

451 - 473

ALWAYS BRING THIS BOOK.



*Mr. H. G. Dyar.*

IN ACCOUNT WITH

**J. L. TREMPER,**

DEALER IN

**CHOICE BEEF,**

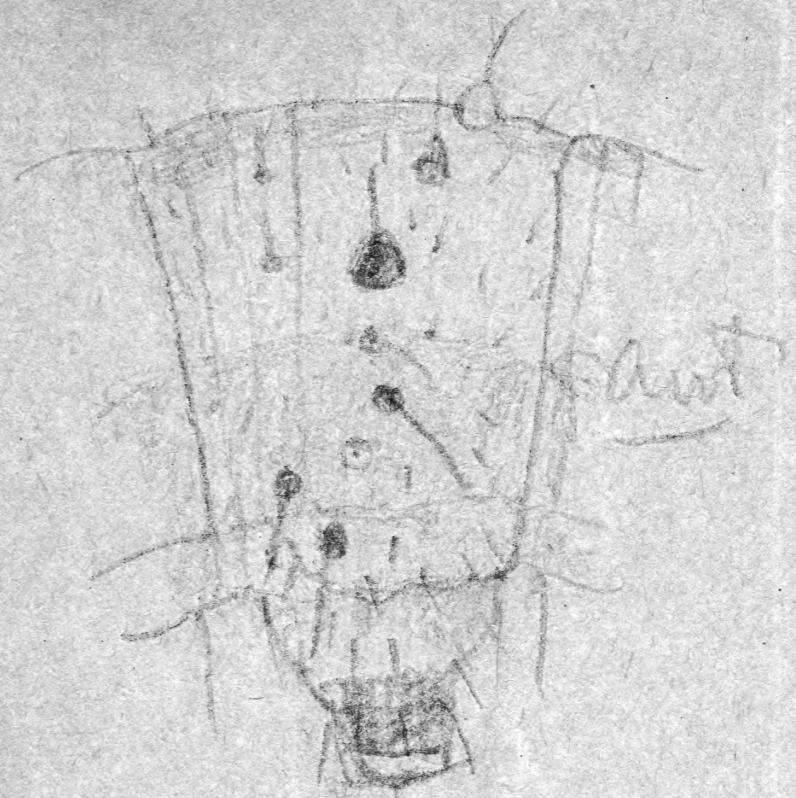
Mutton, Lamb, Veal, Pork,

HAMS, BACON, CORNED BEEF,

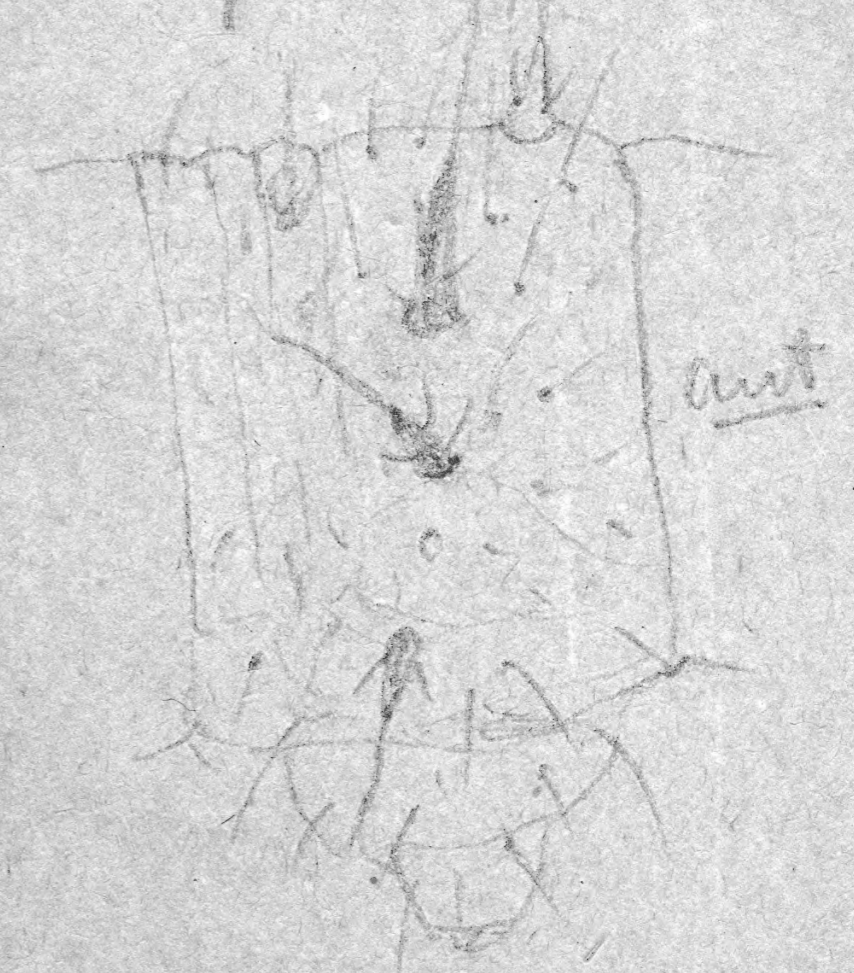
Tongues, &c.

