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# The Canadian Entomologist.

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## THREE NEW GALLS OF CECIDOMYIÆ.

BY C. R. OSTEN SACKEN, CAMBRIDGE, MASS.

I hardly need an apology for presenting from time to time to the entomological public descriptions of galls of *Cecidomyiæ*, even when I did not succeed in rearing the fly. Such observations, unless published soon, are very apt to be lost; once published, they gradually accumulate and furnish a welcome material for the future monographer. To facilitate reference, I give here a list of my previous publications on the galls of North American *Cecidomyiæ* :—

1. On the N. Am. *Cecidomyiæ* (In the Monogr. N. A. Diptera, vol. I, p. 173—205).
2. *Lasioptera*, reared from a gall on the Golden-rod (Proc. Ent. Soc. Phil. 1863, p. 368—370).
3. Two new N. A. *Cecidomyiæ* (Proc. Ent. Soc. Phil. 1866, p. 219—220).
4. Biological notes on Diptera. Article first: *Asphondylia monacha*, n. sp., and other galls on *Solidago* (Trans. Ent. Soc. Phil. 1869, p. 299—303). Article second: A new Amer. *Asphondylia*; On some undescribed galls of *Cecidomyiæ*. Article third: A *Cecidomyia* living in pine resin (*Diplosis resinicola*, n. sp.); a gall of *Cecidomyia* on Wild Cherry; additions, corrections.

*Cecidomyia* (*tiliæ*) *verrucicola*, n. sp. Wart-shaped, round, pale green galls, 3—4 millim. in diameter, projecting on the upper and underside of the leaves of the linden. They occur between the ribs and veins and often upon them. In autumn they become brown, hard and woody, and spring open on the underside, a circular piece detaching itself and either falling to the ground, or remaining fastened to the gall by a small portion of its circumference, in the shape of a lid. Inside of the gall, when green, there is a low-roofed cavity, containing a white larva, with a distinct

breast bone, heart-shaped anteriorly, and ending in an elongate point posteriorly. The dry galls are empty. I found them common on Goat Island (Niagara Falls), on the hills near West Point, N. Y., in Cambridge, Mass., etc., in August and September, on the young shrubs of the linden.

*Cecidomyia* (*urticæ*) *urnicola*, n. sp. Galls on the upper side of the leaves of *Urtica gracilis*, either on the midrib, or, more often, on the lateral veins. Urn-shaped (I mean the shape produced by cutting off the smaller end of a slender pear) up to 3 m. m. high, subsessile (that is, connected by a very small surface with the leaf), pale green, semi-transparent, succulent gall, bearing a short style or nipple at the upper, truncate end. Inside, the larva of a *Cecidomyia*. Lake George, July, 1863; Trenton Falls, July, 1874; not uncommon, but not in large numbers. Each leaf bears one, sometimes two galls, seldom more.

The gall produced by a *Cecidomyia* on the European nettle, and described by Perris, Ann. Soc. Ent. France, vol. IX, p. 401, is different from the present gall.

*Asphondylia* (*asteris*) *recondita*, n. sp. Deformed terminal buds on the principal and the lateral branches of *Aster patens*. These galls consist merely in an arrest of growth and consequent accumulation of leaves, forming a bud-like body up to 10 or 15 m. m. in length. Inside I found pupæ which their structure proves to be those of *Asphondylia*. The horn-like, sharp projections on the head are contiguous here, precisely as in *Asphondylia sarothamni*, figured by Winnertz (Linn. Entomol. vol. VIII, Tab. I, f. 6). I found these galls on Lloyds Neck, Long Island, in September, but did not succeed in rearing the fly.

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## ON NORTH AMERICAN SPECIES OF PLUSIA.

BY A. R. GROTE, A. M., BUFFALO, N. Y.

### *Plusia monodon*, n. s.

Allied to *precativæ* and *gamma*. It differs by the distinct yellow shaded geminatè t. p. line having but a single acute tooth at vein 2; the line running more outwardly at this point, and being otherwise even throughout. Also by the shape of the metallic spot; this is open, silver

bordered, running outwardly obliquely from the median vein to the t. p. line at vein 2, sub-triangulate, the bordering lines fusing outwardly to a point, forming an oblique uneven V. The median space below and beyond the metallic mark is shaded longitudinally with obscure chalceous. The reniform is a narrow angulate dark lunule. The orbicular incomplete, whitish edged. The subterminal is more dentate than usual, and shaded anteriorly with dark brownish, with a golden reflection inferiorly. The median space is dark brown above the metallic mark and below the median vein and the base of vein 3; also inferiorly. The ground color is a purple gray shaded with brown. The t. a line is even, rounded, distinct, like the t. p. line in color. Hind wings rather pale, with blackish hind borders; beneath pale grayish, not yellowish, and without the lines of *preactionis*.

*Expanse* 36 m. m. Cape Breton. From Mr. Roland Thaxter.

