pisi .....brake fern, broom, sallow, birch, mountain ash, scabious, Carex, grass  
 " contigua .....birch, oak, nut, &c.  
 " genistæ.....broom, chickweed, Silene, knotgrass, &c.  
 " rectilinea, h. sallow, bilberry, bramble  
 C. lychnitis .....seeds of white, and black mullein  
 " asteris .....golden rod, Trifolium vulgare, and China aster  
 " absynthii .....wormwood  
 " umbratica.....Sonchus, lettuce  
 H. dipsacea .....Linaria, fl.; also Silene otites, seeds  
 A. myrtilli, s. h. heath  
 E. fuscula .....lavender grass (Molinia cærulea). May be found feeding, at night, about half way up the blades of grass  
 A. urticæ .....nettle  
 " triplasia .....nettle, hop  
 P. chrysitis, h. ...Lappa, thistle, nettle, dead nettle, &c.  
 " gamma.... ..nettle, hop, and most low plants  
 M. typica, h. ...dock, low plants, &c.; gregarious until after h.  
 " maura, h. ....dock, chickweed, ivy, &c.  
 P. ænea..... Polygala vulgaris  
 H. crassalis .....heath  
 S. emortalis ...oak  
 H. derivalis, h. sallow, and bramble  
 " barbalis, h. ...oak; afterwards, birch catkins  
 " tarsipennalis, h. wild raspberry? will eat knotgrass, and sallow  
 " grisealis .....Sisymbrium Sophia, oak, &c.  
 P. punicealis.....Nepeta cataria, fl.-heads  
 R. sanguinalis ...thyme, fl.  
 E. cingulalis, h. Salvia pratensis, under the leaves

## LARVÆ]

## SEPTEMBER

- B. lancealis .....Eupatorium cannabinum, Senecio, Sium latifolium, &c.  
 " terrealis, h. ...golden rod, fl., &c.; hibernates nearly, if not quite, full-fed  
 " urticalis .....nettle  
 E. sambucalis ...elder, convolvulus; may be found hiding, among the corymbs of elder  
 P. forficatalis .....cabbage, horse-radish, &c.  
 S. palealis.....wild carrot, and Peucedanum; in a web, within a fl.-head, of the umbels  
 A. farrella ...Anthyllis vulneraria, fl.  
 H. nimbella .. chamomile  
 " nebulella.....heads of thistles; also China aster  
 " saxicola .....fl.-heads of chamomile  
 C. bistrigella ...alder, between the leaves  
 P. interpunctella on grain, figs, dried insects, &c.; in corn, and seed, and grocers' warehouses, &c.  
 N. angustella ...fruit of spindle  
 G. canella, b. ...Salsola kali; mines the stems, when young; afterwards, feeds on the unripe seeds  
 P. adelphella ...poplar, willow  
 " abietella, h.... young shoots of Scotch fir, and decayed wood, and cones  
 P. palumbella, h. Polygala  
 R. formosella ...elm, birch  
 M. alveariella ...wax in beehives; some hibernates, and others emerge next month  
 T. viburnana ... Myrica gale, and Vaccinium  
 " ministrana ...willow, nut, birch, buckthorn  
 L. scabrana .....elm  
 P. Hastiana .....dwarf sallows, and hawthorn  
 " umbrana .....poplar, willow, hornbeam (?)  
 P. tristana.....guelder rose  
 A. Conwayana...fruit of privet, nut? ash?  
 P. praelongana ...birch  
 " dimidiana ...Myrica, birch, willow  
 " marginana ...teazle, and probably seed-heads of Compositæ  
 M. Ratzeburgiana? Scotch fir  
 " consequana ...Euphorbia paralias  
 C. musculana ...hawthorn, &c.  
 P. myrtellana ...Vaccinium  
 " lundana .....trefoils, and vetches  
 " derasana .....Rhamnus frangula  
 " Mitterpacheriana elm, oak  
 " upupana (?)...oak, birch  
 G. nigromaculana ragwort  
 " campoliliana in willow leaves  
 " geminana.....Vaccinium; s. apple  
 P. tetraquetra in leaves of birch  
 " crenana? .....sallows, willows  
 P. oppressana? poplar  
 E. cirsiiana, h. ...in thistle, and knapweed stems; in woods  
 " Pfulgiana, h. in thistle, and knapweed stems; in open places  
 " nigricostana, h. Stachys, r.  
 " trigeminana ...ragwort  
 S. ianthinana ...hawthorn berries  
 " rufillana ..... umbels of wild carrot  
 C. vacciniana ...Vaccinium, and Berberis  
 P. mercuriana? Dryas octopetala  
 C. splendana ...in acorns; to be collected as soon as possible, and kept cool; also walnuts  
 " grossana .....in beech nuts  
 O. funebrana ...in plums  
 E. pisana .....in pea pods, and vetches  
 S. Weirana .....beech  
 " redimitana ...oak  
 " germarana ...in plums  
 " roseticolana...hips of roses  
 " orobana .....in pods of Vicia cracca, V. sylvatica, Orobus tuberosus, and Genista tinctoria  
 D. plumbana ... pods of vetches? &c.  
 " plumbagana Achillea millefolium



## LARVÆ]

## SEPTEMBER

- P. Rheediana .....wild plum, and apple  
 C. Juliana? .....acorns  
 " microgrammana? Ononis?  
 " fulvana .....heads of Centaurea scabiosa  
 " Hohenwarthiana knapweed, and thistle  
 " scopoliana ...Centaurea, heads  
 " citrana .....Artemisia campestris  
 E. dubitana .....Hieracium, fl., and other Compositæ  
 " atricapitana...stems of ragwort  
 " maculosana? raspberries?  
 " hybridellana thistle, and ragwort, seeds  
 " notulana? ...mint, stems  
 C. tessera, h. in r. of Picris hieracioides  
 A. badiana .....in stems, and r. of burdock  
 " maritima...in stems, and r. of Eryngium maritimum  
 C. dilucidana ...in stems of parsnip  
 " stramineana...Centaurea, heads  
 " alternana .....Centaurea scabiosa, heads  
 " inopiana .....in r. of Artemisia campestris  
 T. hyemana .....hawthorn  
 L. salicella .....dog rose; between united leaves  
 D. fagella.....on most trees; between united leaves  
 E. Steinkellneriella hawthorn, mountain ash, sloe, &c.; between turned-down leaves  
 T. misella.....in dried stems of beans, and unthashed wheat  
 " bistrigella.....birch  
 L. prælatella, h. in a flat case, on underside of wild strawberry  
 I. muscallella, h. rose, &c.  
 A. fibulella .....in a flat case, on leaves of Veronica chamædryis  
 " rufimitrella ...Cardamine pratense  
 N. scabiosellus, h. various low plants  
 " cupriacella, h. various low plants  
 S. comptella.....sloe, and plum  
 S. cæsiella .....hawthorn, and apple  
 " griseocapitella birch  
 " lutarella .....hawthorn  
 " pyrella.....hawthorn, apple, pear, &c.  
 Y. viginipunctella Sedum telephium  
 A. decemguttella Lithospermum  
 P. xylostella.....turnip, &c.  
 E. lobella .....under turned-down sloe leaves  
 D. depressella ...seed-heads of wild carrot  
 G. malvella .....hollyhock, seeds  
 " ericetella, h. Erica cinerea, E. tetralix, and Calluna erica  
 " acuminetella in thistle leaves  
 " aleella .....moss  
 " tenebrella, h. in r., and lower stem of Rumex acetosella  
 " lathyrella.....—?  
 " notatella .....sallow  
 " atriplicella Atriplex, and Chenopodium, seed heads  
 " triparella ..... oak, between united leaves  
 " nigricostella... lucerne, between united leaves  
 " intaminatella Lotus corniculatus  
 P. lappella .....knapweed, and burdock, seeds  
 M. fasciella .....sloe  
 " ustulella, h.... nut, birch, lime, maple, hornbeam, &c.  
 C. flavimaculella Angelica, seeds  
 " stipella.....under bark of dead fir trees  
 " flavifrontella, h. in a case, on beech  
 B. torquatella ...birch, elm  
 " incongruella...Erica, and Calluna  
 T. stanneella ...oak  
 " resplendella...alder  
 G. alchimiella .. oak  
 " Kollariella .....mining leaves of broom  
 " stigmatella .....sallow, willow, poplar  
 " syringella.....privet, lilac, ash  
 " omissella .....Artemisia vulgaris  
 " phasianipennella ..... Polygonum hydropiper, and sorrel

## LARVÆ]

## SEPTEMBER

- G. auroguttella... willow herb, and Hypericum  
 " imperialella Symphytum officinale  
 O. avellanella ...nut  
 " anglicella.....hawthorn, sloe  
 " betulævorella birch  
 " scutulatella? birch  
 " torquilella ...sloe  
 " Scoticella.....mountain ash  
 " Loganella ...birch  
 " guttella.....apple, in turned-down leaves  
 G. atriplicivorella, h. Atriplex  
 C. paripennella in a case, flat, on leaf of birch, rose, sloe, bramble, &c.  
 " saturatella, h. broom  
 " inflatella .....Silene inflata, seeds  
 " therinella.....thistles  
 " cæspitiella, h. rushes, seeds  
 " annulatella ...seeds of Atriplex, — and Chenopodium  
 " argentulella ...seeds of yarrow  
 " virgaureella...seeds of golden rod  
 " laricella, h....larch  
 " fuscocuprella, h. nut  
 " gryhipennella, h. rose  
 " viminetella, h. saw, and osier  
 " artemisicolella, h. fl. of Artemisia vulgaris, and A. campestris  
 " melilotella ...seeds of melilot  
 " Wilkinsonella birch  
 B. somnulentella Convolvulus  
 S. pedella.....in fruit of alder  
 C. Druriella ..... hop  
 " orichalcella ...in leaves of Festuca arundinacea  
 " Lienigiella ..... in leaves of Phragmites communis  
 C. chærophyllella, b. most Umbeliferæ  
 " daucella? ...wild carrot  
 L. atra ..... hawthorn berries, and shoots of apple  
 C. flavicapitella, h. in twigs of hawthorn, in which it bores  
 A. profugella ...gentian, seed  
 " terminetella...Circæa lutetiana  
 A. Treitschkiella dogwood  
 F. cinereopunctella, h. Carex glauca  
 E. tæniatella, h. .... Brachypodium sylvaticum  
 " Megerlella .....Brachypodium, Bromus, Aira, &c.  
 T. complanella...oak  
 " angusticolella rose  
 L. hortella .....oak  
 " lantanella, h. Viburnum lantana; best collected in Nov.  
 " quinqueguttella dwarf willows  
 " irradiella .....oak  
 " Bremiella.....vetches  
 " lautella.....oak  
 " cavella.....birch  
 " pomifoliella...apple, hawthorn  
 " corylella .....nut, birch  
 " spinicolella ...sloe  
 " faginella .....beech  
 " torminella ...Sorbus torminalis  
 " salicolella.....sallow  
 " viminetella ...osier  
 " carpinicolella hornbeam  
 " ulmifoliella ...birch  
 " spinolella.....sallow, willow  
 " quercifoliella oak, willow  
 " corylefoliella hawthorn  
 " Caledoniella...hawthorn, birch  
 " viminiella.....osier, saw  
 " ulicolella .....furze  
 " alnifoliella ...alder  
 " Heegeriella...oak  
 " Cramerella ...oak  
 " tenella .....hornbeam  
 " acerifoliella ...maple  
 " emberizæpennella honeysuckle  
 " Frolichella...alder  
 " Nicelliella ...alder  
 " Stettinella ...alder  
 " Klemannella alder  
 " Schreberella elm  
 " tristrigella ...elm  
 " trifasciella ...honeysuckle  
 " comparella ..poplar  
 L. Clerckella ...sloe, apple, cherry, hawthorn, &c.  
 P. salignella.....willows  
 C. laburnella ...laburnum  
 " scitella.....hawthorn, apple, &c.  
 " Wailesella ...Genista tinctoria  
 B. cidariella.....alder

## LARVÆ]

## SEPTEMBER

- |                                    |   |
|------------------------------------|---|
| B. ulmella .....oak                | N. arcuosella ...strawberry   |
| " Demaryella ...birch              | " gratiosella ...hawthorn   |
| " frangulella ...buckthorn         | " marginecolella elm  |
| " cristatella, h. yarrow           | " alnetella .....alder  |
| N. intimella .....sallows          | " glutinosella ...alder   |
| " subbimaculella oak               | " continuella ...birch  |
| " trimaculella...poplar            | " splendidissimella ...bramble, and<br>dewberry; rarer in wild rasp-<br>berry |
| " floslactella ...nut, hornbeam    | " luteella.....birch  |
| " salicivorella ...sallows         | " regiella.....hawthorn   |
| " myrtillella ...bilberry          | " tilæella.....lime   |
| " microtheriella nut, hornbeam     | P. zophodactylus Erythræa centau-<br>rium                                     |
| " betulicolella...birch            | " pterodactylus convolvulus   |
| " ignobilella ...hawthorn          | " tephrodactylus, h. golden rod, in<br>shady places                           |
| " argentipedella birch             | " serotinus .....Galium Mollugo   |
| " acetosella.....sorrel            | " osteodactylus, h. golden rod  |
| " plagicolella ...sloe             | " microdactylus Eupatorium canna-<br>binum                                    |
| " prunetella ...sloe               |   |
| " tityrella .....beech             |   |
| " malella.....wild apple           |   |
| " angulifasciella rose             |   |
| " atricoleil ..... apple, hawthorn |   |

## PUPÆ]

All who are bent upon doing "the right thing," as regards pupæ, should not fail to study the Rev. Joseph Greene's "Insect-Hunter's Companion." To that gentleman we are indebted for, many years ago, raising the operation of obtaining subterranean pupæ to the dignity of an art. This is the month recommended for a commencement, in earnest, of this work, as a large number of summer, and autumn species have pupated, and other collecting work is on the wane; while it is desirable to get early possession of pupæ before mice, birds, flooding, &c., exercise their destructive influence. The pupæ-hunter is rewarded with specimens in the finest condition, and often with interesting varieties. Most subterranean pupæ are to be found at from 1 in. to 3 in. in depth, close to, or not far from, their food-plants; some species, however, in a light soil go much deeper, particularly *A. Atropos*, *P. Cassinea*, *T. populeti*, *C. vetusta*, and *C. exoleta*. Sandy, or gravelly soils are the most favourable for those species which "go to earth;" and they are seldom found in sticky, or clayey soils, or if so, not far from the surface, if not amongst the first superficial layer of rubbish. The roots of grass, &c., afford a favourite hiding-place to many. Those species which spin up, do so either on, or near, or just beneath their food-plants; or among grass, moss, or rubbish; or on palings, walls, &c., contiguous. So that, as in the case of subterranean pupæ, an abundance of the food-plant peculiar to a species, may sometimes guide us to a successful search.

When pupæ are obtained, they should be preserved in as natural conditions as possible, and should not be exposed to sunshine, or kept in the dry air of a living room. An outhouse, or cellar is to be preferred; but they must be protected from spiders, mice, beetles, &c., and should be kept in sufficiently

## PUPÆ]

## SEPTEMBER

open cages to allow of the free expansion of wings, and of ready examination of the imago on emergence. Too much damp must be guarded against, or mould will exercise a fatal effect. Although emergence may be looked for, often with surprising certainty, at the exact time the imago is due, a warm season will hasten, and a cold one will retard, the period; and some species will remain in pupa for many years, a portion, only, of the same brood, appearing in successive years. Mr. Doubleday suggests that this may often cause the non-appearance of a species, for several years. Among those which, sometimes, remain more than one year in pupa, besides those mentioned in the lists are *S. carpini*, *B. rubi*, *B. callunæ*, *B. roboris*, *N. camelina*, *N. cucullina*, *N. dictæa*, *N. dromedarius*, *N. ziczac*, *N. Chaonia*, *N. Dodonea*, *E. unifasciata*.

- P. Machaon* .....on stems of *Peucedanum palustre*; in fens  
*P. brassicæ* ... } to April, on palings,  
*" rapæ* ..... } walls, &c.  
*" napi* ..... }  
*V. c-album*, b....among nettle, and  
on walls, &c.  
*" cardui* .....on, or near thistles  
*N. Lucina*..... attached to leaf-  
stalk of *Primula*  
*S. populi* .....to April, sub., at r.  
of poplar, willow, &c.  
*M. fuciformis* ...to April, in a loose  
web, among *Lychnis*, *Scabiosa*,  
&c., on the surface  
*A. mendica* ..... to May, under moss,  
on trees, and on the ground  
*" lubricepeda* ...to May, spun up, on  
trees, palings, &c.  
*" menthrasti* ...to May, spun up, on  
trees, palings, &c.  
*O. pudibunda* ... to April, in dead  
leaves, under moss, &c.  
*" antiqua* .....from July, in a web,  
on palings, &c.  
*P. populi* ..... spun up, against  
oak, poplar, &c.; near, or just  
beneath, the ground  
*E. lanestris* ..... cocoon on the  
ground, near hawthorn, &c.; s.  
more than one year in pupa  
*E. versicolora* .....spun up, among  
fallen leaves, at birch; s. more  
than one year in pupa  
*S. illunaria* .....to March, sub., at  
willow, oak, &c.  
*" lunaria* ..... at sloe, oak, nut, &c.  
*O. bidentata* ...to April, under moss,  
on various trees  
*H. pennaria*.....sub., at oak  
*P. pilosaria* .....to Dec., sub., at  
oak, and elm  
*N. zonaria* .....sub., on sand-hills  
*" hispidaria* ...at oak  
*B. hirtaria* .....to Mar., sub., at  
elm, lime, ash, and fruit trees  
*A. prodromaria* sub., at oak, elm,  
&c.; just beneath the surface  
*H. abruptaria* ...to April, spun up,  
on twigs, or between the forks,  
or beneath the branches, of  
lilac, rose, or privet  
*N. viridata* .....to April, between  
united leaves of hawthorn, or  
bramble  
*E. porata* .....to May; fastened to  
leaf of oak  
*" punctaria*.....fastened to leaf of  
oak, or birch  
*" trilineararia* ...to April; fastened  
to leaf of beech, the margin of  
the leaf often curling over, and  
concealing the pupa  
*" pendularia* .. fastened to leaf of  
birch  
*C. temerata* .....to April, in slight  
cocoon among sloe, and wild  
cherry, and probably buck-  
thorn  
*N. pulveraria* ...to April, in withered  
sallow leaves, &c.  
*F. carbonaria* ...to April, among dead  
leaves of willow and birch, on  
the ground

## PUPÆ]

## SEPTEMBER

- L. adustata .....to April, in a slight cocoon, just beneath the surface; among spindle
- H. rupicaprararia in a web, on the ground; among oak, sloe, &c.
- " leucopheararia on the ground; near oak
- " aurantiaria ...sub., at hawthorn, birch, oak, &c.
- " progemmaria sub., at oak, birch, hornbeam, &c.
- " defoliaria ..... sub., at oak, hawthorn, sloe, hornbeam, nut, elm, &c.
- C. brumata .....sub., at oak, &c.
- L. multistrigaria sub., about Galium
- E. decolorata ...about Lychnis dioica
- E. venosata .....about Silene, and Lychnis
- " consignata ...to April, probably under moss, and loose bark, in apple orchards
- " linariata .. ...to April, among yellow toadflax
- " pulchellata ...to April, among the seeds, and dead fl. of foxglove
- " isogrammata to May, about Clematis vitalba
- " fraxinata .....to April, on ash; under moss, and loose bark
- " nanata .....to May, about heath
- " vulgata.....sub., about various plants, and trees
- " expallidata ...to June, about golden rod; s. more than one year in pupa
- " minutata .....to May, about heath
- " assimilata ...to April, in crevices; about currant, and hop
- " exiguata ... ..about oak, &c.
- " dodoneata ...about oak; s. more than one year in pupa
- L. viretata .....to April, in spun-up leaves of privet
- M. ocellata .....among Galium; spun up, near the ground
- M. subtristata ...to April, sub., near Galium
- " galiata .....to May, sub., near Galium
- A. badiata .....in earthen cocoon, on the ground, beneath dog rose bushes
- " derivata .....sub., at dog rose
- C. fluviata .....spun up, in moss, &c.
- C. psittacata.....spun up, among rubbish at r. of oak, lime, apple, rose
- " miata .....at r. of oak, alder, birch, poplar, willow; on the surface, among grass, &c.
- " picata .....to May, in a slight cocoon, on the surface, among, or near chickweed
- " sagittata .....to June, spun up, about Thalictrum, or on the ground, near; in fens
- C. obliquaria ...among broom
- D. furcula .....to May, spun up, on trunk of willow, or sallow
- " bifida .....to April, spun up, on trunk of poplars
- " vinula .....spun up, on trunk of willows, poplars, and sallow; 3 ft. or 4 ft. from the ground
- P. Cassinea .....sub., at oak, deep
- C. curtula .....to Mar., spun up, between dead leaves of poplars, and sallow
- N. carmelita .....sub., at birch
- " trepida .....to April, sub., at oak; cocoon tough, but not always coated with earth; s. more than one year in pupa
- " Chaonia ..... to April, sub., at oak
- C. or .....at birch, among dead, or united leaves
- " ocularis.....at poplars; near the surface of the ground, or spun against the tree
- " flavicornis ...to Feb., between united birch leaves
- A. megacephala to April, under loose bark of poplar
- " alni .....between leaves of various trees; or inside bramble sticks
- N. typhæ, b. ...in stems of Typha latifolia

## PUPÆ]

## SEPTEMBER

- G. flavago.....inside thistle, and burdock stems, about 3 in. from the ground
- T. piniperda.....at Scotch, and other firs; in open places in fir woods, and on the margin; in crevices of bark, or under moss, and fallen needles; rarely within 2 ft. of the tree; 1½ in. to 2 in. deep
- T. gothica .....at various trees; just beneath the surface
- " leucographa } at r. of low plants;
- " rubricosa ... } below the surface
- " instabilis ... } at r. of various trees;
- " stabilis ..... } just below the surface
- " opima .....at r. of Rosa spinosissima, and dwarf willow; below the sand, on sand-hills, in the N.
- " populeti .....sub., at poplars, especially Populus nigra; deep
- " gracilis .....sub., at willows, willows, and low plants
- " miniosa .....among fallen leaves, &c.
- " munda .....under moss, at base of oaks
- " cruda .....sub., at oak
- O. macilenta ...sub., in an oval cocoon, at beech, and birch
- H. serena .....to May, sub., near Sonchus, and lettuce
- A. Aprilina, b....sub., at oak
- H. glauca .. .....to May, sub., near willow, and birch
- " oleracea .....to April, sub., near elm, nettle, dock, &c.; also in kitchen gardens
- " thalassina...to May, sub., near honeysuckle, willow, broom, &c.
- C. verbasci .....to April, in a large tough, earthen cocoon, below the surface; near mullein, and figwort
- " lychnitis .....to April, in an earthen cocoon, near white, and black mullein; s. 2 yrs. in pupa
- " asteris .....to April, near golden rod, &c.; s. 2 yrs. in pupa
- " gnaphalii .....to April, near golden rod
- " absynthii .....to April, near worm-wood
- " chamomillæ near chamomile, &c.
- " umbratica ...to May, sub., near Sonchus, &c.
- H. marginata ...sub., near Ononis procurrens
- A. myrtilli .....spun up, in heath
- B. argentea .....to May, among grass, on the ground
- B. parthenias ...to Mar., at birch, in crevices of bark, or on the ground
- P. pterodactylus on Convolvulus

## IMAGOS]

Although the freshly-emerged species this month, are not numerous, many of them are very local, or rare. L. Bœtica, which has occasionally been taken recently, may possibly be found more frequently if diligently sought for, as it may have been overlooked among the common L. Alexis. S. convolvuli, D. lineata, and C. celerio occasionally come to flowers, and have been taken at rest in strange places, and on strange substances. The beautiful D. pulchella should be sought for in the day time in stubble-fields. S. saccharia is also a day-flyer, but frequents no special locality. The grand blue underwing, C. fraxini, has been found at rest. Some of the hibernating species, which may be found this month, are also rare. The bait of sugar should be continued to be employed this month, until the ivy blossoms come out. On hills, and in sunny spots, these blossoms expand much earlier than in colder, and damper situations.