**POULTRY AND GAME**

IN SEASON.



*Vanessa antiopa*  
Stage II



Stage III

July 3	3/4 Deak 25	88
7	1/2 Deak 25	231
11	2/4 Deak 25	68
	2/4 Deak 25	56
14	3/4 Deak 25	219
17	2 Deak 25	50
	1 Deak 25	35
25	8 Deak 25	160
28	10 Deak 25	168
	4 Deak 25	100

- 11.70

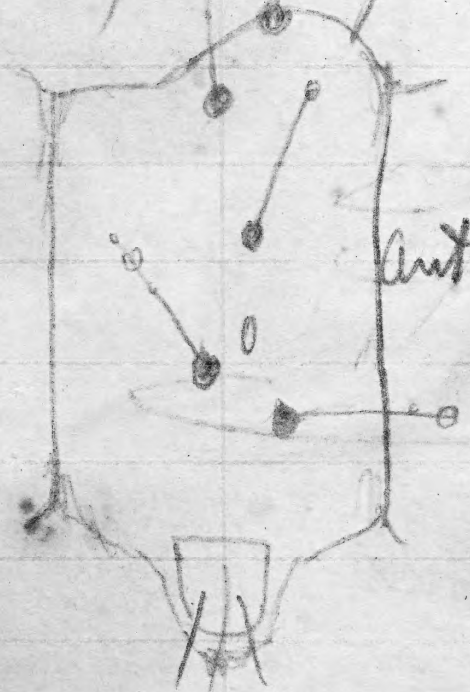
Full Aug 6.90



J. L. Thompson  
Aut. Fla.

*Chrysa defuncta* St I  
Keene Valley, N. Y.  
June 24, 1894

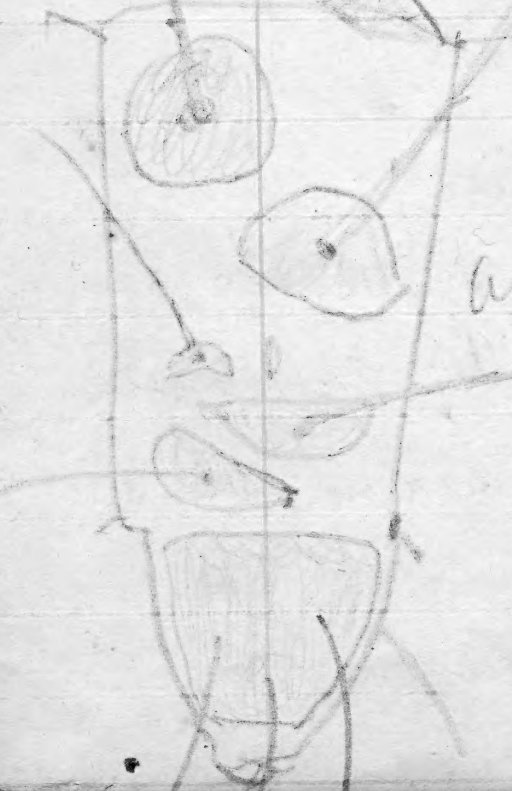
Aug 1	1/2 for Oct 2v	38
	1/2 for Oct 2v	44
4	1/2 for Oct 2v	1 88
6	1/2 for Oct 2v	38
8	2 for Oct 2v	50
	1/2 for Oct 2v	38
11	2 for Oct 2v	50
12	2 for Oct 2v	50
15	5 for Oct 2v	1 10
18	2 for Oct 2v	50
	1 3/4 for Oct 2v	44
22	2 1/2 for Oct 2v	56
25	1 3/4 for Oct 2v	1 16
29	2 1/4 for Oct 2v	63