*Plusia pseudogamma, n. s.*

Like *gamma*, but with a more contrasted color of fore wings. The t. p. line more rounded opposite the cell, succeeded by a white shading which appears again over internal angle without the s. t. line. The metallic mark is like *gamma*, but broader and pure silvery. The space about the spot is shaded with deep brown. Inferiorly the median space is entirely chalceous. The t. p. line is stained with reddish and the inward tooth opposite the extremity of the metallic mark is deeper than in its ally. The s. t. line is less dentate than usual, preceded by a chalceous and brown shading. Hind wings pale gray with blackish borders. Abdomen with dorsal tufts. Beneath obscure gray, unlined. This species has a strangled reniform with narrow pale annulus, like *gamma*, while the orbicular is less conspicuous and the t. p. line is more even superiorly than in its ally.

*Expanse* 42 m. m. Cape Breton. From Mr. Roland Thaxter.

*Plusia Dyaus, n. s.*

Between *verruca* and *preactionis*. Ground color pale olive-lilac gray. Collar and face of dorsal tuft olivaceous. Metallic spot an obtuse silver open mark, succeeded by a well sized detached silver spot. Orbicular with a pale shaded annulus, inconspicuous. Reniform incomplete, with a deep outer constriction and here outlined in pale gold, the annulus being perceivable inferiorly; beyond the reniform the cell is chalceous and inferiorly the median space is golden shaded, the wing about the metallic

marks being olive brown. Terminally the wing is washed with pale golden and there are two deeper golden shades resting on the whitish terminal line below the apex, the lower triangulate. The s. t. line is also superiorly preceded by darker shades. The ordinary lines are pale golden. Fringes pale, dotted at base, with a more prominent black dot opposite vein 3 and the triangulate deeper gold mark. Hind wings largely blackish fuscous, with pale fringes. Beneath with double lines. Nearest to *precaionis*, a little smaller, paler, not purple colored, the median space all golden inferiorly.

*Expanse* 34 m. m. Texas, Belfrage, Nov. 2, No. 142.

Also from Jamaica, Mr. Thaxter, No. 2,076.

It may be distinguished from *verruca*, also, by the subterminal line not forming a broad tooth apically below costa, but being here rounded to the sinus opposite the cell.

*Plusia pedalis*, n. s.

Allied to *gamma* and *ou*. Hind wings wholly blackish fuscous, with whitish fringes lined at base. Fore wings more uniformly dark colored with the ornamentation of *ou*, but with the yellowish open metallic mark short, broad and somewhat foot-shaped, without any accompanying dot. Beneath dark, with median common line.

*Expanse* 36 m. m. Kansas, Prof. Snow, No. 273.

The following is a list of our North American species, following the method of Dr. LeConte's Catalogue of N. A. Coleoptera, adopted in Part 1 of the List of North American Lepidoptera by the late Mr. Coleman T. Robinson and myself, published in Philadelphia, Sept., 1868.

*Plusia Hubn.* (1806).

*Type*, *Plusia chrysitis* of Europe.

- |                                |                               |
|--------------------------------|-------------------------------|
| 1— <i>purpurigera Grote.</i>   | 6— <i>contexta Grote.</i>     |
| <i>Dera purp.</i> Walk.        | 7— <i>Putnami Grote.*</i>     |
| 2— <i>aerea Guen.</i>          | 8— <i>striatella Grote.</i>   |
| <i>Agrapha acerca</i> Hübn.    | 9— <i>formosa Morr.* *</i>    |
| 3— <i>aereoides Grote.</i>     | <i>Leptina form.</i> Grote.   |
| 4— <i>balluca Guen.</i>        | 10— <i>thyatiroides Guen.</i> |
| <i>Dyachrisia ball.</i> Geyer. | 11— <i>mappa G. &amp; R.</i>  |
| 5— <i>metallica Grote.</i>     | 12— <i>bimaculata Steph.</i>  |
| <i>Pl. bractea</i> † Grote.    | <i>Pl. u-brevis</i> Guen.     |

- |                                 |                                      |
|---------------------------------|--------------------------------------|
| 13—biloba <i>Steph.</i>         | 27—oxygramma <i>Guen.</i>            |
| 14—verruca ( <i>Fabr.</i> )     | <i>Autographa oxyrr.</i> Geyer.      |
| 15—Dyaus <i>Grote.</i>          | 28—mortuorum <i>Guen.</i>            |
| 16—precaionis <i>Guen.</i>      | 29—8-scripta <i>Sanborn.</i>         |
| 17—latielavia <i>Morr.</i> —    | 30—viridisignata <i>Grote.</i>       |
| 18—labrosa <i>Grote.</i>        | <i>viridisigma</i> <i>Grote.</i>     |
| 19—monodon <i>Grote.</i>        | 31—epigaca <i>Grote.</i>             |
| 20—pseudogamma <i>Grote.</i>    | 32—ampla <i>Walk.</i>                |
| 21—gamma ( <i>Linn.</i> )       | 33—simplex <i>Guen.</i>              |
| 22—ou <i>Guen.</i>              | 34—pasiphacia <i>Grote.</i>          |
| 23—fratella <i>Grote.</i> * * * | 35—diasema <i>Dalm.</i> —            |
| 24—u-aureum <i>Boisd.</i> —     | 36—parilis ( <i>Hüb.</i> )           |
| 25—pedalis <i>Grote.</i>        | 37—alticola <i>Walk.</i>             |
| 26—brassicæ <i>Riley.</i> * * * | 38—Hochenwarthi ( <i>Hoch.</i> )     |
| <i>Pl. ni</i> ‡ <i>Grote.</i>   | <i>Noctua divergens</i> <i>Fabr.</i> |
|                                 | 39—devergens ( <i>Hüb.</i> )—        |

The following species cannot as yet be identified from published data concerning them: *Plusia flagellum*, *indigna*, *selecta*, *secedens* of the British Museum Lists; *Plusia falcigera* and *rectangula* of Kirby; *Noctua omicron* of Linné.