## IMAGOS]

## SEPTEMBER

The Collector may be reminded that the character of the locality he is working, and the nature of the species he is seeking, must largely determine his method of search and capture, not forgetting the fact that however far Moths may fly, they generally return, for rest, to, or near, what were their food-plants when larvæ. All kinds of places form a harbour for insects. The beating-stick should be energetically applied to heaps of dry rubbish, masses of grass, reeds, weeds, &c., tangled under-growth, haystacks, and thatch (the latter harbours many *Depressariæ*, &c.); while "scarecrows," tree-trunks (especially those exuding sap), leaves, flowers, blackberries, fallen fruit, palings, posts, fences, walls, heaps of stone or sticks, logs of wood, outhouses, eaves, &c., all furnish lodgment-space, and a means of concealment, to various species, and should be vigilently scanned. Indeed, vigilance is especially required, for many species closely resemble the substances on which they are in the habit of resting.

"Second appearances" are this month becoming more common than before. Among the Sphinges and Bombyces, especially, it is not unusual to find two series of transformations in the twelve-months; but by a wise provision of nature, the development of a portion of the brood is sometimes retarded. With some of the Geometrinæ three broods are regularly obtained in confinement; while some of the Bombyces, Psychidæ, and Coleophoræ, require twenty-four months, and even more, to enable them to complete their round of metamorphoses. And sometimes even the date of their advent in the winged state is further delayed by their remaining in the chrysalis state for two, or three, and sometimes as many as four, or five seasons.

- G. rhamnii, h. ...woods, &c.  
 C. Edusa, h. ....clover fields, railway banks, &c.  
 " Hyale, h. ....in clover fields, &c.  
 A. Latona .....fields, woods, &c.  
 V. c-album, 2., h. at blackberries, and fl.; may be found hanging to underside of leaves, in dull weather  
 " urticæ, h. ....  
 " polychloros, h. about elms  
 " Antiopa, h. ...attracted by ivy fl., and cossus-infected trees  
 " Io, h. ....at fl.  
 " Atalanta, h. ....at fl., and fallen fruit, in orchards  
 " cardui, h. ....at fl.  
 C. Pamphilus ...  
 P. Phloæas .....at fl.; at rest, on sorrel, &c., at night  
 L. Bœtica .....  
 " Alexis .....at fl.; may be found on cold, windy days, and at night, at rest, on grass stems, &c., in hollows, on hills
- A. Atropos .....at rest, on palings, &c.  
 S. convolvuli ...at fl., at dusk  
 D. euphorbiæ, m. on the coast  
 " lineata .....at fl., at dusk  
 C. celerio .....at fl., at dusk  
 M. stellatarum, 2., h. at fl.; flies by day, and in the evening, and s. at moonlight  
 D. pulchella .....in stubble fields; a day flyer  
 C. plantaginis, s., 2  
 O. antiqua .....  
 D. coryli, s. ....  
 T. cratægi .....comes to l.  
 R. cratægata, 2. hedges, &c.  
 E. alniaria .....  
 " tiliaria .....comes to l.  
 " fuscantaria ...comes to l.  
 " erosaria .....  
 " angularia .....on trees; comes to l.  
 H. pennaria .....  
 N. zonaria .....  
 P. baiularia, s. ....a second brood s. appears in confinement

## IMAGOS]

## SEPTEMBER

- A. promutata, 2.  
 " immutata, s., 2.  
 S. Sacraria .....flies by day; has  
 been taken at fl., at sugar, and l.  
 O. dilutata .....  
 " filigrammaria  
 T. variata, h. ...  
 " firmata.....  
 M. galiata, 2. ...  
 C. fluviata, h. ...comes to l.  
 P. polygrammata damp meadows ;  
 very local  
 C. psittacata, h. comes to l.  
 " miata, h. ....  
 " picata, 2.....s. in confinement  
 " immanata ...  
 E. cervinaria ...  
 A. plagiata, 2...  
 C. spartiata .....  
 P. lacertula, s., 2. beaten, from birch  
 P. bucephala ...at rest  
 D. cæruleocephala at light  
 T. batis, 2. ....  
 C. diluta .....  
 B. algæ .....  
 A. psi., s.....  
 " alni .....  
 L. vitellina .....  
 " albipuncta ...at fl.  
 " extranea .....on scabious fl.  
 " l-album .....  
 N. fulva .....s. abundant in one  
 corner of a meadow  
 " typhæ .....in marshes  
 " lutosa .....in marshes  
 G. flavago, s. ...  
 H. nictitans .....at ragwort, and  
 thistle fl.  
 " petasitis .....among butter burr  
 " micacea .....comes to l.  
 A. Australis.....among grass; comes  
 to l.  
 H. popularis, b. comes to l.  
 " hispida .....  
 C. graminis, b. on commons; s. at  
 ragwort, and thistle, fl.  
 L. testacea .....comes to l.  
 " cespitis.....hides in grass, by  
 day; comes to l.  
 M. literosa .....  
 C. Haworthii ...  
 C. cubicularis ...hides in thatch  
 A. Puta, h. ....  
 " suffusa, h. ...  
 " saucia, h. ...at ivy; comes to l.  
 " agathina .....beaten, from heath,  
 in the day time; flies over the  
 fl., and rests on them, at night  
 " præcox.....on sand-hills, by the  
 coast  
 N. glareosa .....on heaths  
 " c-nigrum .....comes to l.  
 " Dahlii .....  
 " neglecta .....on heaths  
 O. lota .....at fl., at night  
 " macilenta.....at ivy, and yew  
 berries  
 A. rufina .....at ivy  
 " pistacina .....at ivy  
 " lunosa .....comes to l., and ivy  
 " litura .....at ivy  
 C. vaccinii, h. ...at ivy  
 " spadicea, h. at ivy  
 " erythrocephala, h.  
 S. satellitia, h....at ivy  
 D. rubiginea, h. at ivy, and yew  
 berries  
 H. croceago, h. at fl.  
 X. citrigo .....at l., and ivy; this,  
 and the two following, may be  
 found on the leaves, and twigs  
 of lime trees, at night  
 " cerago .....  
 " silago .....  
 " aurago .....at ivy  
 " gilvago .....at fl.  
 " ferruginea.....at fl.  
 C. xerampelina...at l., and at rest, on  
 ash trunks  
 T. retusa .....comes to l.  
 E. fulvago, b. ...at heath fl.  
 E. ochroleuca, b. at fl.; rests on knap-  
 weed, and thistles, &c.  
 P. chi.....on tree trunks  
 " xanthomista...  
 " flavocincta ...at ivy; rests on  
 walls, &c.  
 D. templi, e., h. usually found by  
 turning over stone-heaps, in  
 elevated districts; comes to l.



## IMAGOS]

## SEPTEMBER

- E. lutulenta*, b. ...at heath fl.  
 " *nigra*.....at ivy  
 " *lichenea* .....on the coast  
*M. oxyacanthæ*...at fl.  
*A. Aprilina* .....  
*P. meticulosa*, 2. at ivy  
 " *empyrea* .....at ivy  
*A. occulta* .....at rest, early in the morning; unquiet when boxed  
*H. protea* .....on tree trunks  
 " *peregrina* .....  
*C. solidaginis* ...at rest  
*C. vetusta*, h. ...at ivy  
 " *exoleta*, h. ...at ivy  
*X. lambda*, e. ... [trunks  
 " *furcifera*, h. ...at ivy, and on tree  
 " *rhizolitha*, h. at ivy, and on tree trunks  
 " *semibrunnea*, h. at ivy  
 " *petrificata*, h. at ivy  
*H. marginata* ... [herbage  
 " *peltigera* .....may be started from  
 " *armigera* .. ...at ivy  
*A. luctuosa* .....flies in the sunshine, over fl., in clover fields, &c.  
*P. gamma*.....  
*G. libatrix*, h. ...in cellars, and on palings, trees, &c.  
*A. pyramidea* ...  
 " *tragopogonis* hides in windows  
*S. anomala* .....at heath fl., and flying along hedgerows, at night; remains fine but a very few days after emergence  
*C. fraxini* .....at rest on walls, &c.  
 " *nupta* .....at rest, on walls, tree-trunks, &c.; soon alarmed when approached; comes to l.  
*H. rostralis*, h. ...in gardens, &c.  
*H. tarsipennalis*, 2. woods  
*P. fimbrialis* .....comes to l.  
 " *farinalis* 2? ...at rest in, and near stables, corn stores, &c.  
 " *glaucinalis* ...beaten from thatch; also at l.  
*B. asinalis*, 2. ...comes to l.  
*E. catalaunalis*...at fl.  
*S. ferrugalis* .....at fl., and sugar; flies at dusk, and can be beaten from hedges  
*S. decrepitalis*, 2?  
*S. hybridalis*, 2. among grass, and clover  
*S. murana* ..... among heath  
 " *coarctalis*, h. on mossy walls  
*E. ocellæa*, b., h. comes to l.  
*C. tristellus* .....  
*T. Pryorella*.....  
*E. ficella* .....in corn, and seed warehouses, among oilcake, &c.  
*N. angustella*, 2  
*M. cephalonica*  
*N. genistella*, h. *Ulex europæus*  
*G. cerella* .....  
*S. Revayana*, h. woods  
*L. literana* .....on oak trunks  
 " *scabrana* .....among elm  
*P. sponsana* .....woods  
 " *variegana* ...hedges  
 " *cristana* .....among willows, and hawthorn  
 " *Hastiana* .....among willows  
 " *maccana* .....  
 " *umbrana* .....  
 " *ferrugana* .....woods  
 " *tristana* .....  
 " *lipsiana* .....  
 " *comariana* ...boggy heaths, & fens  
*G. nœvana* .....among holly  
*P. crenana*, h. ...on most Northern heaths  
*P. ophthalmicana* among aspens  
 " *occultana* .....among young firs  
 " *Solandriana*...  
 " *sordidana* .....among alder, in fens, and marshes  
*E. bimaculana* ...woods  
*R. pinicolana* ...among Scotch fir  
*D. acuminatana*  
*C. ulicetana* .....among furze  
*X. Fabriciana* ...  
 " *pariana* .....  
*E. anthemidana*, 3. chalk districts  
*L. phryganella*...  
*T. pellionella* ...common, in houses  
 " *fuscipunctella*  
 " *pallescentella* in warehouses, and poulterer's shops  
*Y. evonymella* ...among *Prunus padus*  
*H. radiatella*, h.

## IMAGOS]

## SEPTEMBER

- Y. sylvella .....
- " asperella ... ..among apple
- H. scabrella.....among crab apple ;  
rests on tansy fl., at dusk
- P. caudella, h....among Eunonymus  
europæus
- D. pallorella, h. among brushwood
- " umbellella ...among furze
- " arenella, h. ...
- " propinquella, h.
- " subpropinquella, h.
- " alstræmeriella, h. among Conium
- " ciniflonella, h. Rannoch
- " vaccinella, h. Lytham
- " capreolella, h.
- " hypericella ...among Hypericum
- " conterminella, h. among sallows
- " angelicella ... ..among Angelica  
sylvestris
- " ocellella .....among willow
- " Yeatesiella ...in fens, &c.
- " applanella, h.
- " ciliella, h. ... [vulgaris
- " granuloseella... among Anthriscus
- " rotundella ...Howth, Lancashire,  
Folkestone, &c.
- " albiguttella, h.
- " chærophyllivorella, h.
- " nervosella ...
- " badiella .....
- " discipunctella
- " heracliaella, h.
- " olerella ..... near Hazlemere,  
beaten from thatch
- G. hippophaella
- " cuneatella ... [slack
- " Lyellella .....Castle Eden, Wither-
- " celerella .....on coast sand-hills
- " costella.....among Solanum  
dulcamara
- " vicinella .....Belfast, Brighton
- " junctella .....Witherslack, Lake  
District, &c.
- " Hubnerella ...Carlisle, nr. Wake-  
field, Manchester, &c.
- " paupella ..... near Lewisham,  
Folkestone, Lewes
- C. conscriptella ..Witherslack
- B. chenopodiella
- A. betulella ... ..Castle Eden, and  
High Force ; beaten out
- R. Erxlebenella, b. ....among lime  
underwood
- A. semitestacella, b. among beech
- " spiniella, b.....among mountain  
ash, on moors
- Z. fasciapennella the Pentlands
- G. stigmatella ...among willow, &c.
- " stramineella...Castle Eden, Lake  
District, and Stirlingshire
- " hemidactylella
- " falconipennella near London
- " semifasciella
- " populella, h.
- " elongella ..... among alder, and  
yew
- " phasianipennella, h.
- " ononiella .....Cambs, Mickleham
- C. Brogniartella ..... Yorks, Lake  
District, Cambs
- " cuculipennella, h. among privet
- " citrinella, b.
- B. somnulentella
- L. epilobiella, h. among Epilobium  
hirsutum
- " decorella, h. among Epilobium
- " subbistrigella, h. ... Witherslack,  
Worthing, Devon
- L. trifasciella ...among honeysuckle
- L. Clerckella, h. among sloe, and  
fruit trees
- " padifoliella ...
- P. suffusella, h. among willow
- " salignella, h. among willows, near  
London
- B. ulmella.....among oak
- P. acanthodactylus on heaths
- " punctidactylus .....Lake District,  
Birkenhead, Bristol, Farnham
- " pterodactylus, h. ...among Convol-  
vulus
- " monodactylus among Convolvulus
- A. polydactyla, h. ...among honey-  
suckle, and in windows

# OCTOBER

## OVA]

- V. polychloros, s. on elm ; s. willow, and poplar ; in regular batches, globular, glassy, brownish
- T. quercus .....on oak twigs
- " w-album .....on wych elm, also elm ; on the twigs
- " pruni .....on sloe twigs
- " betulæ .....on sloe [sorrel
- P. phloæas .....on dock, ragwort,
- L. Ægon .....on Ornithopus perpusillus ; white
- L. Argiulus .....on ivy, fl. ; white
- H. comma .....on trefoil, and other Leguminosæ
- L. dispar .....on sloe, hawthorn, fruit trees ; on the trunks, in a heap, covered with down
- " monacha .....on oak, beech, fir, birch, apple, &c.
- T. cratægi .....to March, on hawthorn ; also s. sloe, willow, birch, oak
- B. neustria ..... on hawthorn, sloe, fruit trees ; in batches, round twigs, and branches
- " castrensis ...on Artemisia maritima, Daucus maritimus, &c.
- E. vespertaria ...on nut [willow
- " apiciaria .....on poplar, willow,
- C. elinguaris ...on oak, honeysuckle, hawthorn, sloe ; also heath, bilberry, &c.
- H. pennaria .....to April, on oak
- F. pinetaria .....on bilberry
- E. subciliata.....on maple ; at foot-stalk of leaf
- M. rubiginata ...on alder ; large
- S. vetulata .....on buckthorn
- C. immanata.....probably on alder, and other trees, and strawberry, bilberry, &c. ; large
- " prunata.....on currant, gooseberry, sloe ; on the bark, large
- " testata .....on heath, birch, willow, poplar, &c. ; singly, large
- C. populata .....on bilberry, whortleberry, poplar ; globular, large, yellow
- " fulvata .....on dog rose ; rose-pink, large
- " pyrallata .....on Galium, and hawthorn ; large
- " dotata .....on black, and red currant ; large
- C. spartiata .....to April, on broom
- T. chærophyllata on Anthriscus sylvestris, and Bunium flexuosum
- D. cæruleocephala on hawthorn, sloe ; ragged
- A. Australis ..... on succory, Poa annua, &c.
- C. xerampelina...on ash, probably in the chinks of the twigs, and the buds
- T. subtusa .....upon twigs of poplar
- " retusa .....on willow, poplar ; upon the axils of the leaves
- O. lota .....on willow, and willow ; upon the axils of the leaves ; hatch in the spring
- A. pistacina .....on buttercup, &c.
- " lunosa .....on grasses
- P. chi .....on dock, hawthorn, willow, and probably lettuce, sowthistle, tea tree, &c.
- " flavocincta to Mar., on dock, chickweed, groundsel, mint, &c. ; in gardens, on everlasting pea, plum, &c.
- E. lutulenta ..... on Lithospermum arvense, and probably other low plants
- " lichenea .....on ragwort, and probably other plants ; on the coast
- P. empyrea .....on pilewort ; on the leaf-stalks
- H. proboscidalis on nettle ; rather large, pale yellow

## LARVÆ]

## OCTOBER

Many of the larvæ met with this month hibernate. The others will be found nearly full-fed, and may be expected to change this month, or the next.

The eggs of *C. xerampelina* often hatch this month. The young larvæ feed only by night, on ash, though they will eat hawthorn, and guelder rose. Sometimes they attain a fair size before they hibernate; but at others they remain quite small; and occasionally even the larvæ do not hatch until November or December. Then it is, when the buds of the ash being small, and hard, the hawthorn, or guelder rose may be found useful as a substitute.

- L. sinapis* ..... *Vicia cracca*, and  
*Orobus tuberosus*
- P. cratægi*, h. ... hawthorn, sloe, and  
orchard trees
- A. Paphia*, h. ... dog violet, and sweet  
violet
- " *Aglaia*, h. ... dog violet, and sweet  
violet, and wild heartsease
- " *Niobe*, h. ... dog violet, and sweet  
violet
- " *adippe*, h. ... dog violet, and sweet  
violet
- " *Latona*, h. ... dog violet, and sweet  
violet, and wild heartsease
- " *Euphrosyne*, h. } in a web at r. of  
*Selene*, h. .... } violets, &c.
- M. Artemis*, h. ... Scabious, plantain;  
in batches, under a web under  
leaves; also eats woodbine, &c.
- " *Cinxia*, h. ... *Plantago lanceolata*
- " *Athalia*, h. ... narrow-leaved plan-  
tain, foxglove, wild germander
- L. sibylla*, h. ... honeysuckle; under  
a leaf, suspended by silk, from  
a twig
- A. Iris*, h. .... sallow, poplar
- A. Galatea*, h. ... timothy grass, &c.
- E. Epiphron*, h. probably on *Nardus*  
*stricta*, and small rushes; in  
mountain bogs
- T. rubi* ..... bramble, buds, and  
fl.; also probably broom, and  
*Genista*
- P. Phloëas*, h. ... dock, ragwort, sorrel
- L. Adonis*, h. ... *Hippocrepis comosa*,  
&c. [ &c.
- " *Corydon*, h. ... *Hippocrepis comosa*,
- A. Atropos* ..... potato leaves, &c.  
(See last month)
- D. galii* ..... *Galium*, *fuschia*, &c.  
(See last month)
- S. tipuliformis*, h. in the wood of  
currant bushes
- C. ligniperda* ... in the wood of  
various trees. (See last month)
- C. miniata*, h. .... lichen, on oak  
(*Lichen caninus*); also withered  
sallow, oak, alder
- L. mesomella*, h. lichens; will also  
eat sallow, and heath
- " *molybdeola*, h. lichens
- " *griseola*, h. ... lichens, on poplar;  
also withered sallow, &c.
- D. coryli*, s. .... beech, nut, birch,  
alder, oak, willow; generally  
beaten from beech
- R. cratægata*, h. hawthorn, sloe
- A. prunaria*, h. sloe, beech, broom,  
sallow, hawthorn, plum, &c.
- S. illustraria* ..... oak, birch, ash,  
beech, maple
- A. betularia* ..... oak, birch, elm,  
hawthorn, elder, beech, moun-  
tain ash, &c.
- E. trilinearia* ... beech
- " *omicronaria* maple; s. beech
- A. luteata* ..... maple
- A. herbariata*, h. dried plants, in her-  
baria, and in herbalists' shops,  
&c. *Tansy* has been found to  
be eaten, where the species has  
occurred
- C. exanthemaria* sallow, alder
- S. clathrata*, h. saintfoin, lucerne, &c.
- A. strigillaria*, h. heath, broom
- A. citraria*, z. ... wild carrot, trefoil,  
&c.; generally on the coast
- L. olivata*, h. ... *Galium Mollugo*
- E. unifasciata* ... *Odontites rubra*, on  
the capsules, and seeds
- E. subfulvata* ... *Achillea millefo-*  
*lium*, and *chrysanthemum*

## LARVÆ]

## OCTOBER

- E. arceuthata .....juniper, and savine  
 " castigata .....golden rod, heath, nettle, Angelica, &c.  
 " expallidata ...golden rod, fl. ; will also eat Michaelmas daisy, &c.  
 " absynthiata ...fl., and seeds of ragwort, Eupatorium cannabinum, Artemisia vulgaris, Achillea millefolium, golden rod, &c.  
 " knautiata .....Knautia arvensis, fl. and seeds  
 " assimilata.....black currant, hop  
 " exiguata .....barberry, hawthorn, black currant, ash, alder, willow  
 T. simulata .....juniper  
 Y. elutata, h. ...nut, willow, bilberry, alder  
 M. montanata, h. primrose  
 C. munitata, h. groundsel  
 P. vitalbata, 2. Clematis vitalba  
 S. undulata .....sallow, poplars ; between leaves  
 C. russata, h. ... strawberry, birch, hawthorn, willow, &c.  
 " suffumata, h. Galium Mollugo, and ragwort ; hibernates full-fed to March  
 E. bipunctaria, h. Lotus corniculatus, clover, &c.  
 A. plagiata, h.... Hypericum perforatum, fl.  
 D. falcata ..... birch ; also oak, alder, willow, poplar  
 " unguicula.....beech  
 D. bicuspis .....alder, beech, birch  
 C. fluctuosa ..... birch ; between leaves  
 B. glandifera, h. lichens, on walls  
 " perla, h. ....lichens, on walls  
 A. tridens.....hawthorn, sloe, rose, willow, willow, mountain ash  
 L. vitellina, h. .. grasses  
 " putrescens ...grass  
 " littoralis, h..... on Ammophila arundinacea ; on the coast ; burrows 7 or 8 inches in the sand. Will also eat Carex  
 L. impura, h. ...Carex, and Dactylis glomerata. Before h. the larva rolls the grass up, to form "a house," by day ; afterwards, lives inside the stem, and feeds at night only [pitosa  
 " pallens h. ... Deschampsia cæspitosa  
 " phragmitidis, h. common reed, in the young stems ; in marshes, and fens  
 N. lutosa, h.....in stems of common reed, near the r. ; feeds during winter, in mild weather  
 A. Australis, h. Cichorium intybus, Poa annua, and other plants  
 P. leucophæa, h. tufts of grass ; on commons, and in woods  
 A. basilinea, h. on the immature grains of growing wheat ; after h., in spring, on various plants  
 C. Morpheus ...Sedum telephium, willow, bramble, docks, teasel, and other low plants  
 A. valligera, h. . roots of grasses ; chiefly on the coast  
 " Puta .....dandelion, lettuce, carrot, r., knotgrass, &c.  
 " saucia, h. ....plantain, dock, and other low plants  
 " lunigera .....? will eat knotgrass, &c.  
 " ripæ .....Cynoglossum officinale ; on the coast ; burrows 7, or 8 in. in the sand  
 " porphyrea, h. heath  
 T. ianthina, h. Primula, and other low plants ; also broom, &c.  
 " fimbria, h. ...birch, willow, oak, ash, broom, primrose, &c.  
 " subsequa, h. low plants  
 " Orbona, h. ....low plants, and broom ; when young, on willow buds  
 " pronuba, h....dock, &c.  
 N. c-nigrum, h. pea stems, and low plants  
 " conflua, h. ...various low plants, including Silene acaulis  
 " Dahlii, h. ...low plants ; s. feeds up without h. in mild winters