Ant segment of Schizura unicornis stage I on hazel, Keene Valley, N.Y. June 26, 1894 (See BB 391)

(452)

Sept 1	6 1/4 for Oct 2v	1 38
5	1 1/2 for Oct 2v	38
8	2 1/4 for Oct 2v	69
	1 for Oct 2v	25
	2 for Oct 2v	50
12	5 1/4 for Oct 2v	1 26
19	6 1/2 for Oct 20	1 30
22	6 1/2 for Oct 22	1 43
26	2 1/4 for Oct 2v	50
15	3 for Oct 20	40
	1 1/4 for Oct 2v	31
29	2 1/4 for Oct 2v	69
	4 1/4 for Oct 2v	60
		<u>9 69</u>



Chrysa virginea hatched from ant. yellow sp. also egg on a bush, Keene Valley, N.Y. June 23, 1894 BB 452

Blue Book

451

Eggs of *Hyperparva curvica* on oak from  
 2 mi. S. of Dill road June 22, 1898. Nearly  
 spherical but with flattened base  
 slightly shiny, covered with narrow  
 regularly hexagonal reticulation  
 which become smaller at micropyl.  
 and point, with minute bristles  
 at the junction (use higher power) d. 9  $\mu$   
 Hatched June 23 Hd rounded, a little  
 bulging at ocelli and bases of each  
 lobe, pale brown shiny. w.  
 bases of  $i$  enlarged, forming slight  
 bumps,  $m$  5 and 12 setae long  
 pale glandular with drops at tip.  
 Body translucent yellowish feet all  
 dark red brown the anal ones  
 elevated. Most of lateral area and  
 the whole of 5, 8 and 12 red brown  
 setae with large chitinous brownish  
 bases,  $i$  on ant of its fleshy en-  
 largement, normal,  $iv$  post  $ss$   
 $v$  ant, ( $vi$  absent), chitinous leg plate

a tubercle as vesicle  
 of each lobe

Rounder than edge but go on with to molt  
 2<sup>nd</sup> inst June 26 Hd as in *ipomoeae* (BPS  
 398 II) the bands broad, rather light  
 brown, reducing the ground to rounded  
 spots. Tubercles  $i$  as in *ipomoeae*, mostly  
 with fuscate tip, but only one limb  
 bears a seta;  $ii$  scarcely enlarged,  
 other normal.  $vi$  present,  $v$ - $v$  post,  
 about 8 setae on leg plate,  $i$  on  $5, 7$   
 (9-10 small) and 12 black;  $m$  3, 4, 6, 8  
 11 & 13 yellow, the color extending  
 onto these segs. esp. 2d but laterally  
 on 11 & 13. The rest purplish brown  
 finely mottled with paler. Bases of the  
 feet and feet  $m$  7 dark, the feet  
 and feet 8-10 & 13 very pale. Tubercles  
 $i$  and  $v$  pale except on 5 and 7. Setae  
 brown glandular. Anal feet elevated.  
 Towards end of stage the dorsal area become  
 darker than the lateral forming a band  
 widening on 5, 7, 9-10 and 12. Sides of  
 2-4 dotted with bright white  
 tips of anal feet yellow.

the large one often white tipped

Molt June 30 red slightly lobed high the  
under tubercles as before but rather  
small. Pale yellowish, the ventral  
band on angle of lobe most distinct  
the other including both yellow patches  
on median suture and giving the  
appearance of a cross reticulation  
connecting the bands and repeated  
on side of head; bands all red-brown  
finely mottled with yellow. W. 1.5±  
tubercles enlarged & produced, the  
tip furcate, one limb (usually the  
shorter one) bearing the long glandular  
seta, ii scarcely enlarged, the rest  
normal. On 5-12 there are slight  
humps and on 9-11 the i is less  
enlarged than others. Color purplish  
brown, finely mottled, sides of 3-4  
pale and dorsal region darker  
the darker shade incised by a  
series of bright yellow triangular  
patches including i and ii on joint  
3, 4, 6, 8 (running on 9) 11 and 13