## ON SCOPELOSOMA AND ALLIED GENERA.

BY A. R. GROTE, BUFFALO, N. Y.

### *Eucirroedia*, n. g.

The shape of the fore wings is like *Scoliopteryx*, and the ornamentation is like that genus, while the stigmata are well defined, the course of the lines being similar in the two genera. This is a much more robust form

\* This species seems to vary in color; one specimen is very like *festucae* in this respect. A character is offered by the t. p. line, which runs inwardly to a point below the discal dot in *festucae*, and allows of an extension of the silvering within this tooth. In *Putnami* this sinus is rounded and shallower.

\*\* Unknown to me since 1866, when I described the species and at once returned the type to my friend Mr. Treat; I indicated at the time the structural difference in the length of the palpi. Both this species and *thyatiroides* are apparently mimetic of the *Bombyciæ*.

\*\*\* Contrary to Mr. Morrison's supposition, I regard this as a valid species, differing specifically from the larger *P. ou*, taken by myself in Alabama. The t. p. line is straighter, the dot of the metal mark is separate, the size is uniformly smaller.

\*\*\*\* Dr. Speyer regards this species as valid on new characters; a Californian specimen does not differ from my Eastern material.

than the European *Atethmia xerampelina*, and has different shaped, more dentate primaries. Eyes naked, tibiae unarmed. *Eucirroedia pampina* (Guen.) has the colors of *Fodia*. I would restrict *Xanthia* in North America to the species *X. togata* (silago), also found in Europe; the genera might follow in this manner: *Glaea*, *Xanthia*, *Fodia*, *Eucirroedia*, *Scoliopteryx*, *Scopelosoma*, *Lithophane*. I, at one time, identified *X. aurantiago* Guen., but have now no specimens before me.

#### *Scopelosoma.*

The North American species are now eight in number, *sidus* Guen. being unknown to me, unless the latter is = *vinulenta*. The difficulty has arisen in that *Walkeri* varies in color, so that certain specimens seem to accord with M. Gueneé's comparative description of *sidus* as well as *vinulenta* does. However, I am persuaded that it is more probable that *sidus* is founded on an individual of *vinulenta*, as I at first believed, and I only wait some more positive data to restore the name. It is necessary for the purpose to compare M. Gueneé's type. The N. Am. species are then as follows:

*Pettiti* Grote, *Graefiana* Grote, *chromatica* Grote, *vinulenta* Grote (= *sidus*?), *Walkeri* Grote, *Morrisoni* Grote, *devia* Grote. No species are yet known from California.

#### *Litholomia, n. g.*

In the shape of the primaries there is a marked resemblance to *Lithophane* and *Scopelosoma*, the costal margin being straight. The inner margin is straight and nearly as long as the costal, the exterior margin being slightly and evenly rounded; the wing is nearly of an even width throughout. The tibiae are unarmed. The eyes are naked, lengthily lashed. The head is sunken, or oppressed. The male antennae simple, ciliate beneath. The thorax is somewhat rounded and full, approaching *Lithomia*, not quadrate as in *Lithophane* and *Calocampa*. The abdomen is untufted, somewhat flattened, with a dorsal carina, not as rounded as in *Lithomia*. The palpi are short, not exceeding the front. Ornamentation like *Lithophane* and allied genera.

#### *Litholomia napaea.*

Antennae white at the base. Cinereous; markings distinct. Lines double, black, distinct, perpendicular. T. a. line thrice waved, component lines divaricate, equally distinct. Orbicular shaded with white,

ill defined, below it a very narrow line descends towards internal margin beyond; the distinct, slightly waved, broad, median shade line crosses the wing; this line is accompanied by a diffuse shading which in one specimen is tinged with ferruginous. Reniform filled with blackish, forming a larger rounded inferior spot. T. p. line nearly perpendicular, very slightly exserted opposite the cell, the inner line extending outwardly dentedly on the veins. Subterminal line irregular, whitish, preceded by a blackish shading, denticulate. An even black terminal line, obsolete interrupted; fringes even, gray, dotted with blackish. Secondaries blackish fuscous with paler fringes. Beneath paler fuscous, with blackish discal spot and median, irregular, denticulate line; on fore wings the median line is distinctly and broadly inaugurated in deep black, near the discal mark, but afterwards becomes obsolete; terminal space paler than the rest of the wing. Collar with a black line above; behind, on the dorsum are two more faint lines across the base of the tegulae.

*Expanse* 27 m. m. *Hab.* St. Catherines, Mr. Geo. Norman, No. 226, 1115; Quebec, M. Bélanger.

Identified by Mr. Morrison, from a photograph, as his *Scopelosoma napaea*.

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### AGROTIS RUBIFERA, N. S.

BY A. R. GROTE, BUFFALO, N. Y.