## LARVÆ]

## OCTOBER

- N. umbrosa, h. dock, &c. ; feeds in mild winters  
 " neglecta, h. ...heath, birch, willow, and low plants  
 " xanthographa, h. plantain, &c. ; hides under stones  
 A. lunosa, e., h. grasses ; more especially in elevated places ; may be found concealed under stones  
 C. xerampelina, h. ash ; will also eat hawthorn, and guelder rose  
 D. carpophaga, s. Lychnis, and Silene inflata, young seeds  
 E. lutulenta, h. ...Lithospermum arvense, and other low plants  
 A. herbida, h. ...dock, and other low plants  
 H. suasa, s. .... plantain, lettuce, knotgrass, &c.  
 " pisi .. .....brake fern, broom, Scabious, grass, Carex, willow, birch, mountain ash, &c.  
 H. proboscidalis, h. nettle  
 S. emortualis ...oak  
 " grisealis .....Sisymbrium Sophia, oak, &c. ; the larva does not change until the spring  
 B. lupulinalis ...in stems of hop  
 " asinalis, h. ...madder, fl., and young seeds  
 E. sambucalis ...elder, convolvulus  
 P. forficalis .....cabbage, horse-radish, &c.  
 M. polygonalis...Ulex nanus, fl. ; on heaths, &c. ; Genista ?  
 C. phragmitellus, h. common reed  
 M. cribrella, h. ....in thistle stems  
 H. nimbella .....chamomile, and other composite fl.  
 " nebulella, b. ...heads of thistles ; also China aster  
 C. bistrigella ...alder, between the leaves  
 P. interpunctella ... in seed stores, grocer's warehouses, &c., on grain, figs, dried insects, &c.  
 P. palumbella, h. Polygala  
 M. alveariella, h. wax, in beehives  
 T. ministrana ...willow, nut, birch, buckthorn  
 A. Conwayana...fruit of privet, nut, (?) ash (?)  
 C. musculana ...hawthorn, &c.  
 P. siculana .....Myrica gale  
 " comptana ...Potentilla  
 " Mitterpacheriana elm, oak  
 G. campoliliana in willow leaves  
 " geminana ...Vaccinium, apple, s.  
 E. foenana, h. ...in r. of Artemisia  
 S. Wœberana, h. under bark of plum, and other fruit trees  
 C. strobilana, h. cones of spruce  
 " argyrana .....moss, and bark of oak, &c.  
 " hyrciniana, h. spruce fir  
 " vacciniana ...Vaccinium, and Berberis  
 H. fimbriana ...rotten oak wood  
 E. pisana .....in pea pods, and vetches [fir  
 S. coniferana, h. under bark of Scotch  
 " Leplastrierana, h. ...in stems of cabbage  
 " redimitana ...oak  
 " regiana, h. ...under sycamore bark  
 " orobana .....in pods of Vicia cracca, V. sylvatica, Orobus tuberosus, and Genista tinctoria  
 D. politana, h. .... Achillea millefolium, r.  
 " plumbana.....pods of vetches (?) &c.  
 " plumbagana..... Achillea millefolium  
 C. Albersana ...honeysuckle  
 " fulvana .....heads of Centaurea scabiosa  
 " Scopoliana ...Centaurea heads  
 " æmulana .....in fl. of golden rod  
 L. Servillana ... shoots of woolly-leaved willows  
 E. roseana, h. ...seeds of teasle  
 " subroseana?...Solidago, fl.  
 " implicitana ...Solidago, fl. Pyrethrum, Gnaphalium, &c.  
 " anthemidana Erigeron acre, fl.  
 A. maritimana in stems, and r. of Eryngium maritimum  
 C. Francillonana, h., in stems of wild carrot

## LARVÆ]

## OCTOBER

- C. dilucidana ...in stems of parsnip  
 " Smeathmanniana Anthemis cotula  
 " stramineana Centaurea heads  
 " alternana .....Centaurea scabiosa, heads  
 L. salicella .....sallow, alder, maple, rose, Cornus sanguinea, Potentilla anserina, &c.  
 T. pseudo-bombycella, h. lichen, on oak trunks  
 S. inconspicuella, h. on tree trunks, and palings  
 T. misella.....in dried stems of beans, and unthrashed wheat  
 " ganomella, h. in birds' nests  
 " merdella .....in furs  
 " biseliella, h. in birds' skins, hair seating, &c.  
 I. Zinckenella ...birch  
 " Oehlmanniella, h., in a flat case, under fallen leaves  
 A. fibulella .....in a flat case, on leaves of Veronica chamædrys  
 " Degeerella, h., wood anemone  
 S. pyrella..... hawthorn, apple, pear, &c.  
 Y. viginipunctella Sedum telephium  
 A. decemguttella Lithospermum  
 G. malvella .....hollyhock, seeds  
 " notatella .....sallow  
 " obsoletella ...in stems of Chenopodium  
 " bifractella, h. Inula dysenterica, and I. conyza, seeds  
 " cerealella, h. in grains of wheat, and barley  
 " næviferella ...Atriplex, and Chenopodium  
 " Hermannella, Atriplex, and Chenopodium  
 " brizella .....Statice armeria, in fl.-stems  
 " subocellella... Origanum vulgare, seeds  
 P. lappella ..... knapweed, and burdock, seeds  
 " Metzneriella, h. Centaurea nigra, heads  
 " carlinella, h. Centaurea nigra, and thistle heads  
 P. neuropterella, h. in heads of Cirsium acaule  
 C. pseudo-spretella, h. dried fruit, peas, and other seeds; also hams, &c.  
 A. autumnitella Solanum dulcamara  
 G. Kollariella, b. mining leaves of broom  
 O. avellanella ...nut  
 " betulævorella birch  
 C. paripennella...in a case, flat on leaf of birch, rose, sloe  
 " salicornella, h. .... Salicornia herbacea  
 " pyrrhulipennella, h. heath  
 " discordella, h. Lotus corniculatus  
 " genistæcolella, h. Genista anglica  
 " annulatella ...seeds of Atriplex, and Chenopodium  
 " salinella ..... Atriplex portulacoides  
 " cacuminetella seeds of Stellaria graminea  
 " argentulella ...seeds of Achillea millefolium  
 " virgaureella ...seeds of golden rod  
 " juncicolella, h. heath  
 " solitariella, h. Stellaria holostea  
 " melilotella ...seeds of melilot  
 A. æratella, h....in galls, on knotgrass  
 E. apicipunctella, h. in Aira trapeziella, h. in Luzula pilosa  
 " T. complanella...oak  
 " angusticolella rose  
 " dodonæella, h. in oak  
 L. roborella .....oak  
 " quinqueguttella dwarf sallows  
 " Bremiella.....vetches  
 " insignitella ...in a clover  
 " lautella.....oak  
 " vacciniella ...whortleberry  
 " Messaniella ...oak, evergreen oak, chesnut, hornbeam, beech  
 " Dunningiella nut  
 L. Clerckella ...sloe, apple, cherry, hawthorn, &c.  
 C. spartifoliella...under bark of broom  
 " laburnella ...  
 N. atricapitella...oak  
 " anomalella ...rose

## PUPÆ]

## OCTOBER

- C. sagittata ..... spun up, among  
Thalictrum ; or on the ground,  
near ; in fens
- E. lineolata ..... to April, cocoon,  
attached to Galium verum, on  
coast sand-hills ; below the  
surface
- C. obliquaria ... among broom
- D. bicuspis ..... to April, spun up,  
on birch trunks, in the S. ; alder  
in the N. ; rarely above 2 feet  
from the ground. Resembles a  
Brazil nut
- " furcula ..... spun up, on trunk  
of willow, or sallow
- " bifida ..... spun up, on trunk  
of poplars
- " vinula ..... spun up, on trunk  
of willows, poplars, and sallow ;  
three or four ft. from the ground
- S. fagi ..... to May, spun up,  
among leaves of beech, oak,  
birch, elm ; s. at r.
- P. Cassinea ..... sub., at oak ; deep
- P. bucephala ... to May, sub., at  
various trees
- C. curtula ..... to Mar., spun up,  
between dead leaves of poplars,  
and sallow
- " reclusa ..... to May, spun up,  
among dead leaves of sallows,  
poplars, willows
- P. palpina ..... to June, in cocoon,  
at willows, and poplars ; on  
edges of streams, on the ground,  
or under sods
- N. camelina ..... to May, at various  
trees, in a slight cocoon
- " cucullina ... .. to May, at maple,  
and sycamore ; under moss, &c.
- " carmelita ..... sub., at birch
- " dictæa ..... to May, in large co-  
coon, at poplars, and willows ;  
under a leaf, or sod
- " dictæoides ... to May, at birch ;  
in a slight cocoon, under a leaf,  
&c.
- " dromedarius ... to May, at birch,  
alder, nut ; in a slight cocoon,  
under a leaf, &c.
- N. ziczac ..... to May, sub., at  
poplars, sallow, willows
- " trepida ..... sub., at oak ; cocoon  
tough, but not always coated  
with earth [oak
- " Chaonia ..... to April, sub., at
- " Dodonea ..... to May, sub., at oak,  
and birch
- T. batis ..... to May, near bram-  
ble, and wild raspberry
- C. duplaris ..... to May, between  
united birch leaves
- " fluctuosa ..... to May, among birch  
leaves
- " or, b. .... at birch, among dead,  
or united leaves
- " ocellaris, b. ... at poplars, near the  
surface of the ground, or spun  
against the tree
- " flavicornis ... between united birch  
leaves
- D. Orion ..... to May, at birch,  
and oak ; in a cocoon of gnawed  
bark, or rotten wood
- A. tridens ..... to May, spun up, in  
crevices of bark, at hawthorn,  
sloe, rose, willow, mountain ash,  
sallow
- " psi ..... to May, in bark  
crevices, of various trees
- " leporina ..... to May, in excava-  
tions, in the bark of birch,  
poplar, alder, sallow
- " aceris ..... to May, spun up,  
among fallen leaves, and under  
loose bark of sycamore, horse  
chestnut, maple, birch, and s.  
oak [bark
- " megacephala at poplar, under the
- " strigosa ..... to May among, dead  
leaves, of hawthorn ; or rubbish,  
or decayed wood ; s. sub.
- " alni ..... between leaves of  
various trees ; or inside bramble  
sticks
- " ligustri ..... to May, spun up,  
under moss, stones, &c., near  
ash, and privet ; also sub. ; also  
found under the top-stones of  
walls, against the tree



## PUPÆ]

## OCTOBER

- A. rumicis .....to May, spun up, in crevices of trees, palings, walls, &c.
- A. putris .....to May, sub., at elm
- D. pinastri .....to May, in a cocoon, on the ground, among dock, sorrel, &c.
- X. conspicillaris to Mar., sub., at elm, and other trees
- M. albicolon.....to April, sub., near *Atriplex*, *Chenopodium*, lettuce, &c.
- C. Morpheus.....to May, spun up, in a leaf, or an earthen cocoon, attached to food-plant
- A. segetum, s. ...to May, sub., among *Cruciferæ*, grass, &c.
- T. piniperda.....at Scotch, and other firs; in open places in fir woods, and on the margin; in crevices of bark, or under moss, and fallen needles, about 1½ in. or 2 in. deep, rarely within 2 ft. of the tree
- T. gothica.....at various trees, just beneath the surface
- " leucographa } at r. of low plants
- " rubricosa ... } at r. of various trees
- " instabilis } at r. of various trees
- " stabilis } at r. of various trees
- " opima .....at r. of *Rosa spinosissima*, and dwarf shallows; below the sand, on sand-hills, in the N.
- " populeti ..... sub., at poplars, especially *Populus nigra*; deep
- " gracilis..... sub., at willows, shallows, and low plants
- " miniosa .....among fallen leaves, &c.
- " munda .....under moss, at base of oak
- " cruda .....sub., at oak
- D. carpophaga...to April, sub., near *Silene*, and *Lychnis*; on the coast; found by raking sand-hills
- H. serena .....sub., near *Sonchus*, and lettuce [and birch
- H. glauca..... sub., near shallow,
- H. oleracea ..... sub., near elm, nettle dock, &c.; also in kitchen gardens
- " thalassina ... sub., near honeysuckle, shallow, broom, &c.
- X. lithoriza .....to Feb., near honeysuckle; in a papery cocoon, on the ground
- C. verbasci .....in a large, tough, earthen cocoon, near mullein, or figwort
- " scrophulariæ in a cocoon, near figwort, or mullein; s. two years in pupa
- " lychnitis .....sub., near white, or black mullein; s. two years in pupa
- " asteris .....sub., near golden rod, &c.; s. two years in pupa
- " gnaphalii .....sub., near golden rod
- " absynthii ..... sub., near worm-wood
- " chamomillæ...sub., near chamomile, &c.
- " umbratica ....sub., near *Sonchus*, &c.
- H. marginata ...sub., near *Ononis procurrens*
- H. dipsacea .....to May, among melilot, and probably *Silene otites*, and *Linaria*
- A. myrtilli .....spun up, in heath
- E. venustula .....to May, at r. of *Tormentilla reptans*, and grass
- B. argentula .....among grass, on the ground
- B. parthenias ...at birch; in crevices of bark, or on the ground
- A. urticæ .....to May, spun up, among nettle leaves
- " triplasia .....to May, spun up, among nettle leaves, hop, &c.
- P. ænea .....to May, amongst *Polygala vulgaris*
- E. sambucalis ...to May, spun up, in crevices, in palings, walls, &c.; near elder
- G. canella.....to June, among *Salsola kali*

## PUPÆ]

## OCTOBER

- C. sagittata ..... spun up, among  
Thalictrum; or on the ground,  
near; in fens
- E. lineolata ..... to April, cocoon,  
attached to Galium verum, on  
coast sand-hills; below the  
surface
- C. obliquaria ... among broom
- D. bicuspis ..... to April, spun up,  
on birch trunks, in the S.; alder  
in the N.; rarely above 2 feet  
from the ground. Resembles a  
Brazil nut
- " furcula ..... spun up, on trunk  
of willow, or sallow
- " bifida ..... spun up, on trunk  
of poplars
- " vinula ..... spun up, on trunk  
of willows, poplars, and sallow;  
three or four ft. from the ground
- S. fagi ..... to May, spun up,  
among leaves of beech, oak,  
birch, elm; s. at r.
- P. Cassinea ..... sub., at oak; deep
- P. bucephala ... to May, sub., at  
various trees
- C. curtula ..... to Mar., spun up,  
between dead leaves of poplars,  
and sallow
- " reclusa ..... to May, spun up,  
among dead leaves of sallows,  
poplars, willows
- P. palpina ..... to June, in cocoon,  
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edges of streams, on the ground,  
or under sods
- N. camelina ..... to May, at various  
trees, in a slight cocoon
- " cucullina ... to May, at maple,  
and sycamore; under moss, &c.
- " carmelita ..... sub., at birch
- " dictæa ..... to May, in large co-  
coon, at poplars, and willows;  
under a leaf, or sod
- " dictæoides ... to May, at birch;  
in a slight cocoon, under a leaf,  
&c.
- " dromedarius... to May, at birch,  
alder, nut; in a slight cocoon,  
under a leaf, &c.
- N. ziczac ..... to May, sub., at  
poplars, sallow, willows
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tough, but not always coated  
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- T. batis ..... to May, near bram-  
ble, and wild raspberry
- C. duplaris ..... to May, between  
united birch leaves
- " fluctuosa ..... to May, among birch  
leaves
- " or, b. .... at birch, among dead,  
or united leaves
- " ocularis, b. ... at poplars, near the  
surface of the ground, or spun  
against the tree
- " flavicornis ... between united birch  
leaves
- D. Orion ..... to May, at birch,  
and oak; in a cocoon of gnawed  
bark, or rotten wood
- A. tridens ..... to May, spun up, in  
crevices of bark, at hawthorn,  
sloe, rose, willow, mountain ash,  
sallow
- " psi ..... to May, in bark  
crevices, of various trees
- " leporina ..... to May, in excava-  
tions, in the bark of birch,  
poplar, alder, sallow
- " aceris ..... to May, spun up,  
among fallen leaves, and under  
loose bark of sycamore, horse  
chestnut, maple, birch, and s.  
oak [bark
- " megacephala at poplar, under the
- " strigosa ..... to May among, dead  
leaves, of hawthorn; or rubbish,  
or decayed wood; s. sub.
- " alni ..... between leaves of  
various trees; or inside bramble  
sticks
- " ligustri ..... to May, spun up,  
under moss, stones, &c., near  
ash, and privet; also sub.; also  
found under the top-stones of  
walls, against the tree

## PUPÆ]

## OCTOBER

- A. rumicis .....to May, spun up, in crevices of trees, palings, walls, &c.
- A. patris .....to May, sub., at elm
- D. pinastri .....to May, in a cocoon, on the ground, among dock, sorrel, &c.
- X. conspicillaris to Mar., sub., at elm, and other trees
- M. albicolon.....to April, sub., near *Atriplex*, *Chenopodium*, lettuce, &c.
- C. Morpheus.....to May, spun up, in a leaf, or an earthen cocoon, attached to food-plant
- A. segetum, s. ...to May, sub., among *Cruciferae*, grass, &c.
- T. piniperda.....at Scotch, and other firs; in open places in fir woods, and on the margin; in crevices of bark, or under moss, and fallen needles, about 1½ in. or 2 in. deep, rarely within 2 ft. of the tree
- T. gothica..... at various trees, just beneath the surface
- " leucographa } at r. of low plants
- " rubricosa ... } at r. of various trees
- " instabilis } at r. of various trees
- " stabilis    } at r. of various trees
- " opima .....at r. of *Rosa spinosissima*, and dwarf willows; below the sand, on sand-hills, in the N.
- " populeti ..... sub., at poplars, especially *Populus nigra*; deep
- " gracilis..... sub., at willows, willows, and low plants
- " miniosa .....among fallen leaves, &c.
- " munda .....under moss, at base of oak
- " cruda .....sub., at oak
- D. carpophaga...to April, sub., near *Silene*, and *Lychnis*; on the coast; found by raking sand-hills
- H. serena .....sub., near *Sonchus*, and lettuce [and birch
- H. glauca ..... sub., near willow,
- H. oleracea ..... sub., near elm, nettle dock, &c.; also in kitchen gardens
- " thalassina ... sub., near honeysuckle, willow, broom, &c.
- X. lithoriza .....to Feb., near honeysuckle; in a papery cocoon, on the ground
- C. verbasci .....in a large, tough, earthen cocoon, near mullein, or figwort
- " scrophulariæ in a cocoon, near figwort, or mullein; s. two years in pupa
- " lychnitis .....sub., near white, or black mullein; s. two years in pupa
- " asteris .....sub., near golden rod, &c.; s. two years in pupa
- " gnaphalii .....sub., near golden rod
- " absinthii ..... sub., near wormwood
- " chamomillæ...sub., near chamomile, &c.
- " umbratica .....sub., near *Sonchus*, &c.
- H. marginata ...sub., near *Ononis procurrens*
- H. dipsacea .....to May, among melilot, and probably *Silene otites*, and *Linaria*
- A. myrtilli .....spun up, in heath
- E. venustula.....to May, at r. of *Tormentilla reptans*, and grass
- B. argentula .....among grass, on the ground
- B. parthenias ...at birch; in crevices of bark, or on the ground
- A. urticæ .....to May, spun up, among nettle leaves
- " triplasia .....to May, spun up, among nettle leaves, hop, &c.
- P. ænea .....to May, amongst *Polygala vulgaris*
- E. sambucalis ...to May, spun up, in crevices, in palings, walls, &c.; near elder
- G. canella.....to June, among *Salsola kali*

## PUPÆ]

## OCTOBER

L. roborella .....	} among fallen oak leaves	L. faginella .....	among fallen beech leaves
" hortella .....		} among fallen leaves of hornbeam	" carpinicolella
" amyotella.....			" tenella .....
" lautella.....			
" quercifoliella			
" Heegeriella ...			
" Cramerella ...)			

## IMAGOS]

Although the cold winds, and occasional frosts, which now begin to visit us, tell of the approach of winter, we have not yet reached the time,

“When the Night doth meet the Noon  
In a dark conspiracy  
To banish Even from her sky ;”

and the Collector must not yet suppose his “season” is closed. This is the great month for captures at ivy, which is now in bloom ; and a large number of the autumnal species are attracted to the stupefying blossoms. In the day-time bees, and butterflies hold high festival over the mantling ivy sprays ; and at night, soon after dusk, many Moths, especially Noctuæ, flock as to a banquet, where

“Unbought dainties crown the feast.”

The short period required for the intoxication, or stupefaction, of the Moths is remarkable. The blossoms should be lightly beaten, or shaken, into an umbrella, or clap-net, or sheet, or other contrivance, held or spread beneath, when the Moths required are easily boxed. Sometimes the labours of the Collector are rewarded by the capture of the rare *D. rubiginea*. Other flowers, besides the ivy, are also very attractive to Moths, especially *arbutus*, and stinging nettle ; as are also blackberries, and other fruit.

V. c.-album, h. at blackberries, &c. ; may be found hanging to under- side of leaves of trees, in wet weather	H. pennaria .....woods ; at rest, on trees
" polychloros, h. hangs up, in out- houses, hollow trees, &c., for the winter	S. sacraria, 2. ...flies by day ; has been taken at fl. ; at sugar ; and at l. [trees
" Antiope, h. ...at ivy, fl., and cossus- infected trees	H. aurantiaria ...woods ; at rest, on " defoliaria .....woods ; at rest, on trees
" Atalanta, h. at ivy, fl., and fruit	C. brumata .....comes to l.
" cardui, h. ...at fl.	" boreata .....
C. Pamphilus ...	O. dilutata .....
P. Phloæas.....at fl.	T. juniperata ...comes to l.
A. Atropos .....at rest, on palings, &c.	C. psittacata, h. comes to l.
C. celerio .....at fl., at dusk	" miata, h. ....
" nerii .....	E. cervinata .....
E. alniaria .....	C. spartiata .....
	P. Cassinea, e....comes to l.
	P. bucephala ...at rest

## IMAGOS]

## OCTOBER

- P. plumigera .. shady woods, and hedges; local  
 D. cæruleocephala comes to l.  
 T. batis, 2. ....  
 L. vitellina .....  
 " albipuncta ...at fl.  
 " comma, s., 2.  
 " l-album .....  
 N. lutosa, b. ...comes to l.  
 H. micacea .....comes to l. [to l.  
 A. Australis .....among grass; comes  
 L. exigua .....  
 C. cubicularis ...beaten, from thatch  
 A. suffusa, h. ...at ivy  
 " saucia, h. ....at ivy; comes to l.  
 " segetum .....at ivy  
 O. lota .....at ivy [berries  
 " macilentata.....at ivy, and yew  
 A. rufina .....at ivy  
 " pistacina .....at ivy  
 " lunosa .....comes to l., and ivy  
 C. vaccinii, h. ...at ivy  
 " spadicea, h....at ivy  
 " erythrocephala, h. at ivy  
 S. satellitia, h....at ivy [berries  
 D. rubiginea, h. ...at ivy, and yew  
 H. croceago, h. at ivy  
 X. silago .....  
 " aurago, b. ....at ivy  
 " ferruginea ...at ivy  
 D. templi, h. ...usually found by turning over stone-heaps, in elevated districts; comes to l.  
 E. nigra .....at ivy  
 M. oxyacanthæ at ivy  
 A. Aprilina .....  
 P. meticulosa .. at ivy  
 " empyrea .....at ivy  
 C. vetusta, h. ....at ivy  
 " exoleta, h. ....at ivy  
 X. lambda ..... [tree trunks  
 " furcifera, h....at ivy, and rests on  
 " rhizolitha, h. at ivy, and rests on tree trunks  
 " semibrunnea, h. at ivy  
 " petrificata, h. at ivy  
 H. armigera .....at ivy [palings  
 C. fraxini .....at rest, on walls, and  
 " nupta .....at rest, on walls, tree trunks, &c.
- H. proboscidalis [houses  
 " rostralis, h. .. in gardens, and out-  
 P. fimbrialis .....comes to l.  
 D. ramburialis ...  
 M. unionalis ..... successive broods, during the year  
 S. coarctalis, h. on mossy walls  
 E. ficella .....in corn, and seed warehouses, among oilcake, &c.  
 N. angustella, 2.  
 M. alveariella, s. about beehives  
 L. scabrana .....among elm [thorn  
 P. cristana ...among willows, & haw-  
 P. sordidana.....among alder; in marshes, and fens  
 L. phryganella ...  
 E. gelatella .....  
 T. imella .....  
 " pellationella ...common, in houses  
 " pallescentella in warehouses, and poulterer's shops  
 H. radiatella, h.  
 Y. asperella .....among apple  
 P. caudella, h....  
 D. hypericella ...among Hypericum  
 " ocellella .....among willow  
 " depressella, s.  
 " olerella .....beaten, from thatch; near Hazlemere [slack  
 G. Lyellella .....Castle Eden, Wither-  
 " atriplicella, 3. among Atriplex, and Chenopodium  
 A. betulella .....beaten; Castle Eden, High Force  
 Z. fasciapennella the Pentlands  
 G. semifasciella  
 C. citrinella, h....  
 B. somnulentella  
 C. chærophyllella, h.  
 " daucella .....  
 L. decorella, h. among Epilobium  
 L. trifasciella ...among honeysuckle  
 L. padifoliella ...  
 P. salignella, h. among willows, near London [vulus  
 P. pterodactylus, h. among Convolvulus  
 " serotinus ..... among Galium Mollugo  
 A. polydactyla, h. ... among honeysuckle, and in windows

# NOVEMBER

## OVA]

- T. quercus* .....on oak twigs  
 " *w-album* .....on wytch elm ; also elm ; on the twigs  
 " *pruni* .....on sloe twigs  
*L. Ægon* .....on *Ornithopus perpusillus* ; white  
*H. comma*.....on trefoil, and other *Leguminosæ*  
*L. monacha* .....on oak, beech, fir, birch, apple, &c.  
*T. crategi*.....on hawthorn ; also s. sloe, sawlow, birch, oak  
*P. populi* .....to Mar., on oak, poplar, lime, ash, hawthorn  
*B. neustria* .....on hawthorn, sloe, fruit trees ; in batches round twigs, and branches  
 " *castrensis*.....on *Artemisia maritima*, *Daucus maritimus*, &c.  
*E. vespertaria* ...on nut  
 " *apiciaria* ..... poplar, willow, sawlow  
*C. elinguaris* ...on oak, honeysuckle, hawthorn, sloe ; also heath, bilberry, &c.  
*H. pennaria* .....on oak  
*F. pinetaria* .....on bilberry  
*H. aurantiaria* ...to March, on oak, birch, hawthorn, &c.  
 " *defoliaria* .....to March, on oak, nut, sloe, hawthorn, birch, elm, lime, &c.  
*C. brumata* .....to March, on oak, and other trees  
 " *boreata* .....to March, on birch  
*O. dilutata* .....to March, on oak, and other trees  
*E. subciliata*.....on maple ; at foot-stalk of leaf  
*M. rubiginata* ...on alder ; large  
*S. vetulata* .....on buckthorn  
*C. immanata* ...probably on alder, and other trees, and strawberry, bilberry, &c. ; large  
*C. prunata* .. . . . on currant, gooseberry, sloe ; on the bark, large  
 " *testata* ..... on heath, birch, sawlow, poplar, &c. ; singly, large  
 " *populata* .....on bilberry, whortleberry, poplar ; globular, large, yellow  
 " *fulvata* .....on dog rose ; rose-pink, large  
 " *pyraliata* .....on *Galium*, and hawthorn ; large  
 " *dotata* .....on black, and red currant ; large  
*E. cervinaria* ...to April, on mallow  
*C. spartiata* .....on broom  
*T. chærophyllata*... on *Anthriscus sylvestris*, and *Bunium flexuosum*  
*P. Cassinia* .....to April, on oak  
*P. plumigera* ...on maple ; chiefly on the twigs, in hedges, not shaded by trees ; after the 7th of the month, until March. Often singly ; but also in twos, threes, and s. much larger clusters. Circular, smooth ; brown above, whitish beneath  
*C. xerampelina*...on ash ; probably in the chinks of the twigs, and the buds  
*T. subtusa*.....upon the twigs of poplar  
 " *retusa* .....on sawlow, willow, poplar ; upon the axils of the leaves  
*P. chi*.....on dock, hawthorn, sawlow ; and probably lettuce, sowthistle, "tea tree," &c.  
 " *flavocincta* ...on dock, chickweed, groundsel, mint, &c. ; in gardens, on everlasting pea, plum, &c.  
*H. proboscidalis* on nettle ; rather large, pale yellow

## LARVÆ]

## NOVEMBER

A large number of hibernating larvæ hide away early, and are seldom seen again until the spring. Thus several specified under this month may not have been seen since July, August, or September. Several others come out to feed occasionally, when the weather is mild.