the one on 11 also includes the dorsal  
with yellow spots <sup>ii on 8, 9</sup> and the whole row  
is imperfectly bordered with yellow or  
white the border extending to anal  
feet feet and venter brown, the feet  
lined with brown. Tubercles mostly  
white or whitish except in dorsal band  
setae dark, distinct, glandular.  
Molt July 13 Same as first (desc July 17)  
is rounded, higher than wide but not  
above 2 not retracted, not lobed but  
suture rather deep. W. 3 mm. Sides white  
with a yellow but reticulated with white  
bands of purple brown a band one running  
from antenna to top of each lobe. Prof.  
spined d. 5-12 tubercles i then red.  
large & conspicuous, elsewhere very  
small though i on 6-8 is white, and  
acute distal; all other tubercles incon-  
spicuous, setae dark moderately long  
venter & legs purple brown dotted  
with white; sides whitish green  
to finely dotted with white & brown  
the and shading into a bright  
large, very deep green, becoming  
green on side of 2-4, the enlarged tubercles  
on 5 and 12 tinged with red. a dark  
brown d. band, on 2-5; legs again on 5  
and on 12, slightly incised on 6, 8 and  
11 and tubercles i and ii then merged

with yellow spots <sup>"on the"</sup> <sup>"on the"</sup> the whole same  
to imperfectly bordered with yellow or  
white the border extending to anal  
feet feet and venter brown, two feet  
lined with brown. Tubercles sunset  
white or whitish except in dorsal band  
setae dark, distinct, glandular.

Molt July 13 Same as first (desc July 17)  
rounded, higher than wide but not  
above 2 not retracted, not lobed but  
sutures rather deep. w. 3 mm same white  
with a yellow but reticulated with violet  
bands of purple brown a broad one running  
from antenna to top of each lobe. Body  
punctured d. 5-12 tubercles 1 then red.  
large & conspicuous, elsewhere very  
small things in 6-8 to white, and  
rather distinct; all other tubercles more  
sparsely, setae dark moderately long  
venter & legs purple brown dotted  
with white; sides whitish green  
finely dotted with white & brown  
and shading into a bright

green on 24. On 2-3 a d. purple  
from base, white dotted, bordered  
with yellow. On 5 a white sd  
band marked with fine irregular  
purple brown lines begin at tubercle,  
loop up to i on 12 and run to  
anal feet. The d. space then evened  
is bright dark yellowish leaf green  
dotted with white with narrow  
white d. line indistinct. i on 6 is  
marked by a little white patch and  
there is a  $\Delta$  enlargement. sd. line on 8  
Anal feet pale outwardly, not used.  
slender, gently divergent  
[Edges of air and on side of its base become  
not giving a strong odor of HCl]  
Some do not lose all the d. down  
which remain in varying patches  
Turned black to J July 22-24



the large one often white tipped

~~July~~ June 30 red slightly lobed high the  
with tubercles as before but rather  
small. Pale yellowish, the ventral  
band on angle of lobe <sup>as</sup> most distinct  
the other enclosing light yellow patches  
on median suture and giving the  
appearance of a coarse reticulation  
connecting the bands and repeated  
on sides of head; bands all red-brown  
finely mottled with yellow. w. 1.5±  
tubercles enlarged & produced, the  
tip furcate, one limb (usually the  
shorter one) bearing the long glandular  
seta, ii scarcely enlarged, the rest  
normal. On 8 & 9 there are slight  
bumps and on 9-11 the ii is less  
enlarged than others. Color purplish  
brown, finely mottled, sides of 3-4  
pale and dorsal region darker  
the darker shade incised by a  
series of bright yellow triangular  
patches including i and ii on joint  
3, 4, 6, 8 (missing on 9) 11 and 13

the one on 11 also enclosing the spiracle  
Feet pale, various tinged, those on  
8 & 9 a little paler than the others  
palps elevated. Setae dark, glandular  
little later the sides of 2-4 become  
green. The green appears first in the  
pale shade next the dorsal line  
and shades downward. It also  
appears at the sides of 11 and 12-13. Whole  
lateral region becomes paler brown  
setae very distinctly glandular  
~~July~~ July 5 Same as before, setae still glandular  
but not very pronouncedly. Not all  
have the greenish shading  
July 8. Hd higher than wide, elliptical, rounded  
suture not deep, pale yellow with vertical  
brown red brown bands on each lobe  
mottled with pale, the space between  
and behind bands reticulated with red  
brown lines. w. mm. Setae from tubercles  
the 2 at apex & below on each lobe especially  
large. Body leaf green, becoming yellowish  
green on sides of 2-4, the enlarged tubercles  
on 5 and 12 tinged with red. A dark  
brown d. band, on 2-5; before again on 5  
and on 8 & 12, slightly incised on 6, 8 and  
11 and tubercles i and ii then much enlarged