Allied to *rubi* and *conflua*. Taken by Mr. Norman in Canada, and considered to be identical with the European *rubi* in former writings. Abdomen and hind wings paler than in *conflua*. Fore wings of a darker purple-reddish brown; t. a. line geminate, a black spot before the orbicular and usually the disc between the spots is black stained. Claviform indicated. Subterminal pale, more waved, but like *conflua*, differing from *rubi*; beneath the common line is not diffuse as in *conflua*. Thorax darker than fore wings, with front and palpal tips pale. *Expanse* 28 m. m.

Dr. Speyer, to whom I sent a specimen, regards the species as different from *rubi*, but finds no characters to separate the European *Xanthia togata* from a N. A. specimen determined as this latter species, sent to him at the same time.



LEPIDOPTERA COLLECTED AT GODBOUT RIVER, NORTH  
SHORE OF THE ST. LAWRENCE, DURING THE  
SEASONS OF 1874-75.

BY NAPOLEON CORNEAU, RESIDENT.

<i>Papilio brevicauda</i> Saunders	.....9th June, rare.
“ <i>turnus</i> Linn.	.....20th June, rare.
<i>Pieris rapæ</i> Linn.	.....26th June, rare.
“ <i>borealis</i> Scudder.	.....22nd June, uncommon.
<i>Colias interior</i> Scudder.	.....15th July, rare.
“ <i>philodice</i> Godt.	.....14th July, rare.
<i>Vanessa antiopa</i> Linn.	.....2nd June, common.
“ <i>J-album</i> Bois.	.....22nd Sept., rare.
“ <i>Milberti</i> Godt.	.....29th May, rare.
<i>Pyrameis atalanta</i> Linn.	.....5th July, common.
“ <i>huntera</i> Smith.	.....15th July, rare.
“ <i>cardui</i> Linn.	.....24th June, rare.
<i>Argynnis atlantis</i> .	.....15th July, common.
“ <i>myrina</i> .	.....7th July, rare.
“ <i>bellona</i> .	.....8th June, rare.
<i>Melitæa tharos</i> var. <i>Batesii</i> .	.....16th July, common.
<i>Limenitis arthemis</i> Godt.	.....15th July, common.
<i>Grapta progne</i> .	.....29th May, rare.
<i>Lycæna lucia</i> Kirb.	.....11th June, common.
<i>Glaucopsyche Couperi</i> Grote.	.....23rd June, common.
<i>Hesperia mandan</i> Edw.	.....July, rare.

Good specimens of the above can be obtained from William Couper, 67 Bonaventure Street, Montreal.

NOTES ON THE LARVA OF CATOCALA ILIA, CRAM.

BY F. B. CAULFIELD, MONTREAL, P. Q.

On June 15th, 1874, Mr. Wm. Couper, while collecting on Montreal Mountain, found a larva on Oak, which he kindly gave to me. It appeared fully grown, and was a little over two inches in length.

Body onisciform ; general color, gray. Head heart-shaped, strongly bilobed, pale green, with white blotches, twelve short black hairs in front, and near the top of the head there are four small tubercles of a white color, each of which is tipped with a black hair ; head surrounded with a broken border of dark streaks. Upper surface greenish gray, with an interrupted dorsal band of delicate blue gray spots, the whole minutely spotted with black. On the second segment are twelve small white hairs, four on fourth, fifth and sixth, six on seventh, four on eighth to twelfth, six on thirteenth. Sides delicate blue gray, marbled with spots of green and black, with a broken lateral band of a green color ; spiracles yellowish white, with a black ring ; behind each is a large wart tipped with a black hair. A fringe of short white fleshy filaments close to under surface. Under surface pink, with a row of transverse black spots, larger and darker on the middle segments. Feet and prolegs grayish white, spotted with green and black.

This larva was very sluggish during the day, but would fling itself about in a frantic manner if touched ; at night it was very restless, creeping about the box continually. It fed freely on Oak.

Spun up in a leaf June 18th, 1874. Imago emerged latter end of July, 1874, and proved to be *Catocala ilia* Cram.

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## TINEINA FROM CANADA.

BY V. T. CHAMBERS, COVINGTON, KENTUCKY.

(Continued from p. 147.)

### GELECHIA.

#### *G. albomaculella*. *N. sp.*

A single specimen with the palpi broken off. Head pale yellowish tinged with fuscous. Thorax brown, with the apex whitish. Fore wings gray brown, under the lens appearing yellowish white and brown in irregular blotches, with a distinct white spot on the fold at about the basal fourth, the usual opposite white costal and dorsal spots at the beginning of the ciliae, a small white spot at the apex, and two others at the base of the dorsal ciliae. Ciliae sordid white, with a narrow brown hinder marginal line about their middle. Legs and abdomen beneath irregularly blotched with yellowish gray and dark brown. *Al. ex.*  $1\frac{1}{2}$  inch.

*G. niveopulvella. N. sp.*

*Palpi simple; third joint slender and longer than the second, dark brown; the second hoary at the tip; the third whitish on the upper surface at the base.* Head brown, dusted with white, with a row of white scales across the forehead between the eyes. Antennae brown. Thorax brown, densely dusted with white, especially about the middle, where the white prevails. To the eye the fore wings appear very dark brown, with a white spot on the disc before the middle and two or three small ones behind the middle, and an irregular white fascia posteriorly angulated at the beginning of the ciliae; under the lens the wing appears to be pretty densely dusted with white and the spots are only aggregations of the dusting. Under surface and legs irregularly marked with dark brown and gray, and the tarsi are annulate with white. *Al. ex.*  $1\frac{1}{8}$  inch.