- A. Iris, h. ....stretched out, on a  
sallow twig
- A. Australis, h. Cichorium intybus,  
Poa annua, and other plants
- H. hispida, h? .. grasses, lettuce,  
plantain, &c.
- A. Puta.....dandelion, lettuce,  
carrot r., knotgrass, &c.
- " saucia, h. ....plantain, dock, and  
other low plants
- N. Dahlii, h. ...low plants; s. feeds  
up without h., in mild winters
- " umbrosa, h....dock, and various  
low plants; feeds in mild wea-  
ther, through the winter
- C. xerampelina, h. ash
- E. lichenea, h. ...ragwort, and other  
low plants; on the coast
- P. meticulosa, h. groundsel, and  
various low plants
- " empyrea, h....pilewort, &c.
- M. cephalonica, h. ...dried currants,  
&c.
- P. gentiana, h. ...teazle, heads
- " marginana, h. teazle, heads
- C. fulvana? .....heads of Centaurea  
scabiosa
- S. ferrugalis ..... has been fed on  
Aster amellus, on the Continent
- M. polygonalis...Ulex nanus, fl., on  
heaths; Genista?
- T. imella ..... among furrier's  
refuse, and has been found in  
a felt shoe!
- " merdella .....in furs
- " semifulvella, h. in birds' nests,  
feeding on wool
- P. bicostella, h. Erica cinerea
- A. fibulella .....in a flat case, on  
leaves of Veronica chamædrys
- C. albitarsella, h. ...Origanum, and  
Glechoma
- " vitisella, h. ...whortleberry [trees
- C. Linneella, h. under bark of lime
- E. gangabella, h. Dactylis glomerata
- L. lantanella, h. Viburnum lantana;  
best collected this month
- T. marginea, h. bramble
- N. ruficapitella... in common oak,  
and evergreen oak

## PUPÆ]

- P. Machaon .....on stems of Peu-  
cedanum palustre; in fens
- P. brassicæ ... } on palings, walls,  
" rapæ..... } &c.  
" napi ..... }
- S. ocellatus ..... sub., at willows,  
poplars, &c.
- " populi .....sub., at poplar, wil-  
low, &c.
- " tiliaë .....sub., at elm, lime,  
beech
- C. ligniperda ...to May, at various  
trees; spun up, under bark,  
&c.; but s. buries
- L. asellus .....spun up, on a leaf
- A. mendica .....under moss, on trees  
bordering ditches
- A. lubricipeda } spun up, on palings,  
" menthrasti } trees, &c.
- " urtica .....under moss, on trees
- O. pudibunda .....in dead leaves,  
under moss, &c.
- E. lanestris ... .. cocoon, on the  
ground, near hawthorn, &c.
- E. versicolora ...spun up, at birch
- S. carpini .....cocoon, amongst  
leaves, heath, &c.
- E. dolobrararia ...under moss, on oak
- S. illunaria .....sub., at willow, oak,  
&c.
- " lunaria.....at sloe, oak, nut,  
&c.
- " illustraria..... cocoon, among  
leaves, on, or near, the ground

## PUPÆ]

## NOVEMBER

- O. bidentata.....under moss, on various trees
- P. pilosaria .....sub., at oak, and elm
- N. zonaria.....sub., on sand-hills
- " hispidaria.....at oak
- B. hirtaria .....sub., at elm, lime, ash, and fruit trees
- A. prodromaria sub., at oak, elm, &c. ; just beneath the surface
- " betularia .....sub., at oak, elm, birch, and other trees
- H. abruptaria ...spun up, on twigs, &c. ; of lilac, rose, or privet
- T. consonaria ...under moss, at r. of beech, oak, birch
- " crepuscularia undermoss, on alder, birch, elm, poplar, willow ; or in bark crevices
- " biundularia ...spun up, on oak, and birch
- " punctulata ...undermoss, on birch, and alder ; or in bark crevices
- I. lactearia ..... spun up, among leaves of oak, and birch
- E. porata .....fastened to leaf of oak
- " punctaria .....fastened to leaf of oak, or birch
- " trilineararia.....fastened to leaf of beech
- " pendularia ...fastened to leaf of birch
- E. heparata .....among moss, &c., on alder
- C. pusaria..... spun up, on the ground
- " exanthemaria spun up, under leaves of willow, and alder
- M. liturata .....in open places, and on the margins of fir woods, at 1 inch to 2 inches deep, rarely within 2 feet of the tree
- N. pulveraria ...in withered willow leaves, &c.
- F. carbonaria ...among dead leaves of willow, and birch
- " piniaria .....at Scotch fir, and larch ; in open places, in woods, rarely within 2 feet of the tree, at 1½ in. to 2 in. deep
- H. rupicaprararia in a web, on the ground, among oak, sloe, &c.
- " leucopheararia on the ground, near oak
- " progemmaria sub., at oak, birch, hornbeam, &c.
- " defoliaria .....sub., at oak, hawthorn, sloe, hornbeam, nut, elm, &c.
- A. æscularia.....sub., at elm, oak, lime, sloe, hawthorn
- L. multistrigaria sub., about Galium
- E. albularia .....within the spun-up sepals of yellow rattle
- " decolorata ...about *Lychnis dioica*
- E. venosata .....about *Silene*, and *Lychnis*
- " consignata ..... probably under moss, and loose bark, in apple orchards
- " pulchellata ... among the seeds, and dead fl. of foxglove
- " isogrammata .....about *Clematis vitalba*
- " fraxinata .....on ash ; under moss, and loose bark
- " nanata .....about heath
- " vulgata .....sub., at various plants, and trees
- " minutata .....about heath
- " assimilata.....in crevices, about currant, and hop
- " exiguata .....about oak, &c.
- M. ocellata .....among Galium ; spun up, near the ground. The larva s. remains during winter
- M. subtristata ...sub., near Galium
- " galiata .....sub., near Galium
- A. sinuata.....in earthen cocoon, on the ground, among Galium
- " badiata.....in earthen cocoon, on the ground, beneath dog rose bushes
- " derivata .....sub., at dog rose
- C. sagittata .....spun up, about *Thalictrum*, or on the ground, near ; in fens
- E. lineolata .....cocoon attached to *Galium verum*, below the surface, on coast sand-hills



## PUPÆ]

## NOVEMBER

- P. falcula .....between united birch leaves
- D. bicuspis .....spun up, on birch trunks, in the S. ; alder in the N. ; rarely above 2 ft. from the ground
- " furcula .....spun up, on trunk of willow, or sallow
- " bifida .. .....spun up, on trunk of poplars
- " vinula .....spun up, on trunk of willows, poplars, and sallow ; three, or four feet from the ground
- S. fagi .....spun up, among leaves of beech, oak, birch, elm ; s. at r.
- P. bucephala ...sub., at various trees
- C. curtula .....spun up, between dead leaves of poplars, and sallow
- " reclusa .....to May, spun up, among dead leaves of poplars, willows, sallows
- P. palpina.....at willows, and poplars, on edges of streams, in cocoon, on the ground, or under sods
- N. camelina.....in a slight cocoon, at various trees
- " cucullina .....at maple, and sycamore, under moss, &c.
- " carmelita .....sub., at birch
- " dictæa .....at poplars, and willows ; in large cocoon, under a leaf, or sod
- " dictæoides ...at birch ; in a slight cocoon, under a leaf, &c.
- " dromedarius at birch, alder, nut ; in a slight cocoon, under a leaf, &c.
- " ziczac ... .....at poplars, sallow, willows ; in a slight cocoon
- " trepida .....sub., at oak ; cocoon tough, but not always coated with earth
- " Chaonia .....sub., at oak
- " Dodonea.....sub., at oak, & birch
- T. batis ... .....near bramble, and wild raspberry
- C. duplaris .....between united birch leaves
- " fluctuosa ....among birch leaves
- " or, b. ....at birch, among dead, or united leaves
- " ocularis, b. ..at poplars ; near the surface of the ground, or spun against the tree
- " flavicornis ...between united birch leaves
- D. Orion .....at birch, and oak ; in a cocoon of gnawed bark, or rotten wood
- A. tridens .....spun up, in crevices of bark, at hawthorn, sloe, rose, willow, sallow, mountain ash
- " psi.....in bark crevices, of various trees
- " leporina .....in excavations in the bark of birch, poplar, alder, sallow
- " aceris .....spun up, among fallen leaves, and under loose bark of sycamore, horse chesnut, maple, birch, and s. oak
- " megacephala at poplar, under the bark
- " strigosa .....among dead leaves of hawthorn, or rubbish, or decayed wood ; s. sub.
- " alni .....between leaves of various trees ; or inside bramble sticks
- " ligustri .....spun up, under moss, stones, &c., near ash, and privet ; also sub. ; also found under the top stones of walls, against the tree
- " rumicis.....spun up, in crevices of trees, palings, walls, &c.
- A. putris .....sub., at elm
- D. pinastri .....in a cocoon, on the ground, among dock, sorrel, &c.
- X. conspicillaris sub., at elm, and other trees
- M. albicolon.....sub., near Atriplex, Chenopodium, lettuce, &c.
- A. segetum, s. ...sub., among Cruciferae, grass, &c.

## PUPÆ]

## NOVEMBER

- T. piniperda.....at Scotch, and other firs; in open places in fir woods, and on the margin; in crevices of bark, and under moss, and fallen needles; rarely within 2 ft. of the tree, 1½ to 2 in. deep
- T. gothica.....at various trees
- " leucographa } at r. of low plants
- " rubricosa ... } at r. of low plants
- " instabilis ... } at r. of various trees
- " stabilis ..... } at r. of various trees
- " opima .....at r. of Rosa spinosissima, and dwarf sallow; below the sand, on sand-hills in the N.
- " populeti .....sub., at poplars, especially *Populus nigra*; deep
- " gracilis .....sub., at willows, sallows, and low plants
- " miniosa .....among fallen leaves, &c.
- " munda .....under moss, at base of oaks
- " cruda .....sub., at oak
- D. carpophaga...sub., near *Silene*, and *Lychnis*; on the coast; found by raking sand-hills
- H. serena .....sub., near *Sonchus*, and lettuce
- H. glauca .....sub., near sallow, and birch
- " oleracea .....sub., near elm, nettle, dock, &c.; also in kitchen gardens
- " thalassina ...sub., near honeysuckle, sallow, broom, &c.
- X. lithoriza .....near honeysuckle, in a papery cocoon, on the ground
- C. verbasci ... } sub., in a cocoon,
- " scrophulariæ } near mullein, or figwort
- " lychnitis .....sub., near white, and black mullein
- " asteris ..... } sub., near golden
- " gnaphalii ... } rod, &c.
- " absynthii .....sub., near worm-wood
- " chamomillæ...sub., near chamomile, &c.
- " umbratica ...sub., near *Sonchus*, &c.
- H. marginata ...sub., near *Ononis procurrans*
- H. dipsacea .....among melilot, and probably *Silene otites*, and *Linaria*
- A. myrtilli ... ..spun up, on heath
- E. venustula.....at r. of *Tormentilla reptans*, and grass
- B. argentula.....among grass, on the ground
- B. parthenias ...at birch; in crevices of bark, or on the ground
- A. urticæ .....spun up, among nettle leaves
- " triplasia .....spun up, among nettle leaves, hop, &c.
- P. ænea .....among *Polygala vulgaris*
- E. sambucalis ...spun up, in crevices in palings, walls, &c., near elder
- G. canella.....among *Salsola kali*

## IMAGOS]

- P. populi .....at rest, at the base of oak, &c.
- H. pennaria .....woods; at rest, on trees
- H. aurantiaria...woods; at rest, on trees
- " defoliaria.....woods; at rest, on trees
- C. brumata .....comes to l.
- " boreata.....
- O. dilutata .....
- C. psittacata, h. comes to l.
- P. Cassinea .....comes to l.
- P. plumigera ...shady woods, and hedges
- L. vitellina .....
- A. segetum .....
- C. vaccinii, h. ....
- " spadicea, h. ....
- " erythrocephala, h.
- S. satellitia, h. ....
- D. rubiginosa, h.

## IMAGOS]

## NOVEMBER

H. croceago, h.

D. templi, h. ...

M. oxyacanthæ

C. exoleta, h. ...

C. chamomillæ, h.

S. coarctalis, h. on mossy walls

L. scabrana .....among elm

P. cristana .....among sallows, and  
hawthornL. phryganella...flies in woods, in  
calm weather

E. gelatella .....among willow

T. imella .....

H. radiatella, h.

P. caudella, h. ...

C. daucella .....

L. Messaniella ...among evergreen oak

" trifasciella ...among honeysuckle

L. Clerckella, h.

# DECEMBER

As there is now but little work to be done, out-of-doors, and as that may be impeded by frost, or snow, the reader may be reminded that this is a convenient period for over-hauling his collection; carrying out any re-arrangement that, in these days of name-changing, may be deemed desirable; or clearing out duplicate boxes, and otherwise preparing for the campaign next season. Mitey specimens, if worth preserving, may be "doctored" with a diluted solution of corrosive sublimate, dissolved in alcohol, or vinegar; or with a weak solution of phenic acid in alcohol, or naphtha.

As papered drawers and boxes are often objectionable, from the trouble they involve, and the obstacle presented to the entrance of fine pins into the cork, by the coat of paper and paste, it may be desirable to whiten the cork instead. To carry this out properly the paper should be entirely removed from the cork, and the drawer cleaned. Then take as much lævigated oxide of zinc as may be deemed necessary, with a minute portion of indigo or ultramarine, to give greater whiteness, and gently add, mixing with a spatula, as much skimmed milk as will form with it a mixture of the consistence of cream; then with a soft, flat camel's hair brush apply the mixture evenly over the surface; by means of a dabber of muslin or cambric eliminate the lines formed by the brush, and dry slowly at some distance from the fire.

The following are stated to be preferable modes of keeping insects in cabinets or boxes to the ordinary camphor method: Treat each drawer, or box, to a fumigation, for a day or two, of Bisulphate of Carbon, by placing a small piece of sponge partially soaked with the fluid in the corner. If this is done once a-year or so, it is said to be perfectly effective in preventing the appearance of mites, beetles, or other enemies. This is the material employed by many dealers for preserving their large stocks of insects. The reader, however, ought to be warned that so offensive is the smell of this enemy of animal life, that it can only be applied in cases where a spare room is available for the purpose. Dr. Laboulbène gives the preference over every other insect preservative to a solution of equal parts of phenic acid and pure benzine, dropped on a small piece of sponge, and placed in the corner of the box, or drawer. This is stated to have the advantage of arresting fungoid growths.

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## OVA]

- |                                     |                                      |
|-------------------------------------|--------------------------------------|
| T. quercus .....on oak twigs        | T. cratægi.....on hawthorn; also     |
| " w-album .....on wyth elm, also    | s. sloe, sawallow, birch, oak        |
| elm; on the twigs                   | P. populi .....on oak, poplar, lime, |
| " pruni .....on sloe twigs          | ash, hawthorn                        |
| L. Ægon .....on Ornithopus per-     | B. neustria .....on sloe, hawthorn,  |
| pusillus; white                     | fruit trees; in batches, round       |
| H. comma .....on trefoil, and other | twigs, and branches                  |
| Leguminosæ                          | " castrensis .....on Artemisia mari- |
| L. monacha .....on oak, beech, fir, | tima, Daucus maritimus, &c.          |
| birch, apple, &c.                   | E. vespertaria ...on nut             |

## OVA]

## DECEMBER

- E. apiciaria .....on poplar, willow, sallow  
 C. elinguarina ...on oak, honeysuckle, hawthorn, sloe; also heath, bilberry, &c.  
 H. pennaria .....on oak  
 F. pinetaria .....on bilberry  
 H. aurantiaria ...on oak, birch, hawthorn, &c. [trees  
 C. brumata .....on oak, and other  
 " boreata.....on birch [trees  
 O. dilutata .....on oak, and other  
 E. subciliata .....on maple; on foot-stalk of leaf  
 M. rubiginata ...on alder; large  
 S. vetulata .....on buckthorn  
 C. immanata ...probably on alder, and other trees; and strawberry, bilberry, &c.; large  
 " prunata .....on currant, gooseberry, sloe; on the bark; large  
 " testata .....on heath, birch, sallow, poplar, &c.; singly, large  
 " populata .....on bilberry, whortleberry, poplar; globular, large, yellow  
 C. fulvata .....on dog rose; rose-pink, large  
 " pyraliata .....on Galium, and hawthorn; large  
 " dotata .. .....on black, and red currant; large  
 E. cervinaria.....on mallow  
 C. spartiata .....on broom  
 T. chærophyllata on Bunium flexuosum  
 P. Cassinea .....on oak  
 P. plumigera ...on maple; chiefly on the twigs, in hedges, where not shaded by trees. Often singly, but s. in clusters of two, three, or many more. Circular, smooth, brown above, whitish underneath  
 T. subtusa.....upon twigs of poplar  
 " retusa .....on sallow, willow, poplar; upon the axils of the leaves  
 P. flavicincta ...on dock, chickweed, groundsel, mint, &c.  
 H. proboscidalis on nettle; rather large, pale yellow

## LARVÆ]

- M. anceps ..... —? in damp places  
 A. Puta.....dandelion, lettuce, carrot roots, knotgrass, &c.  
 " saucia, h. ....plantain, dock, and other low plants  
 M. cephalonica, h. ...dried currants, &c.  
 P. gentianana, h. teazle heads  
 N. aurella .....from Jan., bramble

## PUPÆ]

- P. Machaon .....on stems of Peucedanum palustre; in fens  
 P. brassicæ ... }  
 " rapæ ..... } on palings, walls, &c.  
 " napi ..... }  
 S. ocellatus .....sub., at willows, poplars, &c.  
 " populi .....sub., at poplar, willow, &c.  
 " tilie .....sub., at elm, lime, beech  
 C. ligniperda ...at various trees; spun up, under bark, &c.; but s. buries  
 L. asellus .....spun up, on a leaf  
 A. mendica .....under moss, on trees bordering ditches  
 " lubricepeda } spun up, on palings,  
 " menthrasti } trees, &c.  
 " urticæ .....under moss, on trees  
 O. pudibunda ...in dead leaves, under moss, &c.  
 E. lanestris .....cocoon, on the ground, near hawthorn, &c.  
 E. versicolora ...spun up, at birch  
 S. carpini .....cocoon, amongst leaves, heath, &c.  
 E. dolobraria ...under moss, on oak

## PUPEÆ]

## DECEMBER

- T. populeti .....sub., at poplars, especially *Populus nigra*  
 " gracilis .....sub., at willows, sallows, and low plants  
 " miniosa .....among fallen leaves, &c.  
 " munda .....under moss, at base of oak  
 " cruda .....sub., at oak  
 D. carpophaga ...sub., near *Silene*, and *Lychnis*; on the coast; found by raking sand-hills  
 H. serena .....sub., near *Sonchus*, and lettuce  
 H. glauca .....sub., near *sallow*, and *birch*  
 " oleracea .....sub., near *elm*, *nettle*, *dock*, &c.; also in kitchen gardens  
 " thalassina .....sub., near *honeysuckle*  
 X. lithoriza .....near *honeysuckle*, in a papery cocoon; on the ground  
 C. verbasci ..... } sub., in a cocoon,  
 " scrophulariæ } near *mullein*, or  
 " lychnitis .....sub., near *white*, and *black mullein*  
 C. asteris ..... } sub., near *golden*  
 " gnaphalii ..... } rod, &c.  
 " absynthii .....sub., near *worm-wood*  
 " chamomillæ...sub., near *chamomile*, &c.  
 " umbratica ...sub., near *Sonchus*, &c.  
 H. marginata ...sub., near *Ononis procurrens*  
 " dipsacea .....among *melilot*, and probably *Silene otites*, and *Linaria*  
 A. myrtilli .....spun up, on *heath*  
 E. venustula.....at r. of *Tormentilla reptans*, and *grass*  
 B. argentula .....among *grass*  
 B. parthenias ...at *birch*, in crevices of bark; or on the ground  
 A. urticæ .....spun up, among *nettle leaves*  
 " triplasia .....spun up, among *nettle*, *hop*, &c.  
 P. ænea.....among *Polygala vulgaris*  
 E. sambucalis ...spun up, in crevices in *palings*, *walls*, &c., near *elder*  
 G. canella .....among *Salsola kali*

## IMAGOS

- H. pennaria .....  
 P. pilosaria .....  
 H. rupicapraria, e. on *hawthorn twigs*  
 " defoliaria .....  
 C. brumata .....comes to l.  
 " boreata.....  
 O. dilutata .....  
 P. populi .....  
 P. Cassinea, b....  
 P. plumigera ...  
 X. rhizolitha, h.  
 E. gelatella .....among *sallow*  
 H. radiatella, h.  
 P. caudella, h....  
 L. trifasciella ...among *honeysuckle*

## NOTES ON LOCALITIES.

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In spite of the encroachments constantly being made by advancing "civilization," and the agricultural, and other improvements being carried out, in large tracts of country, fortunately, for the sake of Entomological and Botanical Science, we have still many localities left to us in a comparative state of nature. The geological and physical features of a country are well known to be the chief regulating agencies in the production of its Flora and its Fauna. We are chiefly interested in the Insect Fauna only, and the Flora upon which that mainly depends. If the observer is assured of the productiveness of any particular locality in a special plant, or family of plants, he may fairly conclude that there are corresponding Insects also to be found. Hills, as a rule, (when moderately covered with a good variety of not-too-closely planted wood) seem more productive than purely agricultural districts in the vale, besides producing special Insects which are not to be found elsewhere. Wet places, provided they are not too much exposed, produce more insect-life than colder and dryer places. Thus forests, woods, heaths, bogs, and especially fens, and sandy districts bordering the sea, are favourite resorts of the Entomologist. In these latter places especially do we find rare and interesting insects. Some of them are remarkably local, being apparently confined to a very small space, not always precisely defined by the range of the food-plant. In some of these districts, notably the "Breck" districts of Norfolk and Suffolk, the ancient coast-line, *inside* the existing line, is unmistakably indicated, and produces its special plants and insects, not to be found elsewhere in the kingdom. These are spots which are most interesting from a scientific point of view, and ought never to be "hunted to death," for the sake of the rare specimens they produce, or we may see "the goose killed for the sake of the golden eggs," to our cost,—a process, indeed, we are threatened with, in regard to some of our local insects, by needy dealers, and greedy Collectors. Mr. Charles G. Barrett has done much to make us acquainted with the riches of this "Breck" district, and the neighbouring fens, and by his energy and intelligence has greatly enlarged our scientific knowledge of many species.