[a *Chordea virginica* laid  
eggs just like these on  
June 24

*Eudromia*  
*actinaria*

452 Laid in a hatch egg little separated  
eggs on leaf which they  
would not eat, but ate grass.

Rounded conical, higher than  
hemispherical, base flat, diam. &  
height .7 mm color bright yellow  
Surface finely hexagonal, adscutate  
rather evenly and not much  
smaller at the top. Scarcely shiny

Hatched June 23 (see sketch for hatch  
cls. vi present !!) Hd shiny black,  
becoming pale below eyes. w. 4±  
Body white, tubercles large black  
with single long hairs, black, as  
also all the feet.

July 27 warts many haired,  
the hair spinulose long overhanging  
the extremities. Body pale, hd  
and wart black; a brown d and  
superstij. stripe. Hair dark  
a single very large transverse elongate  
wart 5d on 3 and 4; iv and v  
small, vi large, a lot of hairs

with distinct tubercles on leg.  
July 1 Hd shiny black, body  
pale yellowish with brown broken  
d. and s-v shadings. Wart  
blackish hair long, rather  
fine black white ringed some  
longer overhanging the head.

July 7 (Hatched 75+) Hd shiny black  
w 1±, Body appears grayish black but  
is really considerably weakened with  
pale surrounding the warts and in  
irregular transverse streaks. Hair thick  
yellowish centrally black and white  
ringed at the extremities, long and  
overhanging some rather close  
erect black hair arise from 1 on  
5 and 12

July 14 Body black with sd and  
lateral white line. Hair same but  
longer, pencils on 5 and 12 more  
distinct

July 23 same. sd white line  
narrow and broken.

VI Aug 4 Decide the long black  
 pencil at 4 and 12 then  
 about over from 1 to 6-11 not  
 longer than the other hair. Other  
 hair 5-12 yellow, pale 2-4. On  
 2-4 with small white mixed  
 with a few black ones. Hair round  
 in small, dry part Body black, a  
 dorsal white <sup>ridge or bands</sup> and sub-sty  
 white band (crossing 1 and 2). Vant  
 black feet rather pale hair bunched

VII Aug 18 Same as before but  
 some appear to be being  
 shed with 2 about equally  
 mixed (Hd 2.0 mm. 19)

VIII Sept 1 Hd shiny black, pale yellow  
 on 1-12 sd 1-13 white ends  
 as before. 1-12 have many all same  
 length about 5-12 very a little  
 longer than 1-12. 1-12 are  
 longer than before. 1-12 except  
 the 1-12 & 12 yellow, all the  
 rest gray (black & white mixed)

(Hd 2.25)

hair not yellow as before  
 shading into almost red on the head,  
 part of the lobes on sides and above

IX Sept 19 Hd 2.4 Same red on head  
 with some black on sides and  
 5-11 hair rather long black,

X Oct 12 Hd 2.5 as before but  
 black on sides and feet.

*Lucinella ocellata* Chapman, England. Egg oval flattened above and below (see sketch)

Hatched June 22 Pale greenish crust and horn thick, covered with minute spines with furcate tips (see sketch)

It is covered with a white granular substance. In each of the 2 white cells black. Body brownish green with white spots and a white line of granules and forming a red line, not at all distinct.

Head is small, rounded by the 7 oblique lateral lines which are not very distinct, some red, purple. The feet a pair of each with reddish tips. Hd. 1/3 from 1mm

Next June 22 Hd high, pointed above, tubular, in 2-3 whorls, tubular, in which a pale line is visible. The angles, green covered with white granules.

Body yellow, covered with granules, a pale line and oblique lateral line also granular, not except at base. Under

the 1st whorl conical granulation as a transparent Y shaped seta but those on hd have only 1 but not 2 as in 2nd whorl. At same vertical line pale yellow. 8d line confined to 1st whorl, the granulation at the oblique line longer than those elsewhere. Making these white lines also raised. Each conical white tubular still bears a Y shaped seta but small and the trunk short than on the directly granular part also Y's but not on the head.