*G. bicristatella. N. sp.*

*Palpi simple, second joint as long as third, and white on the inner surface and tip; outer surface dark brown; third joint ochreous, with a dark brown annulus about the middle.* Antennae ochreous, annulate with brown. Fore wings pale ochreous, dusted and suffused with brown. There is an oblong tuft of dark brown raised scales on the fold, and a short brown streak between it and the dorsal margin. Another tuft of brown scales at the end of the cell, and the apical part of the wing is dark brown. Ciliae stramineous, with a narrow brown hinder marginal line about the middle of those of the dorsal margin. *Al. ex.*  $1\frac{1}{8}$  inch.

*G. Belangerella. N. sp.*

*Second joint of the palpi a little swollen towards the apex, and the third as long as the second; second joint pale gray, third pale ochreous with a brown annulus before the middle and another before the tip.* Head gray. Antennae brown. Thorax and fore wings gray, with a dark brown streak along the fold and two or three small spots about the middle of the wing and two more at the end of the cell slightly raised above the surface. There is a row of eight blackish spots around the apex. Hind wings somewhat sinuate beneath the tip, pale grayish fuscous. Legs dark brown; tarsi annulate with white. *Al. ex.*  $1\frac{1}{8}$  inch.

LEUCOPHYNE, *gen. nov.*

Second joint of the labial palpi three times as long as the short conical third joint; the second joint projects nearly straight in front of the

head, and is clothed with loose, somewhat spreading scales at its apex, but can scarcely be called tufted; the third joint is slightly recurved. No maxillary palpi; tongue scaled and of moderate length. Face full, wider than long, somewhat retreating. Eyes globose, moderate. Vertex short. Antennae simple (as in *Gelechia*).

Fore wings lanceolate. Cell rather narrow, closed. Four marginal veins proceed to the costal margin, the first from about the middle of the cell and much longer than the others, which proceed from the apical part of the cell, the fourth being furcate on the costa before the apex; the median sends four branches to the dorsal margin, the last of which attains the margin near the apex, opposite to the last subcostal marginal vein; submedian furcate at the base; the costal attains the margin before the middle. There is nothing in the fore wings to separate it from *Gelechia*.

Hind wings lanceolate, narrower than the fore wings, resembling in form and neuration the wings of *Holocera*, and yet more those of *Plutella cruciferarum*. The costal vein attains the margin before the middle; the subcostal proceeds straight to the margin before the apex; the discal vein does not touch the subcostal, but terminates at its superior branch, which behind the end of the cell is connected with the subcostal by a very short transverse veinlet, immediately behind which it becomes furcate, delivering both branches to the dorsal margin before the middle; anteriorly it runs through the cell, parallel and close to the subcostal, but becomes obsolete before it reaches the middle of the cell. The median is three-branched and rounds gradually into the discal, which rounds up anteriorly to its superior branch. Submedian distinct.

*L. tricristatella*. *N. sp.*

Palpi reddish brown, sparsely dusted with white, which forms three very narrow and indistinct annulations on the third joint. Face pale yellowish, iridescent. Head and thorax reddish brown. Patagia and basal portion of the dorsal margin of fore wings ochreous yellow, with a small reddish brown tuft within the dorsal margin of the wing, not far from the base; remainder of the wing dark reddish brown, with a large erect tuft on the fold about midway the length of the wing, and a transverse tuft covering the discal vein. Ciliae of mixed brown and whitish scales, and paler than the wing. Legs brown, the tarsi annulate with whitish. The posterior tibiae with a whitish spot about the middle of the outer surface and the tip white. *Al. ex.*  $\frac{3}{4}$  inch.

## TINEA.

*T. marmorella*. *N. sp.*

Head and palpi yellowish white ; the second joint of the palpi brown on the outer surface. Thorax and fore wings white, marbled with dark brown spots, which are confluent, the basal fifth being white, except a brown spot on the base of the costa, one on the base of the dorsal margin, one on the fold and one between it and the dorsal margin ; in the remainder of the wing the brown prevails ; one of these dark brown spots is on the costa before the middle and reaches the fold, and another about the middle of the costa does not quite reach the fold, and behind it along the costa and around the apex is a row of distinct and separate dark brown spots, five of which are on the costal margin. There is a dark brown hinder marginal line extending through the middle of the dorsal ciliae, and the ciliae behind it are dusted with black. *Al. ex.*  $\frac{3}{8}$  inch.

*T. minutipulvella*. *N. sp.*

Outer surface of the second joint of the palpi dark brown. Palpi otherwise and the head white, with a sordid brownish spot between the antennae. Antennae yellowish white, annulate with brown. Thorax and fore wings white, minutely but distinctly dusted with pale brown, the dusting along the costa aggregated into minute brown spots, and also along the base of the dorsal ciliae, which are white flecked with pale brown. Hind wings grayish fuscous. Dorsal surface of the abdomen grayish brown, with a distinct dark brown line along each side. Under surface whitish ; tip pale sulphur yellow. Legs brown on their anterior surfaces, whitish behind and the tarsi annulate with white. *Al. ex.*  $\frac{5}{8}$  inch.