Probably one of the best districts in this country for Insects is Rannoch, which is doubtless largely due to the abundant vegetation of the heaths, woods, and hills having from time immemorial remained wild and unshorn. This it is, too, which makes our old forests such excellent hunting grounds for local insects, particularly Sherwood Forest, and the New Forest. Epping Forest, too, (now happily preserved against further encroachments from lucre-loving lords-of-the-manor), was once a famous locality, and doubtless many good species still linger there. The Forest of Dean has been somewhat disappointing, probably because of the poorness of a good deal of the soil, and the number of young plantations, interspersed with coal-pits and iron-works; while it is a difficult country to work, on account of its hilly character. Bewdley Forest, Worcestershire, has yielded larvæ of *E. versicolora*, and other good things.

Many of our moors, mosses, and heaths yield a fair number of good species, or did do so some years ago; and the undrained fens of Cambridge and Norfolk have long been held in esteem for the richness of their Insect Fauna. Many of the bare, wild districts in the North, "far removed from the haunts of men," have, by sturdy and persistent hunting, been made to yield abundantly. The Isle of Man, and the Hill of Howth, near Dublin, have attracted some of our best Entomologists, and have been the means of adding several new species to our Lists. The Isle of Portland is almost the only place where some species of *Acidalia* are to be found, though success is not always vouchsafed the wayfarer, owing to the villanously wet and windy weather which largely prevails in that district. The coast of Dorset in two places, the Burning Cliff, and Lulworth Cove, yields the very local skipper *P. Actæon*.

The London District includes many good localities which can easily be reached by railway. West Wickham wood, near Croydon, has yielded several good species. The Collector is recommended to proceed from Croydon towards the village of Addington, examining as he goes along the "Bishop's fence" for *N. carmelita*, should he be there when it is due, and also the birch, fir, and other tree trunks. The wood is near the inn. Coombe wood has been worked by the older Entomologists with great success. It is preserved for shooting purposes by the Duke of Cambridge, from whose agent Mr. Clutton, Whitehall-place, it is said to be possible to get an order for admission in pursuit of insects.

Kent, besides being "the garden of England," is probably one of our finest entomological counties. It is so largely blown upon from the sea; it has such a variety of soil and physical feature; and it is so liberally interspersed with well-wooded hills, that this is not to be wondered at. Fortunate is the Entomologist sojourning or resident in London, with time and means to hunt the coasts, and hills, and glades of sunny Kent.

It is on our coasts, marshes, and mountains that we are most likely to find species hitherto unrecorded as British, if not absolutely new to Science. Unfortunately working in these places involves a large expenditure of time, while the labour is so severe that only the strongest can follow it up. If some of our Societies could be induced to take this work up, by employing trustworthy Collectors, they would, while adding materially to the richness of their own collections, fulfil a legitimate function of their existence, and give additional lustre to the reputation gained by England of late years in the path of Entomological Discovery.



# APPENDIX I.

## SPECIFIC AND COMMON NAMES OF PLANTS MENTIONED IN THE CALENDAR.

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<i>Abies excelsa</i> .....	spruce fir
" <i>picea</i> .....	silver fir
<i>Acer pseudo-platanus</i> ..	sycamore
" <i>campestre</i> .....	maple
<i>Achillea millefolium</i> .....	yarrow
" <i>ptarmica</i> .....	sneezewort
<i>Actæa spicata</i> .....	herb Christopher
<i>Ægopodium podagraria</i> .....	gout weed
<i>Aira canescens</i> .....	grey hair grass
" <i>cæspitosa</i> .....	turfy hair grass
<i>Agrimonia eupatoria</i> .....	agrimony
<i>Alisma plantago</i> .....	greater water plantain
<i>Alnus glutinosa</i> .....	alder
<i>Alopecurus agrestis</i> .....	slender foxtail grass
<i>Althea officinalis</i> .....	marsh mallow
" <i>rosea</i> .....	hollyhock
<i>Ammophila arundinacea</i> .....	sea reed, or marum
<i>Anagalis arvensis</i> .....	scarlet pimpernel, or poor man's weather glass
<i>Arenaria media</i> .....	sea-side sandwort
<i>Angelica sylvestris</i> .....	wild angelica
<i>Anthemis nobilis</i> .....	common chamomile
" <i>cotula</i> .....	stinking chamomile
<i>Anthriscus sylvestris</i> .....	wild chervil
" <i>vulgaris</i> .....	common beaked parsley
<i>Anthyllis vulneraria</i> .....	woundwort, or kidney vetch
<i>Aquilegia vulgaris</i> .....	columbine
<i>Arabis</i> .....	rock cress, white arabis, &c.
<i>Arctostaphylos uva-ursi</i> .....	red bearberry
<i>Artemisia campestris</i> .....	field southernwood
" <i>vulgaris</i> .....	mugwort
" <i>maritima</i> .....	sea wormwood
" <i>absinthium</i> .....	wormwood
<i>Æsculus hippocastanum</i> .....	horse chesnut
<i>Asparagus officinalis</i> .....	common asparagus
<i>Asperula odorata</i> .....	sweet woodruff
<i>Asphodelus luteus</i> .....	yellow asphodel
<i>Asplenium Ruta muriaria</i> .....	wall-rue spleenwort
<i>Aster novi belgii</i> .....	Michaelmas daisy

Atriplex .....	orache
" portulacoides .....	shrubby orache, or sea purslane
Avena pratensis .....	narrow-leaved oatgrass
Ballota nigra .....	black horeround
Balsamia hortensis .....	balsam
Barbarea vulgaris .....	yellow rocket, or bitter winter cress
Bartsia viscosa .....	yellow viscid bartsia
Berberis vulgaris .....	barberry
Beta maritima.....	sea beet
Betula alba .....	birch
Brachypodium sylvaticum.....	slender false brome grass
Brassica oleracea .....	cabbage
" rapa .....	turnip
" napus.....	rape
Bryonia dioica .....	red-berried bryony
Briza media .....	quaking grass
Bunium flexuosum .....	earth nut
Calamagrotis epigejos .....	wood reed
Callistephus chinensis .....	China aster
Callitriche verna .....	water starwort
Calluna erica .....	heath, or ling
Caltha palustris .....	marsh marigold
Calystegia sepium .....	large convolvulus, or great bindweed
Campanula trachelium .....	nettle-leaved campanula
" rotundifolia .....	harebell
Cardamine amara .....	bitter lady's smock
" pratensis .....	common lady's smock
" hirsuta.....	hairy bitter cress
Carduus nutans .....	musk thistle
" acanthoides .....	welted thistle
" lanceolatus .....	spear plume thistle
" crispus .....	jagged thistle
Carex paniculata .....	great paniced sedge
" sylvatica .....	pendulous wood sedge
" paludosa .....	lesser common sedge
" riparia .....	great common sedge
" glauca .....	glaucous heath sedge
" intermedia .....	soft brown marsh sedge
Carpinus betulus .....	hornbeam
Castanea vulgaris .....	Spanish chesnut
Centaurea nigra .....	black knapweed
" scabiosa.....	great knapweed
Cerastium vulgatum .....	broad-leaved mouse-ear chickweed
" tomentosum .....	woolley mouse-ear chickweed
" arvense .....	field chickweed, or mouse-ear
Cerasus avium .....	wild cherry
" padus.....	bird cherry
" laurocerasus .....	laurel
Chenopodium album .....	goosefoot
Chærophyllum temulum .....	rough chervil
Chrysanthemum leucanthemum .....	ox eye
" sineuse .....	chrysanthemum

<i>Chrysosplenium alternifolium</i> .....	alternate-leaved golden saxifrage
<i>Cichorium intybus</i> .....	wild succory
<i>Circæa lutetiana</i> .....	enchanter's nightshade
<i>Cirsium lanceolatum</i> .....	spear plume thistle
" <i>arvense</i> ( <i>Carduus arvensis</i> ) .....	creeping plume thistle
" <i>acaule</i> .....	dwarf plume thistle
<i>Clematis vitalba</i> .....	clematis, or travellers' joy
<i>Cochlearia armoracia</i> .....	horse radish
" <i>anglica</i> .....	English scurvy grass
" <i>officinalis</i> .....	common scurvy grass
" <i>danica</i> .....	Danish scurvy grass
<i>Colutea arborescens</i> .....	bladder senna
<i>Conium maculatum</i> .....	common hemlock
<i>Convolvulus arvensis</i> .....	small convolvulus, or small bindweed
<i>Cornus sanguinea</i> .....	dogwood, or wild cornel
<i>Corylus avellana</i> .....	nut, or hazel
<i>Cratægus oxyacantha</i> .....	hawthorn, or whitethorn
<i>Cucubalus bacciferus</i> .....	berry-bearing campion
<i>Cupressus fastigata</i> .....	cypress
<i>Cynoglossum officinale</i> .....	houndstongue
Cyperacæ .....	rush
<i>Cytisus scoparius</i> .....	broom
<i>Dactylis glomerata</i> .....	rough cocksfoot grass
<i>Datura stramonium</i> .....	thorn-apple
<i>Daucus carota</i> .....	common carrot
" <i>maritimus</i> .....	sea-side carrot
<i>Delphinium</i> .....	larkspur
<i>Digitalis purpurea</i> .....	foxglove
<i>Dipsacus sylvestris</i> .....	wild teasle
" <i>Fullonum</i> .....	fuller's teasle
<i>Dryas ocopetala</i> .....	dryas, or mountain avens
<i>Dryum capilare</i> .....	a common moss
<i>Echium vulgare</i> .....	viper's bugloss
<i>Elymus arenarius</i> .....	upright sea lyme grass
<i>Empetrium nigrum</i> .....	crakeberry, or crowberry
<i>Epilobium montanum</i> .....	broad smooth-leaved willow herb
" <i>parviflorum</i> .....	small-flowered hairy willow herb
" <i>palustre</i> .....	narrow-leaved marsh willow herb
" <i>angustifolium</i> .....	rose bay willow herb
" <i>hirsutum</i> .....	great hairy willow herb
" <i>alsinifolium</i> .....	chickweed-leaved willow herb
<i>Equisetum</i> .....	horsetail
<i>Erica cinerea</i> .....	fine-leaved heath
" <i>tetralix</i> .....	cross-leaved heath
<i>Erigeron acre</i> .....	blue fleabane
<i>Eriophorum vaginatum</i> .....	cotton grass
<i>Erithræa centaurium</i> .....	common centaury
<i>Erodium circutarium</i> .....	hemlock storksbill
<i>Eryngium maritimum</i> .....	sea eryngo, or sea holly
<i>Erysimum cheiranthoides</i> .....	treacle mustard
<i>Eunonymus europæus</i> .....	spindle
<i>Eupatorium cannabinum</i> .....	hemp agrimony

Euphorbia esula.....	leafy branched spurge
"    cyparissias .....	cypress spurge
"    paralias.....	sea spurge
Euphrasia officinalis .....	eyebright
Fagus sylvatica .....	beech
Festuca ovina.....	sheep's fescue grass
"    duriuscula.....	hard fescue grass
Ficaria ranunculoides .....	pilewort
Fragaria vesca .....	strawberry
Fraxinus excelsior .....	ash
Fuschia coccinea .....	scarlet fuschia
Galeopsis.....	hemp nettle
Galium Mollugo.....	hedge bedstraw
"    uliginosum.....	rough marsh bedstraw
"    palustre .....	white water bedstraw
"    sexatile .....	smooth heath bedstraw
"    verum .....	yellow bedstraw
Genista anglica.....	needle greenwood
"    tinctoria.....	dyer's greenwood
Gentiana campestris .....	gentian
Geum urbanum .....	herb Bennet, or wood avens
Glechoma hederacea .....	ground ivy
Glyceria aquatica .....	reed grass
Gnaphalium .....	cutweed
Gymnadenia conopsea .....	fragrant orchis
Habenaria bifolia .....	butterfly orchis
Hedera helix .....	ivy
Helianthemum vulgare .....	sun cistus, or rock rose
Heracleum sphondylium .....	cow parsley
Hesperis matronalis .....	dame's violet
Hieracium pilosella .....	mouse-ear hawkweed
"    umbellatum .....	narrow-leaved hawkweed
Hippocrepis comosa .....	tufted horse-shoe vetch
Hippophae rhamnoides.....	sea buckthorn, or sallow thorn
Holcus mollis .....	creeping soft grass
Humulus lupulus .....	hop
Hyoscamus niger .....	henbane
Hypericum perforatum .....	perforated St. John's wort
Ilex aquifolium .....	holly
Inula dysenterica .....	fleabane
"    conyza .....	ploughman's spikenard
Iris pseud-acorus .....	yellow water iris, or flag
"    foetidissima .....	stinking iris
"    germanica .....	fleur de luce, or purple flag
Jasione montana.....	annual sheep's scabious
Jasminum officinale .....	white jasmine
Juniperus sabina .....	savine
"    communis .....	juniper
Lactuca virosa .....	strong scented wild lettuce
"    sativa.....	garden lettuce
"    muralis .....	ivy-leaved wall lettuce
Lamium purpureum .....	red dead nettle

<i>Lamium vulgatum</i> .....	common dead nettle
" <i>album</i> .....	white dead nettle
<i>Lappa tomentosa</i> .....	downy-headed burdock
" <i>glabra</i> .....	smooth-headed burdock
<i>Larix europæa</i> .....	larch
<i>Lathyrus latifolius</i> .....	everlasting pea
" <i>sylvestris</i> .....	narrow-leaved everlasting pea
" <i>pratensis</i> .....	meadow vetchling
" <i>palustris</i> .....	blue marsh vetchling
<i>Lemna minor</i> .....	duckweed
<i>Ligustrum vulgare</i> .....	privet
<i>Linaria vulgaris</i> .....	yellow toadflax
" <i>spuria</i> .....	round-leaved toadflax, or fluellen
<i>Linum catharticum</i> .....	purging flax
<i>Lithospermum arvense</i> .....	corn gromwell
<i>Lonicera periclymenum</i> .....	honeysuckle, or woodbine
<i>Lotus corniculatus</i> .....	common birdsfoot trefoil
" <i>major</i> .....	greater birdsfoot trefoil
<i>Luzula pilosa</i> .....	broad-leaved wood rush
<i>Lychnis sylvestris</i> .....	red campion
" <i>dioica</i> .....	white campion
" <i>flos-cuculi</i> .....	ragged robin
<i>Lycium barbarum</i> .....	box thorn
<i>Lycopsis arvensis</i> .....	bugloss
<i>Lysimachia vulgaris</i> .....	great loosestrife
<i>Lythrum salicaria</i> .....	spiked purple loosestrife
" <i>hyssopifolium</i> .....	hyssop-leaved purple loosestrife
<i>Malva moschata</i> .....	musk mallow
" <i>sylvestris</i> .....	common mallow
<i>Marubium vulgare</i> .....	white horeround
<i>Matricaria chamomila</i> .....	wild chamomile
<i>Medicago lupulina</i> .....	black mendick, or nonsuch
" <i>sativa</i> .....	lucerne
<i>Melampyrum pratense</i> .....	yellow cow wheat
<i>Melilotus officinalis</i> .....	yellow melilot
<i>Melissa clinopodium</i> .....	wild basil
" <i>acinos</i> .....	basil thyme
<i>Mentha arvensis</i> .....	corn mint
" <i>aquatica</i> .....	hairy mint
<i>Menyanthes trifoliata</i> .....	buckbean
<i>Milium effusum</i> .....	millet grass
<i>Molinia cærulea</i> .....	lavender grass
<i>Myosotis arvensis</i> .....	field forget-me-not, or scorpion grass
<i>Myrica gale</i> .....	sweet gale
<i>Nardus stricta</i> .....	small mat grass
<i>Nepeta cataria</i> .....	cat mint
<i>Nerum oleander</i> .....	oleander
<i>Nuppar lutea</i> .....	yellow water lily
<i>Odontites rubra</i> .....	wood chickweed
<i>Onanthe crocata</i> .....	hemlock waterdrop
<i>Onobrychis sativa</i> .....	saintfoin
<i>Ononis procurrens</i> .....	trailing rest harrow

<i>Ononis spinosa</i>	spinous rest harrow
" <i>repens</i>	sea-side rest harrow
<i>Origanum vulgare</i>	wild marjorum
<i>Ornithopus perpusillus</i>	birdsfoot
<i>Orobus sylvaticus</i>	wood bitter vetch
" <i>tuberosus</i>	tuberous orobus
" <i>niger</i>	black bitter vetch
<i>Oxycoccus palustris</i>	cranberry
<i>Papaver rhæas</i>	common red poppy
" <i>orientale</i>	large garden poppy
<i>Pastinaca sativa</i>	parsnip
" <i>sylvestris</i>	wild parsnip
" <i>edulis</i>	garden parsnip
<i>Petasites vulgaris</i>	butter bur
<i>Peucedanum palustre</i>	milk parsley, or hog's fennel, or marsh fennel
<i>Phleum pratense</i>	cat's-tail, or timothy grass
<i>Phragmites communis</i>	common reed
<i>Picris hieracioides</i>	hawkweed picris
<i>Pimpinella magna</i>	great burnet saxifrage
" <i>saxifraga</i>	common burnet saxifrage
<i>Pinus sylvestris</i>	Scotch fir
" <i>strobus</i>	Weymouth fir
" <i>balsamea</i>	Canadian balsam fir
" <i>alba</i>	white fir
<i>Plantago major</i>	greater plantain
" <i>lanceolata</i>	ribwort, or narrow-leaved plantain
" <i>maritima</i>	sea plantain
<i>Platanus orientalis</i>	oriental plane tree
" <i>occidentalis</i>	American plane tree
<i>Poa annua</i>	annual meadow grass
" <i>aquatica</i>	reed meadow grass
<i>Polygala vulgaris</i>	milkwort
<i>Polygonum aviculare</i>	knotgrass
" <i>hydropiper</i>	water pepper, or biting persicaria
" <i>persicaria</i>	spotted persicaria
<i>Polypodium filix-mas</i>	male fern
<i>Populus alba</i>	white poplar
" <i>tremula</i>	aspen
" <i>nigra</i>	black poplar
" <i>fastigata</i>	Lombardy poplar
<i>Potamogeton pectinatus</i>	fennel-leaved pondweed
<i>Potentilla tormentilla</i>	tormentil
" <i>reptans</i>	creeping cinquefoil
" <i>anserina</i>	silver weed
<i>Poteriam sanguisorba</i>	salad burnet
<i>Primula vulgaris</i>	primrose
" <i>veris</i>	cowslip
<i>Prunus spinosa</i>	sloe, or blackthorn
" <i>domestica</i>	plum
<i>Pteris aquilina</i>	brake fern
<i>Pyrethrum inodorum</i>	corn feverfew

<i>Pyrethrum maritimum</i> .....	seaside feverfew
<i>Pyrus communis</i> .....	pear
" <i>malus</i> .....	apple
" <i>aucuparia</i> .....	mountain ash
<i>Quercus robur</i> .....	oak
" <i>ilex</i> .....	evergreen oak
<i>Ranunculus acris</i> .....	upright crowfoot
" <i>bulbosus</i> .....	bulbous crowfoot, or buttercup
<i>Raphanus sativus</i> .....	radish
<i>Reseda luteola</i> .....	weld
" <i>lutea</i> .....	wild mignonette
" <i>odorata</i> .....	garden mignonette
<i>Rhamnus catharticus</i> .....	common buckthorn
" <i>frangula</i> .....	berry-bearing alder
<i>Rhinanthus crista galli</i> .....	yellow rattle
<i>Rhynchospora alba</i> .....	white beak rush
<i>Ribes uva-crispa</i> .....	gooseberry
" <i>rubrum</i> .....	red currant
" <i>nigrum</i> .....	black currant
<i>Rosa spinosissima</i> .....	burnet-leaved rose
" <i>canina</i> .....	wild rose, or dog rose
" <i>centifolia</i> .....	cabbage rose
<i>Rubia peregrina</i> .....	wild madder
<i>Rubus idæus</i> .....	wild raspberry
" <i>fruticosus</i> .....	bramble, or blackberry
" <i>cæsius</i> .....	dewberry
<i>Rumex obtusifolius</i> .....	broad-leaved dock
" <i>acutus</i> .....	sharp dock
" <i>crispus</i> ..	curled dock
" <i>hydrolapathum</i> .....	great water dock
" <i>acetosa</i> .....	common sorrel
" <i>acetosella</i> .....	sheep's sorrel
<i>Salicornia herbacea</i> .....	jointed glasswort
" <i>radicans</i> .....	creeping glasswort
<i>Salix fragilis</i> .....	crack willow
" <i>vitellina</i> .....	yellow willow, or golden osier
" <i>triandra</i> .....	long-leaved triandrous willow
" <i>viminialis</i> .....	common osier, or withy
" <i>cinerea</i> .....	grey willow
" <i>aquatica</i> .....	water willow
" <i>caprea</i> .....	great round-leaved willow
" <i>repens</i> .....	creeping willow
<i>Salsola kali</i> .....	prickly saltwort
<i>Salvia pratensis</i> .....	sage, or meadow clary
<i>Sambucus nigra</i> .....	elder
<i>Saxifraga granulata</i> .....	white meadow saxifrage
<i>Scabiosa arvensis</i> .....	field scabious
" <i>succisa</i> .....	devil's bit scabious
" <i>columbaria</i> .....	small scabious
<i>Schoenus nigricans</i> .....	black bog rush
<i>Scirpus lacustris</i> .....	bullrush, or clubrush
<i>Scleranthus perennis</i> .....	perennial knawel

<i>Scleranthus annuus</i>	.....annual knawel
<i>Scolopendrium vulgare</i>	.....common hartstongue
<i>Scrophularia aquatica</i>	.....water figwort
" <i>nodosa</i>	.....knotted figwort
<i>Scutellaria galericulata</i>	.....common skullcap
<i>Sedum telephium</i>	.....orpine, or live-long
" <i>acre</i>	.....biting stonecrop, or wall pepper
" <i>reflexum</i>	.....crooked yellow stonecrop
" <i>album</i>	.....white stonecrop
<i>Senecio Jacobæa</i>	.....common ragwort
" <i>aquaticus</i>	.....marsh ragwort
" <i>vulgaris</i>	.....common groundsel
" <i>sylvaticus</i>	.....mountain groundsel
<i>Sesleria cærulea</i>	.....blue moor grass
<i>Silene acaulis</i>	.....moss campion
" <i>inflata</i>	.....bladder campion
" <i>maritima</i>	.....sea campion
" <i>otites</i>	.....Spanish catchfly
" <i>nutans</i>	.....Nottingham catchfly
<i>Sinapis nigra</i>	.....black mustard
" <i>arvensis</i>	.....charlock
" <i>alba</i>	.....white mustard
<i>Sisymbrium Sophia</i>	.....flixweed
<i>Sium latifolium</i>	.....broad-leaved water parsnip
<i>Solanum dulcamara</i>	.....woody nightshade
" <i>nigrum</i>	.....black nightshade
" <i>tuberosum</i>	.....potato
<i>Solidago virgaurea</i>	.....golden rod
<i>Sonchus arvensis</i>	.....corn sow thistle
" <i>oleraceus</i>	.....common sow thistle
<i>Sparganium</i>	.....bur reed
<i>Spinacia</i>	.....spinach
<i>Spiræa ulmaria</i>	.....meadow sweet
<i>Stachys betonica</i>	.....betony
" <i>sylvatica</i>	.....hedge woundwort
" <i>arvensis</i>	.....corn woundwort
<i>Statice armeria</i>	.....sea pink, or thrift
" <i>limonium</i>	.....spreading spiked sea thrift, or sea lavender
<i>Stellaria uliginosa</i>	.....bog stitchwort
" <i>graminea</i>	.....lesser stitchwort
" <i>media</i>	.....common chickweed
" <i>holostea</i>	.....greater stitchwort
<i>Stratiotes aloïdes</i>	.....water aloe, or water soldier
<i>Symphoricarpos racemosus</i>	.....snowberry
<i>Symphytum officinale</i>	.....common comfrey
<i>Syringa vulgaris</i>	.....lilac
<i>Tamus communis</i>	.....black bryony
<i>Tanaceum vulgare</i>	.....tansy
<i>Taraxacum dens leonis</i>	.....dandelion
<i>Teucrium scorodonia</i>	.....wild germander, or wood sage
<i>Thalictrum minus</i>	.....lesser meadow rue
" <i>flavum</i>	.....common meadow rue