1st whorl 4 1/2 from 1mm

Body yellow, covered with granules, a pale line and oblique lateral line also granular, not except at base. Under

the 1st whorl conical granulation as a transparent Y shaped seta but those on hd have only 1 but not 2 as in 2nd whorl. At same vertical line

pale yellow. 8d line confined to 1st whorl, the granulation at the oblique line longer than those elsewhere. Making these white lines also raised. Each conical white tubular

still bears a Y shaped seta but small and the trunk short than on the directly granular part also Y's but not on the head.

1st whorl 4 1/2 from 1mm

under 1st whorl granulation. Tubular seta Y shaped, 1st whorl, same conicalness, all present

as in the 1st whorl, bases tubular granulation.

1st whorl 4 1/2 from 1mm





754B Mine red mounted on blackberry, eating  
 of leaves. The pupa is red, hd with a  
 brownish tint, <sup>shiny</sup> lines, tubercles white  
 & distinct, 3rd narrow, broken  
 etc. again distinct. White dots  
 of tubercles small with a few  
 fainter supplementary ones. The  
 feet blackish, abd. white (2  
 scarcely enlarged, but 15 all <sup>(shd 16)</sup>  $\pm$   
 20 & hd 25 = same hd with black  
 shade before. The feet black

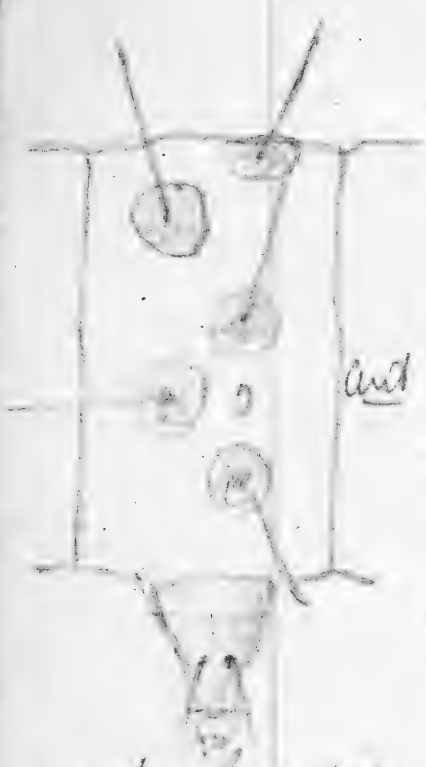
454 WVH Fig (shd 16) newhd. 2 1/2 mm  
 as seen at first

alc, 50 .12 1.03 1.47 2.1 3.0  
 found

455

3 eggs laid separately very young  
 short of Populus balsamifera, 1st small  
 2nd 3rd narrow, broken  
 white, diameter same. Pupa 1/2 in  
 small broad low ribs red  
 feet the minute white, like much  
 each row divide into 20 and  
 continue on the side, 28 in  
 connected by transverse lines which  
 are thin when the ribs are  
 shallow hollow, elongated  
 very much by the narrow  
 ends of the ribs. Edges all  
 rounded, shining  
 Hatched pupa little leopards  
 dark, all, etc. the feet black.  
 Body white, leg plate tubercles  
 and anal plate blackish, setae  
 distinct, dark. Scales small  
 from large nearly black ones  
 (V. abscis) setae present about

10. 12. 1900 from a disturbed region



alike. 12 enlarged dorsally  
July 4 Body pale green  
12 - little enlarged feet  
apparently all alike  
Normal very large blade  
with fine setae, normal  
vi present. E the tarsus  
and leg plate black, faint indication  
of subdorsal and stria lines. Hd  
black except a patch at side  
of each eye and labrum. W. 9 mm

Molt July 4 and July 5  
Body yellow, tubercles black, with  
a subwhite shade. A dorsal  
line of small setae. Setae  
black except a broad white line  
marked by *H. testaceo* brownish with  
black spots. Tubercles as connected  
into 4-5 large bands of black. W. 3 mm ±  
Body whitish green, with broad stria rusty  
orange band, feet, tubercles black  
and long setae with subdorsal, whitish  
line, or all 4 green line present on  
with black (dorsal part of the same line)  
with a red blotch on the first line