*T. marginimaculella*. *N. sp.*

Outer surface of the palpi brown ; inner surface and face white ; vertex pale sulphur yellow, or, perhaps, rather deep stramineous. Maxillary palpi grayish white. Antennae silvery gray. Thorax and base of the costal portion of the wing brown, that color also being extended as a streak or series of spots along the fold to the dorsal margin and at the base of the dorsal ciliae. There are four brown spots on the costal margin, the last of which is placed at the beginning of the ciliae, and a row of brown spots extends at the base of the ciliae entirely around the apex ; there is a dark brown spot on the middle of the disc and another at the end of the cell. Ciliae and hind wings silvery pale gray. Abdo-

men brown, the apex silvery. The first pair of legs is brown on the anterior surface, and the tarsi are annulate with white. Middle and hind legs silvery gray. *Al.* 2x.  $\frac{1}{2}$  inch.

In former pages of this journal I have described a few other species from Canada among species from the United States. In all of these instances the *habitat* is given, except in the single instance of *Cecophora boreasella*, where I find that I have omitted it. The single specimen from which it was described was unfortunately destroyed while under examination. It was received from Mr. Saunders, Editor of this journal, and was labelled No. 399. I do not know whether Mr. Saunders has other specimens or not.

(The specimen sent Mr. Chambers was the only one in my possession.—W. S.)

#### NOTES ON AN INTERESTING EASTERN VARIETY OF *ONCOCNEMIS CHANDLERI*.

BY H. K. MORRISON, CAMBRIDGE, MASS.

Mr. Fred. Tepper has just sent me for examination a very interesting pair of insects taken on the sea shore of Long Island, which approach so nearly the type of *O. chandleri* in my collection from the mountains of Colorado, that I cannot separate them specifically, although there are certain differences, which I give below. The capture is the more valuable since the species of *Oncocnemis*, so far as known, inhabit only the mountains of Europe, Siberia, Colorado and California.

I propose the name *riparia* for this form, and in case the study of larger series of specimens should show it to be a good species, that name can be retained for it.

The principal difference between the insects is in the color of the posterior wings; in *chandleri* ♂ they are white with a broad black even border; in *riparia* ♂ they are entirely white, except that the veinlets are stained with black and there is a slight gray shading at the costal angle; this difference is seen still more distinctly beneath, and then on the anterior wings as well. The posterior wings of *riparia* ♀ above have a dark gray-black border, but beneath they are white as in the male.

In the Coloradan species the outer surface of all the tarsi is checked with black and white ; in the Long Island one these markings are almost entirely obsolete. The markings of the anterior wings of the former species are more prominent and better defined, the ordinary spots are not so elongate, and are united by a short, thick neck, and the basal dash is shorter and thicker ; otherwise the markings are much the same.

The female of *riparia* presents a curious structure of the end of the abdomen, perhaps for the purpose of retaining the male ; the end of the abdomen is bare of scales, but near the tip there is a ring of rather long hairs, followed by a ring of stout curved spines ; such a structure is, so far as I know, unique in the Noctuidæ.

I have not been able to observe the female of *chandleri*, so that I do not know whether it is armed in the same way.

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## DESCRIPTIONS AND NOTES ON THE NOCTUIDÆ.

BY H. K. MORRISON, CAMBRIDGE, MASS.

*Agrotis decolor* Morr.

Proc. Boston Soc. Nat. Hist., vol. 17, p. 162.

*Agrotis campestris* Grote.

CAN. ENT., Oct., 1875.

Having received many additional specimens of this species, I am able to give below a fuller description than my original one, and to compare it with its two allies, *geniculata* Grote and *tessellata* Harr.

*A. decolor* can at once be distinguished from *tessellata* by the dark purple ground color, frequently overspread in the median and basal spaces with cinereous, and by the absence of any gray tint ; from *geniculata* the best character which I have observed to separate it is the color of the thorax, which in *decolor* is brown, having usually the prothoracic and meta-thoracic tufts yellow, and having always a yellow spot at the base of the tegulæ ; in the former the thorax is simply cinereous and black.

The following are its characters drawn from a large series of specimens from Maine, Canada, New Hampshire, New York and Massachusetts :

Tibiæ spinose. Collar with a lobate central black line. Thorax usually brown, lighter than the wings, having frequently an anterior furrowed tuft and always a posterior tuft. Abdomen smooth, rounded, with the ovipositor of the female slightly exerted. Color of the anterior wings very variable, usually brown with a distinct purple tinge, occasionally the basal and median spaces are suffused with cinereous, and then the subterminal and terminal are dark and contrasting; in other specimens the wings are entirely purple black, in others purple brown, in still others the median space is dark purple brown and the basal and subterminal space bright even yellowish brown; this seems to be the most common form. The ordinary lines are distinct, black and geminate; the usual spots are shaped as in *tessellata*, the space between them is usually filled with black; a black line at the base of the fringe.

Posterior wings whitish or light gray, with a broad, black, marginal band; in the males this band is even and well defined; in the females usually suffuse.

Expanse 30-37 m. m.

I regard this as a northern mountainous species, belonging to the Canadian fauna.

*Caradrina meralis*, nov. sp.

Expanse 31 m. m. Length of body 13 m. m.