Thymus serpyllum.....	wild thyme
Tilia intermedia .....	lime tree
Trifolium repens.....	Dutch clover, white clover, or shamrock
"    procumbens .....	hop trefoil
Tripolium vulgare .....	sea starwort
Triticum repens .....	couch grass
"    juncum .....	rushy sea wheat grass
Tropæolum .....	garden nasturtium
Tussilago farfara.....	coltsfoot
Typha latifolia ..	reed mace
Ulex europæus .....	common furze
"    nanus .....	dwarf furze
Ulmus campestris .....	elm
"    montana .....	wych elm
Urtica dioica .....	nettle, or stinging nettle
Vaccinium myrtillus .....	bilberry
"    vitis idæa.....	whortleberry
Valerian officinalis.....	official valerian
Verbascum lychnitis .....	white mullein
"    pulverulentum .....	yellow hoary mullein
"    nigrum .....	dark mullein
"    blattaria .....	moth mullein
Veronica chamædrys.....	germander speedwell
Viburnum tinus .....	laurestinus
"    lantana .....	mealy guelder rose, or wayfaring tree
"    opulus .....	guelder rose
Vicia cracca .....	tufted vetch
"    sylvatica.....	wood vetch
"    lutea .....	yellow vetch
"    sativa .....	common vetch
"    sepium .....	bush vetch
Viola odorata .....	sweet violet
"    canina .....	dog violet
"    tricolor .....	wild heartsease
Vitis vinifera .....	vine

## APPENDIX II.

# A List of British Lepidoptera, WITH THE TIMES OF THEIR APPEARANCE.

ABBREVIATIONS.—The Roman numerals are used to indicate the Months, thus:—  
 I January; II February; III March; IV April; V May; VI June; VII July; VIII August;  
 IX September; X October; XI November; XII December. The abbreviations used for the  
 Nomenclators' names are as follow:—*B.* Boisduval, *Ba.* Barrett, *Be.* Bedell, *Ben.* Bentley,  
*Bjer.* Bjerkander, *Bk.* Borkhausen, *Bon.* Bouché, *Br.* Bruand, *C.* Curtis, *Clk.* Clerck, *Craw.*  
*Crewe.* D. Duponchel, *Db.* Doubleday, *Desv.* Desvignes, *Dg.* Douglas, *Don.* Donovan, *E.*  
*Esper.* Ed. Edleston, *Evers.* Eversmann, *F.* Fabricius, *Fisch.* Dr. F. Fischer, *Fors.* Forster,  
*F.R.* Fischer E. von Rolerstamm, *Frr.* Freyer, *Fro.* Frolich, *Fu.* Fuessly, *G.* Guenée, *Gm.*  
*Germar.* Go. Goetze, *Gregs.* Gregson, *H.* Hubner, *Hchw.* Hochenwarth, *Hey.* Heyden, *Hf.*  
*Hufnagel.* Hml. Hummel, *H.S.* Herrich Schaffer, *Htch.* Hatchet, *Hw.* Hawarath, *Ill.* Illiger,  
*K.* Kirby, *Kn.* Knoch, *Kol.* Kollar, *Kngs.* Knaggs, *L.* Linné, *Lch.* Leach, *Ld.* Lederer,  
*Lef.* Lefebvre, *Lnig.* Lienig, *Lo.* Logan, *Ls.* Laspeyres, *Lt.* Latreille, *M.* Mann, *Mc.*  
*McLachlin.* N. Newman, *Ni.* Nicelli, *O.* Ochsenheimer, *Ol.* Olivier, *P.* Panzer, *Pal.* Palmer,  
*Pey.* Peyerimhoff, *Rbr.* Rambur, *Rt.* Rottemburg, *Rtz.* Ratzburg, *S.* Scopoli, *S.V.*  
*Systematisches Verzeichniss der Wiener Gegend.* *Sax.* Saxesen, *Sc.* Scott, *Schlg.* Schlager,  
*Si.* Sircom, *Sk.* Schrank, *So.* Sodoffsky, *Ss.* Stephens, *Stn.* Stainton, *Tau.* Tauscher, *Tengs.*  
*Tengstrom.* *Thnb.* Thunberg, *Ti.* Tischer, *Tr.* Treitsche, *V.* Vieweg, *Va.* Vaughan, *Vill.* de  
*Villers.* *Wd.* Wood, *Wk.* Wocke, *Wlk.* Wilkinson, *Wsd.* Westwood, *Z.* Zeller, *Zk.* Zincken,  
*Ztt.* Zetterstedt.

### DIURNI.

PAPILIONIDÆ				
PAPILIO, L.	OVA	LARVÆ	PUPÆ	IMAGOS
MACHAON, L. ....	VI	VI to VIII	VIII	V to VII
<i>PIERIDÆ</i>				
LEUCOPHASIA, Ss.				
SINAPIS, L. ....	V VI and VIII	VI and IX X	VII & IX to IV	IV V and VIII
PIERIS, Sk.				
CRATÆGI, L. ....	VI	VIII to V	VI	V VI VII
BRASSICÆ, L. ....	V and VIII	VI and IX	VII & IX to IV	IV to VIII
RAPÆ, L. ....	V and VIII	VI and IX	VII & IX to IV	IV to VIII
NAPI, L. ....	V and VIII	VI and IX	VII & IX to IV	IV to VIII
DAPLIDICE, L. ....	V and VIII	VI and IX	VII & IX to IV	V and VIII
ANTHOCHARIS, B.				
CARDAMINES, L. ....	V	VII	VII to V	IV V VI
<i>RHODOCERIDÆ</i>				
GONOPTERYX, L.				
RHAMNI, L. ....	IV	VI VII	VII	VII to V
COLIAS, F.				
EDUSA, F. ....	V to IX	VI VII	VIII	VI to VIII to IV
HYALE, L. ....	V	VII	VIII	VII VIII to IV

VANESSIDÆ

ARGYNNIS, <i>F.</i>	OVA	LARVÆ	PUPÆ	IMAGOS
PAPHIA, <i>L.</i> . . . . .	VII	VIII to VI	VI	VI VII
AGLAIA, <i>L.</i> . . . . .	VIII	VIII to VI	VI	VI VII
NIÖBE, <i>L.</i> . . . . .	VIII	VIII to V	VI	VI VII
ADIPPE, <i>S. V.</i> . . . . .	VIII	VIII to VI	VI	VI VII
LATONA, <i>L.</i> . . . . .	VIII IX	VIII to V	VI	VIII IX
EUPHROSYNÉ, <i>L.</i> . . . . .	VI	VII to V	IV	V VI and s. VIII
SELENE, <i>S. V.</i> . . . . .	VI	VII to V	V	V VI and s. VIII
MELITÆA, <i>F.</i>				
ARTEMIS, <i>S. V.</i> . . . . .	VI	VIII to IV	IV	V VI
CINXIA, <i>L.</i> . . . . .	VI	VII to V	V	V VI
ATHALIA, <i>E.</i> . . . . .	VII	VIII to V	VI	VI VII
VANESSA, <i>F.</i>				
C-ALBUM, <i>L.</i> . . . . .	v and VII	v and VIII	VI and IX	VI VII & IX to IV
URTICÆ, <i>L.</i> . . . . .	IV v and VII	v VI and VIII	VI and VIII	VI VII & IX to IV
POLYCHLOROS, <i>L.</i> . . . . .	v s. X	s. X to v VI	VII	VII to v
ANTIOPA, <i>L.</i> . . . . .	v	VI VII	VII	VII to v
IO, <i>L.</i> . . . . .	IV v	VI VII	VII	VII VIII to v
ATALANTA, <i>L.</i> . . . . .	v	VI VII	VII	VII VIII to VI
CARDUI, <i>L.</i> . . . . .	VI	VI VII to IX	VII to IX	VII to v
NYMPHALIDÆ				
LIMENTIS, <i>F.</i>				
SIBYLLA, <i>L.</i> . . . . .	VII	VIII to v	VI	VI VII
APATURA, <i>F.</i>				
IRIS, <i>L.</i> . . . . .	VII	VIII to v	VI	VII
SATYRIDÆ				
ARGE, <i>B.</i>				
GALATEA, <i>L.</i> . . . . .	VII	VIII to v	VI	VII
EREBIA, <i>B.</i>				
EPIPHRON, <i>Kn.</i> . . . . .		VIII to v		VI VII
MEDEA, <i>S. V.</i> . . . . .	VIII	IX to v	VI	VII VIII
SATYRUS, <i>F.</i>				
ÆGERIA, <i>L.</i> . . . . .	v and VIII	VI VII & IX to III	IV and VII	IV and VII VIII
MEGÆRA, <i>L.</i> . . . . .	v and VIII	VI VII & IX to IV	IV and VII	v and VIII
SEMELE, <i>L.</i> . . . . .	VII	VIII to VI	VI	VII
IANIRA, <i>L.</i> . . . . .	VII	VIII to v	VI	VI VII
TITHONUS, <i>O.</i> . . . . .	VII	VIII to VI	VI	VII
HYPÉRANTHUS, <i>L.</i> . . . . .	VII	VIII to VI	VI	VI VII
CENONYMPHA, <i>H. S.</i>				
DAVUS, <i>L.</i> . . . . .	VI	VIII to v	VI	VI VII
PAMPHILUS, <i>L.</i> . . . . .	v	v VI and VIII	IV and VII	v to X
LYCÆNIDÆ				
THECLA, <i>F.</i>				
RUBI, <i>L.</i> . . . . .	v	VII and X	VIII to IV	v VI and s. VIII
QUERCUS, <i>L.</i> . . . . .	VII to IV	v VI	VI	VII
W-ALBUM, <i>Kn.</i> . . . . .	VII to IV	v VI	VI	VI VII
PRUNI, <i>L.</i> . . . . .	VII to III	v VI	VI	VI VII
BETULÆ, <i>L.</i> . . . . .	X	v VI	VII	VII VIII
POLYOMMATUS, <i>Lt.</i>				
HYPOTHOE, <i>L.</i> . . . . .	VIII	VIII to VI [to IV VII		VII VIII
PHLÆAS, <i>L.</i> . . . . .	VI and X	v VI & VIII & X IV and X		IV & VI VIII & X
LYCÆNA, <i>F.</i>				
BÆTICA, <i>L.</i> . . . . .		VII to IX		VIII IX
ÆGON, <i>S. V.</i> . . . . .	VII to II	v VI	VI	VII VIII

	OVA	LARVÆ	PUPÆ	IMAGOS
ARTAXERXES, <i>F.</i> .....		v	VI	VI
AGESTIS, <i>S.V.</i> .....VIII		VII and IX to IV	IV and VII	v VI and VIII
ALEXIS, <i>S.V.</i> .....v and IX		IV and VIII	v and VIII	v VI and VIII IX
ADONIS, <i>S.V.</i> .....x		v and VII VIII	v and VIII	v VI and VIII
CORYDON, <i>S.</i> .....IX		x to VI	VII	VII VIII
ACIS, <i>S.V.</i> .....				VI VII
ALSUS, <i>S.V.</i> .....VI		VII	IV	v VI
ARGIOLUS, <i>L.</i> .....		VI and IX		IV v and VIII
ARION, <i>L.</i> .....VI		VII to IV?		VI
<i>ERYCINIDÆ</i>				
NEMEOBIUS, <i>Ss.</i>				
LUCINA, <i>L.</i> .....VI		VII to IX	VIII to v	v VI
<i>HESPERIDÆ</i>				
SYRICHTHUS, <i>B.</i>				
ALVEOLUS, <i>H.</i> .....v		IV		v and s. VIII
THANAOS, <i>B.</i>				
TAGES, <i>L.</i> .....v		VII and IX to IV		v and VIII
HESPERIA, <i>B.</i>				
PANISCUS, <i>E.</i> .....VI		IX		VI
SYLVANUS, <i>E.</i> .....VII		v and VII		v VI and VIII
COMMA, <i>L.</i> .....VIII to III		VI		VII VIII
LINEA, <i>S.V.</i> .....VII		VIII to VI		VII
ACTÆON, <i>E.</i> .....		VI	VII	VII VIII

## NOCTURNI

*SPHINGIDÆ*

SMERINTHUS, <i>O.</i>				
OCELLATUS, <i>L.</i> .....	VIII		IX to v	v VI
POPULI, <i>L.</i> .....v	VIII IX			v VI
TILIÆ, <i>L.</i> .....	VIII IX			v VI
<i>ACHERONTIA, O.</i>				
ATROPOS, <i>L.</i> .....	IX X		IX to VI	VII and s. x
SPHINX, <i>O.</i>				
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PURPURARIA, <i>L.</i> .....		VIII?		v VI VII
APLASTA, <i>H.</i>				
ONONARIA, <i>Fu.</i> .....		IV and IX		v VII VIII
ASPILATES, <i>Tr.</i>				
STRIGILLARIA, <i>H.</i> .....VI		VIII to v	v	VI VII
CITRARIA, <i>H.</i> .....v and VIII		VII and x	VIII	v and VIII
GILVARIA, <i>S.V.</i> .....		IX to VI		VIII
ZERENIDÆ				
ABRAXAS, <i>Lch.</i>				
GROSSULARIATA, <i>L.</i> ....		v	VI	VI VII VIII
ULMATA, <i>F.</i> .....		IX		VI VII
LIGDIA, <i>G.</i>				
ADUSTATA, <i>S.V.</i> .....VII		v VI	IX to IV	v VI VII
LOMASPILIS, <i>H.</i>				
MARGINATA, <i>L.</i> .....		VI and IX		v and VIII
LIGIDÆ				
PACHYCNEMIA, <i>Ss.</i>				
HIPPOCASTANARIA, <i>H.</i> ..		IX to v		v
HYBERNIDÆ				
HYBERNIA, <i>Lt.</i>				
RUPICAPRARIA, <i>S.V.</i> .....II		v	VII to I	XII I II
LEUCOPHEARIA, <i>S.V.</i> ..III		v VI	VII to I	I II III
AURANTIARIA, <i>H.</i> .....XI to III		VI VII	VII to IX	X XI
PROGEMMARIA, <i>H.</i> .....		v VI	VII to I	II III
DEFOLIARIA, <i>L.</i> .....XI to III		v	VII to I	X XI XII
ANISOPTERYX, <i>Ss.</i>				
ÆSCULARIA, <i>S.V.</i> .....		v VI	x to I	II III IV
LARENTIDÆ				
CHEIMATOBIA, <i>Ss.</i>				
BRUMATA, <i>L.</i> .....XI to III		v		XI XII
BOREATA, <i>H.</i> .....XI to III		VI		X XI XII
OPORABIA, <i>Ss.</i>				
DILUTATA, <i>S.V.</i> .....XI to III		v VI		IX to XII
FILIGRAMMARIA, <i>H.S.</i> ..IX to II		II to IV		VIII IX
LARENTIA, <i>Tr.</i>				
DIDYMATA, <i>L.</i> .....		IV v		VI
MULTISTRIGARIA, <i>Hw.</i> ...IV		VI		IV
CÆSIATA, <i>S.V.</i> .....VII		IX to v		VI
RUFICINCTATA, <i>G.</i> .....		v		VII
SALICATA, <i>H.</i> .....				VI VII
OLIVATA, <i>S.V.</i> .....VIII		x to IV		VI VII VIII
PECTINITARIA, <i>Fu.</i> ....		VIII IX		v VI
EMMELESIA, <i>Ss.</i>				
AFFINITATA, <i>Ss.</i> .....		VIII		VI
ALCHEMILLATA, <i>L.</i> ....		VIII IX		VI
ALBULATA, <i>S.V.</i> .....VI		VIII	x to IV	v, VI
DECOLORATA, <i>H.</i> .....		VII		VI

	OVA	LARVÆ	PUPÆ	IMAGOS
TÆNIATA, <i>Ss.</i> .....		VIII?		VI VII
UNIFASCIATA, <i>H.</i> ..... VIII		IX X		VI VII
BIFASCIATA ? .....				VII VIII
ERICETATA, <i>C.</i> .....				VI VII
BLANDIATA, <i>S. V.</i> .....		IX		V VI VII VIII
<b>EUPITHECIA, C.</b>				
VENOSATA, <i>F.</i> .....		VII		V VI
CONSIGNATA, <i>Bk.</i> .....	VI		IX to IV	V VI
LINARIATA, <i>S. V.</i> .....	VIII		IX to IV	V VI
PULCHELLATA, <i>Ss.</i> .....	VII		IX to IV	V VI
CENTAUREATA, <i>S. V.</i> ..	VIII IX			V to VIII
SUCCENTURIATA, <i>L.</i> .....	VIII IX			VII
VALERIANATA, <i>H.</i> .....	VII			VI
SUBFULVATA, <i>Hw.</i> .....	IX X			VI to VIII
SUBUMBRATA, <i>S. V.</i> .....	VIII IX			VI
PERNOTATA, <i>G.</i> .....				
PLUMBEOLATA, <i>Hw.</i> .....	VII VIII			V VI
ISOGRAMMATA, <i>Tr.</i> .....	VII VIII			VI
PYGMÆATA, <i>H.</i> .....	VI VII			V VI
HELVETICATA, <i>B.</i> .....	IX			IV V
ARCEUTHATA, <i>Frr.</i> .....	X			VII
SATYRATA, <i>H.</i> .....	IX			V VI
EGENARIA, <i>H. S.</i> .....				VI
CASTIGATA, <i>H.</i> .....	VIII to X			V VI
TRISIGNATA, <i>H. S.</i> .....	IX			VI VII
LARICIATA, <i>Frr.</i> .....	VII			V VI
VIRGAUREATA, <i>Db.</i> .....	VIII IX			V VI
ALBIPUNCTATA, <i>Hw.</i> ..	IX			V VI
PUSILLATA, <i>S. V.</i> .....	VI VII			V
IRRIGUATA, <i>H.</i> .....	VI			IV V VI
PIMPINELLATA, <i>H.</i> .....	VI and IX			IV V and VIII
FRAXINATA, <i>Crw.</i> .....	VIII IX		X to IV	V to VII
EXTENSARIA, <i>Frr.</i> .....				VI
INNOTATA, <i>H.</i> .....	VIII IX		X	VI VII
INDIGATA, <i>H.</i> .....	VII			V VI and VIII
CONTRACTATA, <i>G.</i> .....	IX			VII VIII
NANATA, <i>H.</i> .....	VIII IX to V			V VI and s. VIII
SUBNOTATA, <i>H.</i> .....	VIII IX			VI VII
CAMPANULATA, <i>H. S.</i> ..	VIII IX			VI VII
VULGATA, <i>Hw.</i> .....	VII and IX			IV V and VII
EXPALLIDATA, <i>G.</i> .....	IX			VII VIII
ABSYNTHIATA, <i>L.</i> .....	IX X			VI VII
MINUTATA, <i>G.</i> .....	VIII IX to V			VI
ASSIMILATA, <i>Db.</i> .....	— and IX X			V and VIII
TENUIATA, <i>H.</i> .....	III IV			VI VII
SUBCILIATA, <i>G.</i> .....	VIII to IV			VII
DODONEATA, <i>G.</i> .....	VI VII			IV V VI
ABBREVIATA, <i>Ss.</i> .....	VI VII			III IV
EXIGUATA, <i>H.</i> .....	IX X			V VI
SOBRINATA, <i>H.</i> .....	V VI			VII
TOGATA, <i>H.</i> .....	VIII			VI
PUMILATA, <i>H.</i> .....	VI and —			IV V and VII VIII
CORONATA, <i>H.</i> .....	VII VIII			IV V

	OVA	LARVÆ	PUPÆ	IMAGOS
RECTANGULATA, <i>L.</i> ....		IV V	V VI	VI
DEBILIATA, <i>H.</i> .....		IV V		VI
COLLIX, <i>G.</i>				
SPARSATA, <i>H.</i> .....		VIII IX		VI
LOBOPHORA, <i>C.</i>				
SEXALATA, <i>H.</i> .....		IX		V VI
HEXAPTERATA, <i>S.V.</i> ..		VIII		IV V
VIRETATA, <i>H.</i> .....		VII VIII		V VI
LOBULATA, <i>H.</i> .....	IV	VIII		III IV
POLYCOMMATA, <i>S.V.</i> ..IV V		VI		IV
THERA, <i>Ss.</i>				
JUNIPERATA, <i>L.</i> .....		VIII IX		X
SIMULATA, <i>H.</i> .....		VI and X		IV V and VIII
VARIATA, <i>S.V.</i> .....		VII and III to V		VI and VIII
FIRMATA, <i>H.</i> .....		IV V		VII and IX
YPSIPETES, <i>Ss.</i>				
RUBERATA, <i>Frr.</i> .....		IX	IV	V VI
IMPLUVIATA, <i>S.V.</i> .....		VIII IX	III IV	V
ELUTATA, <i>H.</i> .....	VII	X to V	VI	VI VII
MELANTHIA, <i>D.</i>				
RUBIGINATA, <i>S.V.</i> .....VII to IV		V VI		VII
OCELLATA, <i>L.</i> .....VI		VII VIII	VIII to V	V VI
ALBICILLATA, <i>L.</i> .....	V	VIII IX	VIII to V	V VI VII
MELANIPPE, <i>D.</i>				
HASTATA, <i>L.</i> .....		VIII	IX to V	VI VII
TRISTATA, <i>L.</i> .....	Taken among junipers, in Scotland.			VI
LUCTUATA, <i>H.</i> .....		VIII IX	XI to V	VI VII
	Probably confounded with <i>Tristata</i> .			
PROCELLATA, <i>S.V.</i> ....VII		VIII IX	X to V	V VI VII
UNANGULATA, <i>Hw.</i> ....		VII VIII		VI VII
RIVATA, <i>H.</i> .....		VI and IX		VII VIII
SOCIATA, <i>Bk.</i> .....		VI and IX		V and VII
MONTANATA, <i>S.V.</i> ....VI VII VIII		X to III	IV	V VII VIII
GALIATA, <i>S.V.</i> .....		VII and IX		V VI and IX
FLUCTUATA, <i>L.</i> .....		VI and IX		IV V and VIII
ANTICLEA, <i>Ss.</i>				
SINUATA, <i>S.V.</i> .....		VIII		VI
RUBIDATA, <i>S.V.</i> ....VI VII		VIII	X to V	VI
BADIATA, <i>S.V.</i> .....	III	VI	VII to III	III IV
DERIVATA, <i>S.V.</i> .....III IV		VI	VII to III	III IV V
BERBERATA, <i>S.V.</i> .....		VI and IX		V and VIII
COREMIA, <i>G.</i>				
MUNITATA, <i>H.</i> .....	VI	X to III	IV	VI VII
PROPUGNATA, <i>S.V.</i> ....		IX		V VI
FERRUGATA, <i>L.</i> .....	V	VII and IX		V VI and VIII
UNIDENTARIA, <i>Hw.</i> ....		VIII		V VI and VIII
QUADRIFASCIARIA, <i>G.</i> ..		IV V and VIII		VI VII
CAMPTOGRAMMA, <i>Ss.</i>				
BILINEATA, <i>L.</i> .....		IV		VI VII
FLUVIATA, <i>H.</i> .....VII		VIII	IX	VII and IX to V
PHIBALAPTERYX, <i>Ss.</i>				
TERSATA, <i>S.V.</i> .....		IX		VI VII
LAPIDATA, <i>H.</i> .....		V VI		—? and VIII
LIGNATA, <i>H.</i> .....	VII and IX	VIII & IX to IV		V VI VII VIII