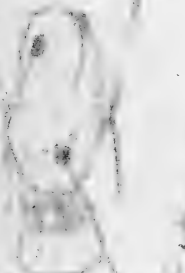
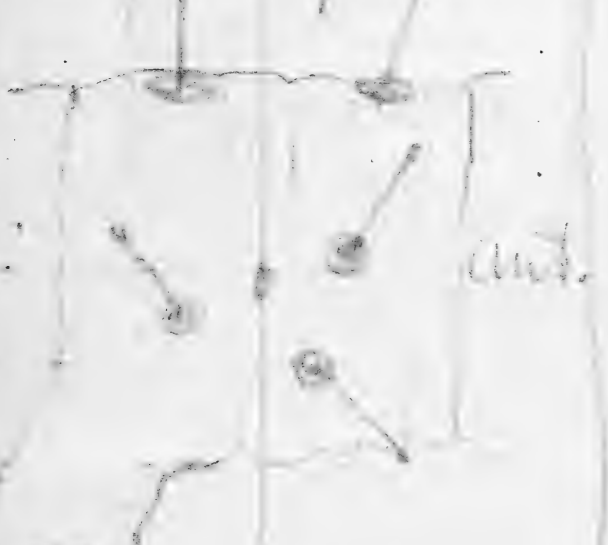
July 10 1900

456

Egg laid by *Euphonia mendica* night  
of June 25-6 (June 25-6, 1894)  
Incubated in a slender, twisted  
fine which runs from one side to  
another so that the egg is always  
free to turn. Slightly flattened  
slightly on two opposite sides but  
not so much as usual. The  
living pale yellowish brown color  
with a few spots:  $8 \times 6 \times 5$  mm  
Under the thin membrane are repre-  
sented only by rather shallow  
dents, just indicated and very rough  
to give shadows. The whole surface  
is covered by finely, but distinctly  
shaped dent with flattened  
elevation all quite regular, round  
The suspensory fibre merely adheres  
to the egg. = sticky secretion of nidus?  
Egg very delicate, smash easily  
to a change to milky yellow



Hatched July 3 very long slender and  
 looping with great capacity. When  
 disturbed it rears up on an  
 irregular S shape  $\text{S}$  and keeps still  
 the prolegs shed about 10 mths  
 only segments around the last inst.



white, rather transparent.  
 (Reared with food and care) \*  
 456A

456A reared on apple in abundance laid on  
 the ground. It was reared at base of old  
 pasture, Jefferson Highlands, N.H., June 30 1894  
 Hatched July 3. Reared with  
 and was found (on apple) all dead July 20  
 (no food in dish)

July 17 21mm - all  
 + head black, white pencil black on 3, 7, 12  
 black pencil black on 11 whole length  
 pencil black on 457

According to the americana on paper  
 (Grandidentata K.!) 26 1894

white. The prolegs are  
 black. They are found with  
 light yellow from within  
 long prolegs from 3, 7, 12

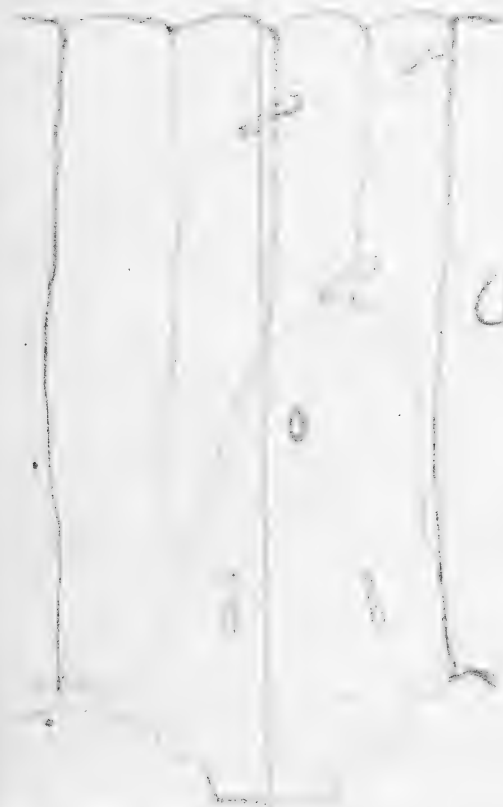
about stiff, granular  
 dark from black. Red  
 but also seen  
 blackish, only  
 small, concolorous, with  
 no distinctive  
 warts and the shape, may be  
 pale yellow, or brown, black  
 and green, or purple, or  
 varying. The tubercles are  
 plates of black, spiracles brown

reared on 34 (1) and (2)  
 (3) with true prolegs on fruit  
 step, (4) reared on another in S.