This is a comparatively stout, inconspicuously marked species, differing materially from *meskei*, *miranda* and *tarda*, the other species of the genus. Eyes naked. Tibiæ unarmed. Palpi black, tipped with white. Antennæ of the male pubescent. Front, vertex, collar and thorax gray. Abdomen untufted. Anterior wings grayish white; the markings black and quite faint; traces of the half-line; the interior line faint, oblique; exterior line rounded, obsoletely dentate; orbicular spot reduced to a black dot, the reniform forming a conspicuous luniform black mark; subterminal line absent; a partially obsolete series of black dots at the base of the fringes.

Posterior wings white, immaculate, except that the discal dot shows through from below.

Beneath gray, the anterior wings suffused with black, strong discal dots and a common median line, best marked on the costa.

*Hab.* Maine. Collection H. K. Morrison.



*Hadena fibulata* Morr.

Bull. Buff. S. N. S., 1874.

I have specimens of this species from Maine and Canada, which offer considerable variation; it is probable that it should be referred to *Hadena* rather than *Dryobota*; it seems to be in a measure intermediate between the two genera.

*Hadena norna*, nov. sp.

Expanse 23 m. m. Length of body 15 m. m.

This is one of the small, slender species of *Hadena*, belonging to the little sub-genus *Oligia*, as defined by Mr. Grote.

Eyes naked. Antennæ simple. Thorax and abdomen smooth and untufted. Anterior wings light brown, shaded with darker brown in the basal, terminal and central portion of the median spaces; sub-basal space light; interior line simple, fine and distinct, forming three prominent lobes; orbicular spot absent; reniform present, situated in the centre of the median dark space, white and strongly contrasting; exterior line also simple and distinct, incepted on the costa before the reniform; a distinct costal shade before the inconspicuous subterminal line; a black line at the base of the fringe. Posterior wings yellowish gray, with a fine median line. Beneath the anterior wings are blackish, except along the costa and inner margin; the posterior wings are yellowish, both with a median line and the latter with a terminal shade. *Hab.* Maine. Coll. H. K. Morrison.

Easily separated from its allies by the conspicuous white reniform spot.

## GRAPTA SATYRUS (EDWARDS).

BY C. W. PEARSON, MONTREAL, QUE.

On Dominion Day, while at Chateauguay Basin, I collected a number of larvæ which were found feeding on nettle. I secured them in my larva box, and took a quantity of the food-plant with me. When I reached home in the evening I was too busy to examine them carefully, and the next day I found that quite a lot of them had changed to chrysalids.

Among those that had not changed were a couple of *P. atalanta*, and the rest were all *V. Milberti*, a great many of which were infested with parasites, and in a few days all that escaped these foes had changed. In about ten or twelve days they began to emerge, and on opening the box on the 13th, I was much surprised to find one specimen of this beautiful *Grapta* hanging from the empty case. I did not know what it was until I compared it with an example from California. On the 15th also, along with several specimens of *Milberti*, I found another in the box, and comparing both of them with my example from California, I cannot find any difference except that they are in better order. Chateauguay Basin is about fifteen miles south of here, and has never been visited much by collectors, but we have recorded from that locality three insects which have never been taken here (Montreal), viz., *A. bellona* and *E. columbina*, taken by Mr. Jack, and *G. satyrus*, taken by myself.

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#### ANNUAL MEETING OF THE ENTOMOLOGICAL SOCIETY OF ONTARIO.

The fifth annual meeting of the above society was held, according to announcement, in the Court House, in the City of Ottawa, Ontario, on the 22nd day of September, 1875, at 3 p. m. The reports of the officers were read, and a copy of the President's address promised to be placed at the disposal of the printing committee for publication.

The following officers for the ensuing year were then elected :

*President*—W. Saunders, London; *Vice-President*—Rev'd C. J. S. Bethune, M. A., Port Hope; *Secretary-Treasurer*—J. H. McMechan, London. *Council*—Wm. Couper, Montreal; R. V. Rogers, Kingston; J. Pettit, Grimsby; J. M. Denton and E. Baynes Reed, London. *Editor of Entomologist*—W. Saunders. *Editing Committee*—Rev'd C. J. S. Bethune, M. A.; G. J. Bowles, Montreal; E. Baynes Reed. *Library Committee*—W. Saunders, E. Baynes Reed and J. H. McMechan. *Committee on Centennial Exhibition*—W. Saunders, Rev'd C. J. S. Bethune, M. A., J. H. McMechan. *Auditors*—G. Geddes, Chas. Chapman, London.

The various reports of the officers and from the Branches of the Society will be found in the forthcoming Annual Report.

## THE USEFULNESS OF SPIDERS.

BY JOHN G. JACK, HILLSIDE, CHATEAUGUAY BASIN, Q.

I have often wondered why people have such a dislike for spiders, and why, instead of killing, they are not placed upon trees and plants, for they are exceedingly fond of a great many insects injurious to vegetation. I have seen them very busy devouring the interior of a chrysalis of *Clisiocampa*, and in winter, when out of doors, they generally hibernate under the loose bark of trees, in which case all the beetles and chrysalids in the vicinity are sure to be found destroyed, only the shells remaining. I notice that the Lady-birds (*Coccinella*) hibernate beside them in safety, and are never destroyed, living even within their webs. Whether this is a natural taste of the spider or an instinct I can only leave for Entomologists to determine; the fact however remains.