	OVA	LARVÆ	PUPÆ	IMAGOS
POLYGRAMMATA, <i>Bk.</i> ..				III and VIII IX
VITALBATA, <i>S. V.</i> .....VII VIII		VI and X		V VI and VIII
SCOTOSIA, <i>Ss.</i>				
DUBITATA, <i>L.</i> ..... ..IV		VI	VII	VIII to III
VETULATA, <i>S. V.</i> .....VII to III?		VI		VI VII
RHAMNATA, <i>S. V.</i> .....		V VI	VI	VI VII
CERTATA, <i>H.</i> .....		VI VII		V VI
UNDULATA, <i>L.</i> .....		IX X		VI VII
CIDARIA, <i>Tr.</i>				
PSITTACATA, <i>S. V.</i> ....		VII VIII	IX	IX X XI to III
MIATA, <i>L.</i> .....		VIII	IX	IX X to V
PICATA, <i>H.</i> .....		VIII	IX to V	VI VII
CORYLATA, <i>Thnb.</i> .....		VIII IX		V VI
SAGITTATA, <i>F.</i> .....		VIII	X to V	VII
RUSSATA, <i>S. V.</i> .....		VII and X to IV	VII and V	V VI and VIII
IMMANATA, <i>Hw.</i> .....		V to VII		VII VIII IX
SUFFUMATA, <i>S. V.</i> .....		IX X	III	IV V
SILACEATA, <i>S. V.</i> .....		VII and IX	VII and X to IV	V VI and VIII
RETICULATA, <i>S. V.</i> ....				VII
PRUNATA, <i>L.</i> .....		V VI	VI	V VI VII
TESTATA, <i>L.</i> .....		V	VI	VII and IX
POPULATA, <i>S. V.</i> .....		V		VII
FULVATA, <i>Fors.</i> .....		V		VI VII
PYRALIATA, <i>S. V.</i> .....		V		VII
DOTATA, <i>L.</i> .....				VI VII
PELURGA, <i>H.</i>				
COMITATA, <i>L.</i> .....		VIII IX	X to VI	VII
EUBOLIDÆ				
EUBOLIA, <i>D.</i>				
CERVINARIA, <i>S. V.</i> .....XI to IV		VI VII	VIII	IX X
MENSURARIA, <i>S. V.</i> ....		VI		VI VII VIII
MÆNIATA, <i>S.</i> .....		V		VIII
PALUMBARIA, <i>S. V.</i> ....		V		VI
BIPUNCTARIA, <i>S. V.</i> ....		X to V		VII
LINEOLATA, <i>S. V.</i> .....		S. IV V VI & IX	X to IV	V VI VII VIII
CARSIA, <i>H.</i>				
IMBUTATA, <i>H.</i> .....		VI		VII
ANAITIS, <i>B.</i>				
PLAGIATA, <i>L.</i> .....		VII and X to IV		V VI and VIII IX
LITHOSTEGE, <i>H.</i>				
GRISEATA, <i>S. V.</i> .....VI		VII		VI VII
CHESIAS, <i>Tr.</i>				
SPARTIATA, <i>F.</i> .....		V VI		IX X
OBLIQUARIA, <i>S. V.</i> .....		VII VIII IX <sup>1</sup>	VIII to IV	V VI VII
SIONIDÆ				
TANAGRA, <i>D.</i>				
CHÆROPHYLLATA, <i>L.</i> ..VII to II		V		VI VII

## DREPANULÆ

## DREPANLULIDÆ

PLATYPTERYX, *Ls.*

LACERTULA, <i>H.</i> .....	VI and VIII IX		IV V VII and S. IX
SICULA, <i>S. V.</i> .....	V VI		V VI
FALCULA, <i>S. V.</i> .....	VII and X	†	V and VIII

	OVA	LARVÆ	PUPÆ	IMAGOS
HAMULA, <i>S. V.</i> .....		VI and IX		v VI and s. VIII
UNGUICULA, <i>H.</i> .....VI		VII and IX X		v VI and s. VIII
CILIX, <i>Lch.</i>				
SPINULA, <i>S. V.</i> .....		v VI and VII	VI and VII	v VI and VIII

**PSEUDO-BOMBYCES**

*DICRANURIDÆ*

DICRANURA, *Lt.*

BICUSPIS, <i>Bk.</i> .....	VIII IX X	x to IV	IV V
FURCULA, <i>L.</i> ... ..VI	VI VIII IX	IX to V	v VI VII
BIFIDA, <i>H.</i> .....VI	VII VIII IX	IX to IV	v VI VII
VINULA, <i>L.</i> .....VI	VII VIII	VIII to V	v VI
STAUROPIUS, <i>Gm.</i>			
FAGI, <i>L.</i> .....	VIII IX	x to V	VI VII
PETASIA, <i>Ss.</i>			
CASSINEA, <i>F.</i> .....XI to IV	V VI	VII to X	X XI XII
NUBECULOSA, <i>E.</i> .....IV	V VI		III IV

*PYGÆRIDÆ*

PYGÆRA, *O.*

BUCEPHALA, <i>L.</i> .....	VII VIII IX	x to V	v VI VII
CLOSTERA, <i>Ss.</i>			
CURTULA, <i>L.</i> .....IV and VII	v and VIII IX	VI & IX to III	IV v and VII
ANACHOREATA, <i>S. V.</i> ....	VII		VIII
RECLUSA, <i>S. V.</i> .....	VII and IX		v and VIII

*NOTODONTIDÆ*

GLUPHISIA, *B.*

CRENATA, <i>E.</i> .....	VIII		v VI
PTILOPHORA, <i>Ss.</i>			
PLUMIGERA, <i>S. V.</i> .....XI to IV	v VI		x XI
PTILODONTIS, <i>Ss.</i>			
PALPINA, <i>L.</i> .....	VII and IX		v VI and VII
NOTODONTA, <i>O.</i>			

CAMELINA, <i>L.</i> .....VI	VII and IX		v and VIII
CUCULLINA, <i>S. V.</i> .....	VIII IX	x to v	v and s. VIII
CARMELITA, <i>E.</i> .....	VI VII		III IV
DICTÆA, <i>L.</i> .....	VI and IX		v VII and VIII
DICTÆOIDES, <i>E.</i> .....VI	VII and IX		v VI VII
DROMEDARIUS, <i>L.</i> .....VI	VII & VIII IX	x to v	v VI and s. VIII
TRILOPHUS, <i>S. V.</i> .....	VII VIII IX		v to VIII
ZIZZAC, <i>L.</i> .....	VI and IX		v and VIII
TREPIDA, <i>E.</i> .....	VIII	IX to IV	IV v VI
CHAONIA, <i>S. V.</i> .....	VI VII VIII		IV v
DODONEA, <i>S. V.</i> .....	VII VIII IX	x to v	v VI
DILOBA, <i>Ss.</i>			
CÆRULOCEPHALA, <i>L.</i> ..IX	v VI	VII VIII	IX

**NOCTUÆ**

TRIFIDÆ

*BOMBYCIFORMES*

*NOCTUO-BOMBYCIDÆ*

THYATIRA, *O.*

DERASA, <i>L.</i> .....	VIII IX		VI VII
BATIS, <i>L.</i> .....	VIII IX	x to v	v VI VII & IX X
CYMATOPHORA, <i>Tr.</i>			
DUPLARIS, <i>L.</i> .....	VIII IX	x to v	v VI VII

	OVA	LARVÆ	PUPÆ	IMAGOS
FLUCTUOSA, <i>H.</i> .....		IX X	X to V	VI VII
DILUTA, <i>S. V.</i> .....		V VI	VII	VIII IX
OR, <i>S. V.</i> .....		VI VII VIII	IX X	VI VII
OCULARIS, <i>L.</i> .....		VII VIII IX	IX X	V VI
FLAVICORNIS, <i>L.</i> .....		VI VII	IX	III
RIDENS, <i>F.</i> .....	IV	VI VII	VIII	III IV
<i>BRYOPHILIDÆ</i>				
BRYOPHILA, <i>Tr.</i>				
GLANDIFERA, <i>S. V.</i> ....IX		X to IV V	VI	VII VIII
PERLA, <i>S. V.</i> .....		X to IV V VI	V VI	VII VIII IX
ALGÆ, <i>F.</i> .....				VII VIII
<i>BOMBYCOIDÆ</i>				
DIPHThERA, <i>O.</i>				
ORION, <i>E.</i> .....		VII VIII IX	X to V	VI VII
ACRONYCTA, <i>Tr.</i>				
TRIDENS, <i>S. V.</i> .....		VIII IX X	X to V	VI VII
PSI, <i>L.</i> .....		VIII IX	X to V	V VI VII
LEPORINA, <i>L.</i> .....	V VI	VI VIII IX	X to V	V VI VII
ACERIS, <i>L.</i> .....	VII	VIII IX	X	V VI VII
MEGACEPHALA, <i>S. V.</i> ..		VI VII VIII	IX to IV	V VI
STRIGOSA, <i>S. V.</i> .....	VI	VII VIII IX	X to V	VI VII
ALNI, <i>L.</i> .....		VII VIII IX	VIII to IV	V VI VIII IX
LIGUSTRI, <i>S. V.</i> .....		VIII IX	X to V	V VI VII
RUMICIS, <i>L.</i> .....	VI	VI VII VIII	IX to IV	V VI VII
AURICOMA, <i>S. V.</i> .....		VI VII	VII	VII VIII to V
MENYANTHIDIS, <i>E.</i> ....		VI VII VIII		VI
MYRICÆ, <i>G.</i> .....		VIII IX		V VI S. VII
SIMYRA, <i>O.</i>				
VENOSA, <i>Bk.</i> .....	VI	VIII IX		VI
GENUINÆ				
<i>LEUCANIDÆ</i>				
SYNIA, <i>D.</i>				
MUSCULOSA, <i>H.</i> .....				VIII
LEUCANIA, <i>Tr.</i>				
CONIGERA, <i>S. V.</i> .....		III to V		VI VII
VITELLINA, <i>H.</i> .....		X to II		IX X XI
TURCA, <i>L.</i> .....		II III		VI VII
LITHARGYRIA, <i>E.</i> .....		I III IV V		VI VII to III?
ALBIPUNCTA, <i>S. V.</i> .....				VIII IX X S.
EXTRANEÆ				
OBSOLETA, <i>H.</i> .....		VIII IX		VI VII
LOREVI, <i>D.</i> .....				VII
PUTRESCENS, <i>H.</i> .....		X		VII VIII
LITTORALIS, <i>C.</i> .....	VII	VIII to IV V		VI VII
PUDORINA, <i>S. V.</i> .....		III IV		VI VII
COMMA, <i>L.</i> .....	VI	VIII to IV		VI VII and s. X
L-ALBUM, <i>L.</i> .....				VI IX X
STRAMINEÆ				
IMPURA, <i>H.</i> .....	VII	X to III IV V		VI VII
PALLENS, <i>L.</i> .....	IX	X to III IV		VI VII VIII
PHRAGMITIDIS, <i>H.</i> .....	VII	VIII to V		VI VII
TAPINOSTOLA, <i>Ld.</i>				
BONDII, <i>Kngs.</i> .....				VI VII
ELYMI, <i>Tr.</i> .....		V		VI VII



MELIANA, C.	OVA	LARVÆ	PUPÆ	IMAGOS
FLAMMEA, C. ....				V VI
SENTA, Ss.				
ULVÆ, H. ....		IX to III IV		VI VII
NONAGRIA, O.				
DESPECTA, Tr. ....				VI VII VIII
FULVA, H. ....		V VI		VIII IX
CONCOLOR, G. ....				VI
HELLMANNI, Evers ....		VI		VI
NEURICA, H. ....		IV V VI		VII VIII
BREVILINEA, Kngs. ....				VIII
GEMINIPUNCTA, Htch. ...		V VI	VII	VII VIII
CANNÆ, O. ....		V		VIII
TYPHÆ, E. ....		VII VIII		IX
LUTOSA, H. .... IX		X to VI	VII	VIII IX X
APAMIDÆ				
GORTYNA, O.				
FLAVAGO, S. V. .... IX		VII VIII	VIII IX	IX
HYDRÆCIA, G.				
NICTITANS, L. ....		V VI		VII VIII IX
PETASITIS, Db. ....		VI VII		VIII IX
MICACEA, E. ....		V VI VII		VIII IX X
AXYLIA, H.				
PUTRIS, L. ....		VIII	X to V	VI VII
XYLOPHASIA, Ss.				
RUREA, F. ....		IV	IV V	V VI VII
LITHOXYLEA, S. V. ....		V VI		VI VII
SUBLUSTRIS, E. ....				VI VII
POLYODON, L. ....		IV V		VI VII VIII
HEPATICÆ, Ch. ....		VIII to III IV		VI VII
SCOLOPACINA, E. ....		V		VII VIII
DIPTERYGIA, Ss.				
PINASTRI, L. ....		VIII IX		VI VII
XYLOMIGES, G.				
CONSPICILLARIS, L. ....		VI VII VIII		III IV V
APOROPHYLA, G.				
AUSTRALIS, B. .... X		X XI to III IV		VII VIII IX X
LAPHYGMA, G.				
EXIGUA, H. .... VII		VIII IX		VIII to X
NEURIA, G.				
SAPONARIÆ, Bk. ....		VII VIII		V VI VII VIII
HELIOPHOBUS, B.				
POPULARIS, F. ....		IV V	VI VII	VII VIII IX
HISPIDA, H. ....		XI		IX
CHARÆAS, Ss.				
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HERBOSANA, <i>Ba.</i> . . .		vi vii	VECTISANA, <i>Wsd.</i> . .	v & viii	v & vii
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ÆNEANA, <i>H.</i> . . . . .	I	VI	ALTERNANA, <i>Ss.</i> . . . . .	IX X	VI VII		
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	LARVÆ	IMAGOS		LARVÆ	IMAGOS
CINIFLONELLA, <i>L.</i> ...		III VIII	ALACELLA, <i>D.</i> .....	VI	VII
VACCINELLA, <i>H.</i> ..VI		VII VIII III	LONGICORNIS, <i>C.</i> ....?	VI	V VI
CAPREOLELLA, <i>Z.</i> ..VI		IV VIII	DIFFINELLA, <i>Hw.</i> ..IV		VI
HYPERICELLA, <i>H.</i> ..V VI		VII X	TERRELLA, <i>S.V.</i> ....		VI VII
CONTERMINELLA, <i>Z.</i> VI VII		VII VIII IV	DESERTELLA, <i>Ed.</i> ..		V VII VIII
ANGELICELLA, <i>H.</i> ..VI		VII IX	EXPOLITELLA, <i>Dg.</i>		VI VII
CARDUELLA, <i>H.</i> ....V		VII	ACUMINATELLA, <i>St.</i> VII IX		VI to VIII
OCELLELLA, <i>F.</i> ....V VII		VII VIII X	ARTEMISELLA, <i>Tr.</i> VI		VI to VIII
YEATESIELLA, <i>F.</i> ..VI		VIII IX	VISCARIELLA, <i>Lo.</i> ..V		VI
RHODOCHRELLA, <i>H.S.</i>			ALBIPALPELLA, <i>H.S.</i> VI		VII
(var. of „ Subpropinquella)	III		ARUNDINETELLA, <i>Z.</i> III IV		VI VII
APPLANELLA, <i>F.</i> ....VI		VII IV	SENECTELLA, <i>Z.</i> ....		VII VIII
CILIELLA, <i>Stn.</i> ....VII		VIII III	MUNDELLA, <i>Dg.</i> ....		V VIII
GRANULOSELLA, <i>Stn.</i> VI		IX	SIMILIS, <i>Dg.</i> .....		VII VIII
ROTUNDELLA, <i>Dg.</i> ..V		VIII IX	AFFINELLA, <i>Hw.</i> ..IV V VI		VI VII
DEPRESSELLA, <i>H.</i> ..VI		VIII	BORELLA, <i>Dg.</i> ....		VI VII
PIMPINELLA, <i>Z.</i> ....VI		VII VIII	GALBANELLA, <i>Fisch.</i>		VII
BIPUNCTOSA, <i>C.</i> probably a var. of <i>Liturella</i>	VII		BASALTINELLA, <i>Z.</i> ...?		VI VII
ALBIPUNCTELLA, <i>H.</i> VI		VIII III	DOMESTICELLA, <i>Hw.</i> III IV		VI VII
CNICELLA, <i>Tr.</i> ....V VI		VI VII	RHOMBELLA, <i>H.</i> ....VI		VII VIII
EMERITELLA, <i>Hey.</i> VII		VIII	PROXIMELLA, <i>H.</i> ..VIII		V VI
PULCHERRIMELLA, <i>Stn.</i> VI VII		VII VIII	NOTATELLA, <i>H.</i> ....IX X		V VI
DOUGLASELLA, <i>Stn.</i> V		VII VIII	LYELLELLA, <i>C.</i> ....		VIII IX X
WEIRELLA, <i>Stn.</i> ....V VI		VII VIII	VULGELLA, <i>H.</i> .....IV V		VI VII
CHÆROPHYLLIVORELLA, <i>Db.</i> V VII	VIII IV		LUCUELLA, <i>H.</i> ....II III		V VI
ULTIMELLA, <i>Stn.</i> ..VI		VII VIII	SCRIPTELLA, <i>H.</i> ....VIII		V VI
NERVOSELLA, <i>Hw.</i> VI VII		VIII IX	FUGITIVELLA, <i>Z.</i> ..V		VI VII
BADIELLA, <i>H.</i> .....		VIII	ÆTHIOPELLA, <i>Wsd.</i> VIII?		V VI
DISCIPUNCTELLA, <i>H.S.</i>		VIII IX	SOLUTELLA, <i>Fisch.</i> ..		V
HERACLEELLA, <i>De Geer</i> VI		VIII III	DISTINCTELLA, <i>Z.</i> ...		VI VII
OLERELLA, <i>Z.</i> .....VI VII		VIII IX X	CELERELLA, <i>Dg.</i> ..		IX
PSORICOPTERA, <i>Stn.</i>			COSTELLA, <i>Ss.</i> .....VII VIII		VIII IX
GIBBOSELLA, <i>Z.</i> ....VI		VII	MACULELLA, <i>Hw.</i> ..VI		VII
GELECHIA, <i>Stn.</i>			TRICOLORELLA, <i>Hw.</i> IV		VI
CINERELLA, <i>L.</i> ....		VI VII	FRATERNELLA, <i>Dg.</i> V		VI VII
RUFESCENTELLA, <i>Hw.</i> V VI		VII VIII	MUSCOSELLA, <i>Z.</i> ....V		VI VII
INORNATELLA, <i>Dg.</i>		VI	MACULIFERELLA, <i>Mann</i> V		VII
GERRONELLA, <i>Z.</i> ..		VII	VICINELLA, <i>Dg.</i> ....V		VIII IX
VILELLA, <i>Z.</i> .....		VII VIII	LEUCOMELANELLA, <i>Z.</i> V		VII
HIPPOPHAELLA, <i>Sk.</i> VII		VIII IX	JUNCTELLA, <i>Dg.</i> ..		IV VIII IX
MALVELLA, <i>H.</i> ....IX X		VI VII	HUBNERELLA, <i>Hw.</i> VI?		VIII IX
POPUELLA, <i>L.</i> ....V		VI VII	MARMORELLA, <i>Hw.</i> V		VI VIII
NIGRA, <i>Hw.</i> .....V VI		VI VII	OBSOLETELLA, <i>Fisch.</i> VII X		VI
TEMERELLA, <i>L.</i> ....VI		VII	INSTABILELLA, <i>Dg.</i> IV V		VII VIII
LENTIGINOSELLA, <i>Z.</i> V VI		VI VII	OCELLATELLA, <i>Stn.</i> VI VI		VII VIII
VELOCELLA, <i>Fisch.</i> IV		IV V VIII	LITTORELLA, <i>Dg.</i> ..		V
FUMATELLA, <i>Dg.</i> ..		VI VIII	ATRIPLICELLA, <i>Fisch.</i> V VII		VII VIII
ERICATELLA, <i>H.</i> ..IX to III		IV VIII	SEQUACELLA, <i>Hw.</i> ..V		VI VII
MULINELLA, <i>Ti.</i> ..V		VI VII	ALEELLA, <i>F.</i> .....IX		V VI
DIVISELLA, <i>Dg.</i> ....		VI	LEUCATELLA, <i>L.</i> ..V VI		VI VII
PALUSTRELLA, <i>Dg.</i>		VII	ALBICAPITELLA, <i>Z.</i> VI		VII
SORORCUELLA, <i>H.</i> V		VI VII	NANELLA, <i>H.</i> .....V		VII
CUNEATELLA, <i>Z.</i> ..VII		IX	MOUFFETELLA, <i>S.V.</i> IV V		VI
PELIELLA, <i>Z.</i> .....		VI VII	DODECELLA, <i>L.</i> ....V		VII



LARVÆ		IMAGOS	LARVÆ		IMAGOS
TRIPARELLA, <i>Z.</i> . . .	VII IX	V VI	USTULELLA, <i>F.</i> . . .	VIII IX to IV	V
TENEURELLA, <i>H.</i> . .	IX IV	VI VII	APLOTA, <i>Ss.</i>		
LIGULELLA, <i>Z.</i> . . .	V	VI VII	PALPELLA, <i>Hw.</i> . . .	V	VIII
VORTICELLA, <i>Z.</i> . . .	VI	VI VII	NOTHRIS, <i>Stn.</i>		
TÆNIOLELLA, <i>Tr.</i> . .	V VI	VII	VERBASCELLA, <i>S.V.</i>	V	VII
SIRCOMELLA, <i>Stn.</i> . .	VI?	VI VII	DURDHAMELLA, <i>Stn.</i>	VI	VII
IMMACULATELLA, <i>Dg.</i>		VIII	SOPHRONIA, <i>Stu.</i>		
NIGRITELLA, <i>Z.</i> . . .		VI	PARENTHESSELLA, <i>L.</i>		VI VII
CORONILLELLA, <i>Ti.</i>	V	VI VII	HUMERELLA, <i>H.</i> . .	V	VI
ANTHYLLIDELLA, <i>H.</i>	IV	VI VIII	PLEUROTO, <i>Stn.</i>		
ATRELLA, <i>Hw.</i> . . .	V VI	VII	BICOSTELLA, <i>L.</i> . . .	X to V	VI VII
BIFRACTELLA, <i>Mann</i>	X III	VI VII	HARPELLA, <i>Schlg.</i>		
OBLITELLA, <i>Dö.</i> . . .		VI	GEOFFROYELLA, <i>L.</i> . .		V VI
LUCIDELLA, <i>Ss.</i> . . .		VII	BRACTEELLA, <i>L.</i> . .	II IV	VI
LUTULENTELLA, <i>Z.</i>		VII	HYPERCALLIA, <i>Ss.</i>		
GRACIELLA, <i>Stn.</i> . .		V	CHRISTIERNINELLA, <i>L.</i>	V	VI VII
CONFINIS, <i>Stn.</i> . . .	V	VI	DASYCERA, <i>Stn.</i>		
STRELTZIELLA, <i>H.S.</i>		VI	SULPHURELLA, <i>F.</i> . .	IV	IV to VII
CEREALELLA, <i>Ol.</i> . .	X III	V VI	OLIVIERELLA, <i>F.</i> . .	V?	VI VII
GEMMELLA, <i>L.</i> . . .	V?	VII VIII	CECOPHORA, <i>Stn.</i>		
NÆVIFERELLA, <i>Z.</i> . .	VI X	VI VIII	MINUTELLA, <i>L.</i> . . .	III	VI
HERMANNELLA, <i>F.</i>	VI X	V VIII	FLAVIMACULELLA, <i>Stn.</i>	IX	VI to VIII
PICTELLA, <i>Z.</i> . . . .	V	V VIII	TRISIGNELLA, <i>Z.</i> . .		V VI VII
BRIZELLA, <i>Ti.</i> . . . .	X	V VIII	STIPELLA, <i>Clk.</i> . . .	IX	VI VII
SUBDECURTELLA, <i>Stn.</i>	VI	VI	AUGUSTELLA, <i>H.</i> . .	V?	VI
ERICINELLA, <i>Z.</i> . . .	VI	VII VIII	ALBIMACULELLA, <i>Hw.</i>	(var. of Augustella)	
PAUPELLA, <i>Z.</i> . . . .	VII VIII	VIII IX	WOODIELLA, <i>C.</i> . . .		VI
INOPELLA, <i>Z.</i> . . . .	VII	VIII	GRANDELLA, <i>Desv.</i>		V VI
SUBOCCELLELLA, <i>Ss.</i>	X	VI VII	FORMOSELLA, <i>SV.</i> . .		VII
INTAMINATELLA, <i>Stn.</i>	VIII IX	V VI	LUNARELLA, <i>Hw.</i> . .		VII VIII
OSSEELLA, <i>Stn.</i> . . .		VII	LAMBDELLA, <i>Don.</i> . .		VI VII
TARQUINIELLA, <i>Stn.</i>		VI	SUBAQUILELLA, <i>Ed.</i>		VI VIII
KNAGGSIELLA, <i>Stn.</i>	VI	VII VIII	TINTELLA, <i>Tr.</i> . . .	V?	V VI
UMBROSELLA, <i>Z.</i> . .		V VI VII	SUBOCHRELLA, <i>Döb.</i>		VI VII
SANGIELLA, <i>Stn.</i> . .	V	VI VII	FUSCO-AURELLA, <i>Hw.</i>	IV	VIII
PINGUINELLA, <i>Tr.</i> . .	V	VII	FLAVIFRONTPELLA, <i>H.</i>	IX to IV	V VI
LATHYRELLA, <i>Stn.</i>	IX	VI	FUSCESCENTELLA, <i>Hw.</i>		VII VIII
PARASIA, <i>D.</i>			PSEUDOSPLETELLA, <i>Stn.</i>	X IV	VII VIII
LAPPELLA, <i>L.</i> . . . .	IX X	VI VII	CECOGENIA, <i>G.</i>		
METZNERIELLA, <i>Dg.</i>	X II	VI VIII	KINDERMANNIELLA, <i>Z.</i>		VII VIII
CARLINELLA, <i>Dg.</i> . .	X II	VI VII	ENDROSIS, <i>Stn.</i>		
NEUROPTERELLA, <i>Fisch.</i>	X to VI	VII VIII	FENESTRELLA, <i>S.</i> . .	I to XII	I to XII
CLEODORA, <i>Stn.</i>			BUTALIS, <i>Tr.</i>		
CYTISELLA, <i>C.</i> . . . .		VII	GRANDIPENNELLA, <i>Hw.</i>	IV	VI VII
STRIATELLA, <i>S.V.</i> . .	VI	VIII	FUSCOÆNEELLA, <i>Hw.</i>	IV	VI VII
CHELARIA, <i>Hw.</i>			SENESCENTELLA, <i>Stn.</i>	V	VII
CONSCRIPTELLA, <i>H.</i>	VI?	VIII IX	FUSCOPRELLA, <i>Hw.</i>		VII
ANARSIA, <i>Z.</i>			CICADELLA, <i>Z.</i> . . .	V	VII
SPARTIELLA, <i>Schlg.</i>	V VI	VII VIII	VARIELLA, <i>Ss.</i> . . .		VI
GENISTELLA, <i>Stn.</i> . .	V	VII	CHENOPODIELLA, <i>H.</i>	IV VIII	VI IX
MACROCHILA, <i>Ss.</i>			TORQUATELLA, <i>Lnig.</i>	VIII IX	VI VII
FASCIELLA, <i>H.</i> . . .	IX	V	INCONGRUELLA, <i>Stn.</i>	IX	III IV
MARGINELLA, <i>F.</i> . .	V	VII	PANCALIA, <i>Stn.</i>		
JUNIPERELLA, <i>L.</i> . .	V	VII	LEWENHOEKELLA, <i>L.</i>		VI VII

LARVÆ   IMAGOS		LARVÆ   IMAGOS	
LATREILLELLA, C. . . .		PRÆCOCELLA, Z. . .	V
GLYPHIPTERYGIDÆ		AURULENTELLA, Z. IV VIII	VII VIII
ACROLEPIA, C.		CEDESTIS, <i>Stn.</i>	
PERLEPIDELLA, <i>Stn.</i>	VI	FARINATELLA, D. . . III IV & VI	VI VII
GRANITELLA, <i>Tr.</i> . . VI VII	VIII	GYSSELINELLA, D. . . III	VI VII
AUTUMNITELLA, C. VII X	VIII IV	OCNEROSTOMA, Z.	
BETULELLA, C. . . .	VIII X	PINARIELLA, Z. . . . IV & VI	IV VI & VIII
MARCIDELLA, C. . .		ZELLERIA, <i>Stn.</i>	
ROSLERSTAMMIA, <i>Stn.</i>		HEPARIELLA, M. . .	VIII IV
ERXLEBENELLA, F. IV & VII	V VI & VIII IX	INSIGNIPENNELLA, <i>Stn.</i>	VIII IV
PRONUBELLA, S. V.	V	FASCIAPENNELLA, L.	IX X
GLYPHIPTERYX, Ss.		SAXIFRAGÆ, G. . . . V VI	VII
FUSCOVIRIDELLA, <i>Hw.</i>	IV V VI	GRACILLARIIDÆ	
THRASONELLA, S. . . V ?	VI VII	GRACILLARIA, Z.	
CLADIELLA, <i>Stn.</i> . . . .	VI VII	ALCHIMIELLA, S. . . VII IX	V VI VIII
HAWORHELLA, Ss. IV VI	V VII	STIGMATELLA, F. . . VI VIII IX	VII & VIII IX
EQUITELLA, S. . . . V VI	VI to VIII	STRAMINEELLA, <i>Stn.</i>	VIII IV
SCHÆNICOLELLA, <i>Stn.</i> IV V	V	HEMIDACTYLELLA, H. VII VIII	IX
OCULATELLA, Z. . . .	VI	FALCONIPENNELLA, H. VIII	IX
FISCHERIELLA, Z. . . VII	V VIII	SEMIFASCIELLA, <i>Hw.</i> VII	IX
ÆCHMIA, <i>Stn.</i>		POPULETELLA, Z. . . VII	IX IV
DENTELLA, <i>Stn.</i> . . . VII	V VI	ELONGELLA, L. . . . V VII	V VI IX
PERITTIA, <i>Stn.</i>		TRINGIPENNELLA, Z. III IV & VI VII	V VIII
OBSCUREPUNCTELLA, <i>Stn.</i> VII	V	SYRINGELLA, F. . . . VI IX	V VIII
TINAGMA, D.		OMISELLA, Dg. . . . VII	V VIII
SERICIELLA, <i>Hw.</i> . . VIII	IV V	PHASIANIPENNELLA, H. VIII IX	IX IV
STANNEELLA, <i>Fisch.</i> IX	VI	AUROGUTTELLA, Ss. IV VI IX	V VIII
RESPLENDELLA, Dg. VII IX	VI	ONONIELLA, D. . . . IV V	VI VIII IX
DOUGLASIA, <i>Stn.</i>		IMPERIALELLA, M. VIII IX	V
OCNEROSTOMELLA, <i>Stn.</i> IV	VII	HOFFMANNIELLA, <i>Schleich</i>	
ARGYRESTHIIDÆ		KOLLARIELLA, Z. . . VI & IX X	V & VII
ARGYRESTHIA, <i>Stn.</i>		CORISCIMUM, Z.	
EPHIPPELLA, F. . . . V	VI VII	BROGNIARTELLA, F. VI to VIII	VII IX
NITIDELLA, F. . . . . V	V VIII	CUCULIPENNELLA, H. VIII	VIII IX IV
PURPURASCENTELLA ? <i>Stn.</i>		CITRINELLA, <i>Fisch.</i>	IX X IV
SEMITESTACELLA, C.	VIII	ORNIX, Z.	
SPINIELLA, Z. . . . . V VI	VIII	AVELLANELLA, <i>Stn.</i> VII IX X	V VI VIII
ALBISTRIELLA, <i>Hw.</i> V	VII	DEVONIELLA, <i>Stn.</i> . .	V
CONJUGELLA, Z. . . . VIII	VI VII	ANGLICELLA, <i>Stn.</i> . . VII IX	IV V VIII
SEMIFUSCELLA, <i>Hw.</i> V	VII VIII	BETULÆVORELLA, <i>Dbl.</i> VII IX X	V VI VIII
ÆRARIELLA, <i>Stn.</i> . .	VI	SCUTULATELLA, <i>Stn.</i> IX ?	VI
(possibly a var. of <i>Conjugella</i> )		TORQUILELLA, <i>Stn.</i> VII IX	V to VIII
MENDICELLA, <i>Hw.</i> V	VI VII	SCOTICELLA, <i>Stn.</i> . . IX	V VI
GLAUCINELLA, Z. . . III IV	VI VII	LOGANELLA, <i>Stn.</i> . . IX	V VI
RETINELLA, Z. . . . V	VI VII	GUTTELLA, <i>Hw.</i> . . . VIII IX	V VI
ABDOMINELLA, Z. . . IV	VII	COLEOPHORIDÆ	
DILECTELLA, Z. . . . V	VI	GONIODOMA, Z.	
ANDEREGGIELLA, <i>Fisch.</i> V	VII VIII	ATRIPLICIVORELLA, <i>Dbl.</i> IX to V	VIII
CURVELLA, L. . . . . V	VI VII	COLEOPHORA, Z.	
SORBIELLA, <i>Tr.</i> . . . VI	VII	FABRICIELLA, <i>Vill.</i>	VI VII
PYGMÆELLA, H. . . IV V	VI VII	DEAURATELLA, <i>Lnig.</i>	VII
GÆDARTELLA, L. . . II IV	VI VII	ALCYONIPENNELLA, <i>Kol.</i> V VI	VII VIII
BROCHELLA, H. . . . III IV	VI VII	FISCHELLA, L. . . .	VII
ARCEUTHINELLA, Z. IV V	V VI	PABIPENNELLA, <i>Fisch.</i> IX X V	I

LARVÆ	IMAGOS	LARVÆ	IMAGOS
WOCKEELLA, <i>Z.</i> . . . . v	VI VII	WILKINSONELLA, <i>Sc.</i> VIII IX	VI
OCHREELLA, <i>Hw.</i> . . v	VII VIII	<i>ELACHISTIDÆ</i>	
SALICORNELLA, ( <i>N.S.</i> ) x to v	VII VIII	BEDELLIA, <i>Stn.</i>	
BINOTAPENNELLA, <i>Fisch.</i> v	VIII	SOMNULENTELLA, <i>Z.</i> VIII IX	VIII X
LIXELLA, <i>Z.</i> . . . . . IV	VII	STRATHMOPODA, <i>Z.</i>	
VIBICELLA, <i>H.</i> . . . . . v VI	VII	PEDELLA, <i>L.</i> . . . . . IX	VII
CONSPICUELLA, <i>M.</i> . . . v VI	VI VII	COSMOPTERYX, <i>Stn.</i>	
PYRRHULIPENNELLA, <i>Ti.</i> x IV v VI	VI VII	DRURIELLA, <i>Z.</i> . . . VIII IX	VII
ALBICOSTELLA, <i>Hw.</i> VIII	VI VII	ORICHALCELLA, <i>Stn.</i> VIII IX	v & VII
VULNERARIELLA, <i>Z.</i>	VI VII	LIENIGIELLA, <i>Z.</i> . . . IX	VI VII
ANATIPENNELLA, <i>H.</i> v VI	VI to VIII	BATRACHEDRA, <i>Stn.</i>	
PALLIATELLA, <i>Z.</i> . . v	VI VII	PRÆANGUSTELLA, <i>Hw.</i> VI	VII VIII
IBIPENNELLA, <i>Hey.</i> v	VI VII	PINICOELLA, <i>Z.</i> . . . .	VI VII
CRURCIPENNELLA, <i>Fisch.</i> v	VI VII	OINOPHILA, <i>Ss.</i>	
NIVEICOSTELLA, <i>Fisch.</i> VI	VI VII	V-FLAVELLA, <i>Hw.</i> . . v VI	VII VIII
DISCORDELLA, <i>Z.</i> . . x to v	VI to VIII	CHAULIODUS, <i>Tr.</i>	
GENISTÆCOLELLA, <i>Dbl.</i> x VI	VI VII	INSECURELLA, <i>Stn.</i>	VII VIII
SATURATELLA, <i>Stn.</i> IX VI	VII	ILLIGERELLA, <i>H.</i> . . . . v VI	VII
ONOSMELLA, <i>Z.</i> . . . . v VI	VII	CHÆROPHYLELLA, <i>Go.</i> VI IX	VII VIII
INFLATELLA, <i>Stn.</i> . . VIII IX	VII	DAUCELLA, <i>Pey.</i> . . . IX ?	x XI
THERINELLA, <i>Stn.</i> . . IX	VI VII	LAVERNA, <i>C.</i>	
TROGLODYTELLA, <i>Stn.</i> v VI VII	VII VIII	PALUDICOLELLA, <i>Dbl.</i> II to v	VI to VIII
LINEOLELLA, <i>Hw.</i> . . III v	VI VII	LACTEELLA, <i>Ss.</i> . . . . v	VI to VIII
MURINIPENNELLA, <i>Fisch.</i> v VI	v VII	MISCELLA, <i>S. V.</i> . . . . IV to VI	v to VIII
SQUAMOSELLA, <i>Stn.</i>	VIII	CONTURBATELLA, <i>H.</i> v VI	VI VII
CÆSPITIELLA, <i>Z.</i> IX v	VI VII	RASCHKIELLA, <i>Fisch.</i> v VII	VI VIII
ANNULATELLA, <i>Tengs.</i> IX X	VII VIII	STEPHENSIELLA, <i>Stn.</i>	
SALINELLA, <i>Stn.</i> . . x v	VI VIII	EPILOBIELLA, <i>Schlg.</i> VI VII	VIII to v
CACUMINATELLA, <i>Dbl.</i> x	VII VIII	OCHRACELLA, <i>C.</i> . . v	VII VIII
ARGENTULELLA, <i>Z.</i> IX X	VII	PHRAGMITELLA, <i>Ben.</i> v	VII
VIRGAURELLA, <i>Stn.</i> IX X	v VII VIII	DECORELLA, <i>Ss.</i> . . . . VI VII	VIII IX X to IV
HEMEROBIELLA, <i>Z.</i> v	VII	SUBSTRIGELLA, <i>Hw.</i> VII VIII	VIII IX to v
JUNCICOLELLA, <i>Stn.</i> x v	VII	ATRA, <i>Hw.</i> . . . . . IX to II III	VI VII
LARICELLA, <i>H.</i> . . . . IX v	VI VII	RHAMNIELLA, <i>Z.</i> . . . . v	VII
ALBITARSELLA, <i>Z.</i> . . XI v VI	VI VII	VINOLENTELLA, <i>H. S.</i>	
NIGRICELLA, <i>Ss.</i> . . . . v VI	VI VII	CHRYSOCLISTA, <i>Stn.</i>	
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VITISELLA, <i>Gregs.</i> . . XI IV	VI VII	HELIODINES, <i>Stn.</i>	
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ELACHISTA, <i>Stn.</i>			TRIGUTTELLA, <i>Stn.</i> . . . . .	v vi ix x	v viii
GLEICHENELLA, <i>F.</i> . . . . .	iv v	vi vii	QUINQUEGUTTELLA, <i>Stn.</i> . . . . .	v vi ix x	v vi viii
MAGNIFICELLA, <i>Tengs.</i> . . . . .	iv v	vii	NIGRESCENTEELLA, <i>Lo.</i>		v
APICIPUNCTELLA, <i>Stn.</i> . . . . .	x to iv	vi vii	(considered a form of Bremiella)		
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FLAVICOMELLA, <i>Stn.</i>		vii	VACCINIATELLA, <i>Sc.</i> . . . . .	vii ix x	v vi viii
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SUBNIGRELLA, <i>Dg.</i> . . . . .	iv vii	v vi viii	CARPINICOLELLA, <i>Stn.</i> . . . . .	vii ix	v vi viii
PERPLEXELLA, <i>Stn.</i> . . . . .	iv v	vi vii	ULMIFOLIATELLA, <i>H.</i> . . . . .	vii ix	v vi viii
HUMILIELLA, <i>Z.</i> . . . . .		vi vii	SPINOLELLA, <i>D.</i> . . . . .	vii ix	v to viii
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BEDELLELLA, <i>Si.</i> . . . . .	iv vii	v viii	MESSANIATELLA, <i>Z.</i> . . . . .	iv vii x	v viii xi
SUBOBSCURELLA, <i>Db.</i> . . . . .	iii vii	v vi vii	CORYLIFOLIATELLA, <i>Hw.</i> . . . . .	vii ix	v viii
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ZONARIELLA, <i>Tengs.</i> . . . . .	iv vii	v vi viii	VIMINIATELLA, <i>Si.</i> . . . . .	vii ix	v vi viii
GANGABELLA, <i>Fisch.</i> . . . . .	xi to iv	v vi	SCOPARIELLA, <i>Ti.</i> . . . . .		vi vii
TÆNIATELLA, <i>Stn.</i> . . . . .	ix v	v vi	ULICOLELLA, <i>Va.</i> . . . . .	ix	vi vii
CINGIELLA, <i>Fisch.</i>		vi vii	ALNIFOLIATELLA, <i>H.</i> . . . . .	vii ix	iv v vii viii
ORLIQUELLA, <i>Ed.</i> . . . . .		v vi	HEGERIELLA, <i>Z.</i> . . . . .	vii ix	v vi viii
MEGERIELLA, <i>Z.</i> . . . . .	ix vi	v vi viii	CRAMERELLA, <i>F.</i> . . . . .	vii ix	v viii
ADSCITATELLA, <i>Stn.</i> . . . . .	v vi	vi vii	TENELLA, <i>Z.</i> . . . . .	vii ix	v vi viii
CERUSSELLA, <i>H.</i> . . . . .	iv vii	v to viii	ACERIFOLIATELLA, <i>Z.</i> . . . . .	vii ix	v vi viii
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ELEOCHARIELLA, <i>Stn.</i> . . . . .	v	vi vii	FROLICHIATELLA, <i>Z.</i> . . . . .	vii ix	v vi viii
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DISPUNCTATELLA, <i>D.</i> . . . . .		vi vii	KLEMANNATELLA, <i>F.</i> . . . . .	vii ix	v vi viii
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SUBOCHREATELLA, <i>Db.</i>		v vi	SCABIOSÆCOLELLA, <i>Db.</i> . . . . .	iv vii	v viii
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TISCHERIA, <i>Z.</i>			LYONETIIDÆ		
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DODONÆATELLA, <i>Stn.</i> . . . . .	x to v	vi	PHYLLOCNISTIS, <i>Z.</i>		
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HORTELLA, <i>F.</i> . . . . .	vii ix	v viii	SPARTIFOLIATELLA, <i>H.</i> . . . . .	iv v vii x	v to viii

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WAILESELLA, <i>Stn.</i>	..v vi viii ix	v vi vii	TITYRELLA, <i>Dg.</i>	....vii ix x	v viii
LOTELLA, <i>Stn.</i>	.....vii viii	v vi	MALELLA, <i>Stn.</i>	....vii ix	v viii
LATHRIFOLIELLA, <i>Stn.</i>	viii	v	ANGULIFASCIELLA, <i>Stn.</i>	ix x	vi vii
OROBIELLA, <i>Stn.</i>	....viii	v	ATRICOLELLA, <i>Stn.</i>	viii ix x	v viii
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SALACIELLA, <i>Tr.</i>	....	vi vii	GRATIOSELLA, <i>Stn.</i>	ix	v
AURITELLA, <i>H.</i>	....v	vi	MARGINICOLELLA, <i>Stn.</i>	vii ix	v viii
CREPUSCULELLA, <i>Fisch.</i>		vi vii	ALNETELLA, <i>Stn.</i>	ix	v vi
SPATUTELLA, <i>G.</i>	....	vii	GLUTINOSSELLA, <i>Stn.</i>	vii ix	v viii
RELIQUELLA, <i>Z.</i>	....	v vi & viii	CONTINUPELLA, <i>Stn.</i>	ix	vi
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ULMELLA, <i>M.</i>	.....vii ix x	v vi viii ix	RUFICAPITELLA, <i>Hw.</i>	x xi	v
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HIPPOCASTANELLA, <i>D.</i>	viii	v vi	ULMIVORELLA, <i>Frr.</i>	vi & x	v & viii
CRISTATELLA, <i>Fisch.</i>	vii ix v	v vi viii	TILIELLA, <i>Frr.</i>	....ix x	v vi
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ATRICAPITELLA, <i>Hw.</i>	vii x	v vi viii	SQUAMATELLA, <i>Stn.</i>		viii
ANOMALELLA, <i>Go.</i>	..vii x	vi viii	IMMUNDELLA, <i>Z.</i>	....iv v	vii viii
PERPYGMÆELLA, <i>Db.</i>	vii x	v vi viii	PULVEROSELLA, <i>Stn.</i>	vi vii	v vi
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OXYACANTHÆCOLELLA, <i>Db.</i>	vii x	v vi viii	QUADRIMACULELLA, <i>H.S.</i>		vii
VISCERELLA, <i>Dg.</i>	....vii x	v vi viii	PTEROPHORI		
CATHARTICELLA, <i>Stn.</i>	vii x	v vi viii	PTEROPHORIDÆ		
SEPTEMBRELLA, <i>Stn.</i>	vii x	v vi viii	AGDISTES, <i>H.</i>		
CRYPTELLA, <i>Frr.</i>	..vii x	vi viii	BENNETH, <i>C.</i>	....v	vii
WEAVERELLA, <i>Dg.</i>	..x iv	vi	PTEROPHORUS, <i>Lt.</i>		
INTIMELLA, <i>Z.</i>	....ix	v vi	BERTRAMI, <i>Roessler</i>	v vi	vi vii
HEADLEVELLA, <i>Stn.</i>		v viii	RHODODACTYLUS, <i>S.V.</i>	vi vii	viii
SUBBIMACULELLA, <i>Hw.</i>	ix x	v	OCHRODACTYLUS, <i>H.</i>	v	vi vii
ARGYROPEZELLA, <i>Z.</i>	x	v vi	ISODACTYLUS, <i>Z.</i>	....v & viii	vii
TRIMACULELLA, <i>Hw.</i>	vii ix x	v viii	TRIGONODACTYLUS, <i>Hw.</i>	iv	vi
QUINQUELLA, <i>Be.</i>	..	vi vii	ZETTERSTEDTH, <i>Z.</i>	v?	vi vii
SERRICOPEZA, <i>Z.</i>	....vi	vi	ACANTHODACTYLUS, <i>H.</i>	vi vii	vii ix
FLOSLACTELLA, <i>Hw.</i>	vii ix x	v viii	PUNCTIDACTYLUS, <i>Ss.</i>	vii	vii ix
SALICIVORELLA, <i>Db.</i>	vii ix x	v viii	PARVIDACTYLUS, <i>Hw.</i>	v	vi vii
MYRTILLELLA, <i>Ed.</i>	vii ix x	v viii	HIERACII, <i>Z.</i>	.....vi	vii viii
MICROTHERIELLA, <i>Wing</i>	vii ix x	v viii	LÆTUS, <i>Z.</i>	.....vi	vii
POTERIELLA, <i>Stn.</i>	..vi	vii	TEUCRII, <i>Greening</i>	..	
BETULICOLELLA, <i>Stn.</i>	vii ix x	v viii	PILOSELLÆ, <i>Z.</i>	.....vi	vii viii
IGNOBILELLA, <i>Stn.</i>	..vii ix	v viii	PHÆODACTYLUS, <i>H.</i>	v vi	vii
ARGENTIPEDELLA, <i>Z.</i>	ix x	v vi	SEROTINUS, <i>Z.</i>	....v & ix	vi vii & x
ACETOSELLA, <i>Stn.</i>	..vii ix	v viii	PLAGIODACTYLUS, <i>Fisch.</i>	iv v	vi vii
PLAGICOLELLA, <i>Stn.</i>	vii ix	v viii	ZOPHODACTYLUS, <i>D.</i>	ix x	vii viii

LARVÆ   IMAGOS		LARVÆ   IMAGOS	
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OSTEODACTYLUS, <i>Z.</i> ix iv	vii	ARIDUS, <i>Z.</i> . . . . . iv v	v
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### ERRATUM.

\* \* At page 221, third line from the bottom, strike out INTERJECTARIA, as synonymous with DILUTARIA.