It is well to encourage any insect that can destroy the *Clisiocampa*, which is likely to cause great mischief the coming season if not destroyed in the rings. In our orchard of 1000 trees, my brothers and I have, after school hours, gathered by actual count about 8000 rings, and still can take off two or three hundred in an hour's time. We are paid a cent per dozen by father, and think it a good thing. The youngest boy is only five years old, and he has frequently gathered 60 or 70 rings after school, even in the short winter afternoons. "Eternal vigilance is the price of"—apples.

## MISCELLANEOUS.

*Correction and Errata.*—The following was received from Mr. W. H. Edwards too late for insertion in our last number: "After the mss. of my paper was sent to the printer, I discovered that I had overlooked the fact that *myrina* is expressly enumerated by Hübner under his coitus *Argynnis*. Also, in reference to the same paper, the following errata: Page 193, lines 14 and 17, for 'class' read 'clan.'"

*Pterophorus periscelidactylus.*—On the morning of the 31st October, while the thermometer was several degrees below freezing, I captured a healthy specimen of this species. Was not that very late for it?—R. VASHAN ROGERS.

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Mr. J. M. Grant, of Crowelton, Buffalo, W. Nebraska, desires to arrange some exchanges with Entomologists in Ontario or Québec. Parties desiring to exchange will please write him.

Mr. T. G. Schanpp, 25 Broadway, Brooklyn, E. D., N. Y., has many duplicates in Coleoptera from New York, Texas, Louisiana, Florida, &c., which he desires to exchange for specimens from the north; collects only in Cicindelidæ and Carabidæ.

Mr. W. V. Andrews, 36 Boerum Place, Brooklyn, N. Y., has a number of European, Australian and New Zealand Coleoptera, which he wishes to exchange for species purely Canadian or Arctic.

Mr. George P. Cooper, of Topeka, Kansas, has a large number of Western insects, which he would be glad to exchange for Canadian insects

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#### BOOK NOTICES.

Remarks on Canker Worms and Description of a New Genus of Phalaenidæ, by Chas. V. Riley, 8vo., 8 pp., with eight wood-cuts. Through the kindness of the author we have been supplied with an advanced copy of the above paper, in which the many points of difference between *vernata* and *pometaria* are clearly pointed out; the differences in structure being sufficiently great to require, in the author's opinion, the erection of a new genus for *vernata*.

The Lepidopterist's Calendar, by Joseph Merrin, second edition, price 3s. 6d., published by H. Marsden, Gloucester, England. This is an excellent little work of 250 pages, giving the time when the various species of British Lepidoptera appear in the egg, larval, pupal and imago states, with the food plant and habitat, all thoroughly worked up to the present time. Mr. Marsden has appointed Mr. W. V. Andrews, 36 Boerum Place, Brooklyn, N. Y., as his American agent for the sale of this work.

Bulletin of the Buffalo Society of Natural Sciences, Vol. iii, No. 1. Contains Description of a New Crustacean, already referred to in our

August No.; a paper on Texan Lepidoptera, by Dr. Leon F. Harvey; on New species of *Eusarcus* and *Pterygotus*, by A. R. Grote and W. H. Pitt, and Part II of Synopsis of Fungi of the United States, by M. C. Cooke, M. A.

The Structure and Transformations of *Eumacus atala*, by Samuel H. Scudder, 4to, 8 pp., with one excellent lithographic plate, from the Memoirs Bost. Soc. Nat. Hist. Notice of the Butterflies and Orthoptera collected by Geo. M. Dawson, as Naturalist of the B. N. A. Boundary Commission, 8vo, pp. 5, by Samuel H. Scudder. We tender the author our sincere thanks for copies of the above valuable papers.

The Scientific Monthly—a magazine devoted to the Natural Sciences; E. H. Fitch, Editor and Proprietor, Toledo, Ohio, Vol. 1, No. 1. This new claimant for public favor is an 8vo journal of 48 pages (the first number, owing to an accident, is only 40 pages). It contains several papers of interest to the Naturalist, among which we would especially mention "First Impressions of the Bird Fauna of California, by Prof. Robert Ridgeway." The subscription price is \$3 a year in advance, or 45 cts. a number.

The Cincinnati Quarterly Journal of Science, Vol. II, No. 4, October, 1875. The October number of this valuable quarterly contains two papers on Entomology, one on the Tineina of Colorado, by our esteemed friend and contributor, V. T. Chambers, of Covington, Kentucky; the other on Lepidopterous Larvae, by A. G. Weatherby. Mr Chambers is at present residing in Colorado, and his paper gives the results of personal observations on the Tineina of Colorado, many of which have been taken at altitudes of from 7,000 to 11,500 feet. In it he gives descriptions of twenty-two new species, besides references to others already described. These were all captured or bred from July 20th to Sept. 1st. Among others, Mr. Chambers has taken in this far distant locality *Ecophora borcasella*, first described from specimens sent to him from London, Ont., by the Editor of this journal, and *Argyresthia goodastella*, hitherto known in this country only from specimens captured at Quebec by M. Belanger, thus proving a very wide range for these tiny creatures.

CANADIAN ENTOMOLOGIST.—Having had several of the earlier numbers of our journal reprinted, including index for Vol. I, we are now prepared to furnish full sets of our ENTOMOLOGIST, or any back numbers required.