reared on 29 1894  
 4.0mm  
 reared July 30, 1894 Cat no 11031

458 - 227

7 minute larva stage I in a little  
house in willow



a piece cut out  
of a leaf except  
cut. a small house  
was fastened on  
with threads and  
slightly raised  
black with a  
small. Body pale

yellowish with faint green tinge, not  
strong, setae white with enlarged  
tips, as illustrated, vi absent,  
in secondary ones (Jan 2 - 1944)

cut house Stage 2 - 4-5 - similar  
thorax, covered with white setae  
as in hall type. Like others of stage I  
all white apparently, thorax, legs  
was entirely, same on 2nd but  
shorter shaft, 4th undate, black.

whitish not yellow-green like 443  
and of this abnormal shape

459

Little Whorling leaf-miner  
found in apple K.V. Jan 27 1944  
inst 3-6 large out of pupa  
7-13 small so that legs look  
great. 2 prolegs and 4  
small, anal pair flat, slightly  
divergent. Ventrals white  
with faint green tinge, curved  
with white dots and dot  
on ventral white 8d line  
absent normal in stage  
IV stage, post V, VI 2-8, a pair 2-8  
on legs, setae short brown, tips  
white forming the dots and a  
few other tripple-ministry dots  
without dots...

small but thick and fat. Under 3-4  
small part, legs, same as stage I  
with distinct rather large white dot  
at flat on back of leaf, 4d same  
as leaf but less green, ash ad 1.8  
feet manipulator. Spins on paper



461



*Leucosticte discolorata* on  
*Populus tremuloides*, K.V.  
 W.V. June 28, 1898; in pupa  
 Stage I. Antennae normal  
 Ant. 12 segments, no  
 secondary, i ant.

below ii part; 3 rings seg. part, ix and v

5-v, nearly in line, is a large highest

(vi absent) a single spine on base of leg 1

[\*Ant. 12 segments, no secondary, i ant.]

the segments, i and ii alternate +

(but which is lower not determined)

Stage II Roughly tubercular, iii, iv and v

apparently represented by small tu-

bercle warts, which seems to represent

i is smaller, ant. and above ii, many

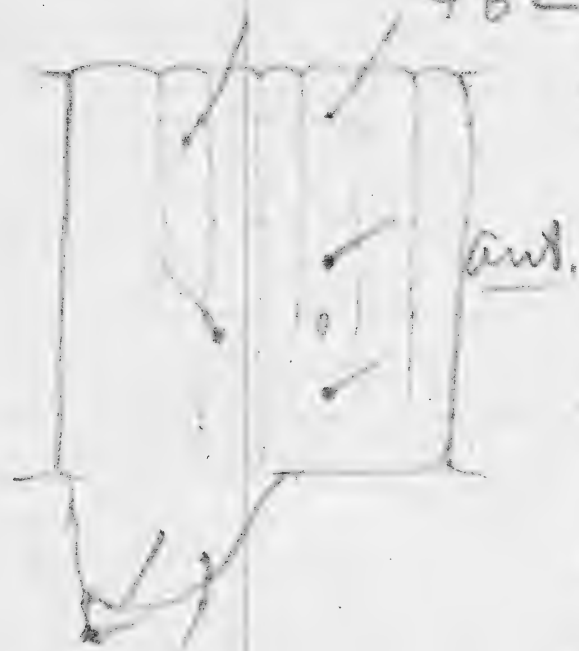
secondary tubercles, but especially

in a transverse row on first seg. of

segment. Slight sd tube on seg. 4

apparently represent secondary sd tube  
 a slight one on 12 represent ii.

462



newly hatched  
 mounted on  
*Populus tremuloides*  
 New Valley, W.V.,  
 June 28, 1898.

Setae normal, (vi  
 absent) iii consist

of 2 setae, 1 below v the other on

under separated and and the viii

which is near medio-ventral line

On 12 (fig) vi is plainly seen to be absent

as viii then occurs normally on the leg

Stage II Taken whole, legs as in structure

egg Elliptical, flattened on a side

curved on the sides, nearly hexag-

onally reticulate. Size .7 x .5 x .3 mm



July 17 Like mother's hair  
 length of head 3 mm ±  
 all grey brown except S-V  
 when yellowish. Body all black  
 except in spots where the hair is very  
 thick and then spots yellow. No  
 continuation yellow S-V band. See BB 77  
 this is the NO (also BB 77) and  
 only a variety of 414) a narrow  
 faint line of NO (also BB 77)

July 24 See 414. The present one  
 relatively smaller and shorter than  
 before. W. hd. 5 mm ±. Body all  
 black. Head hair short. Hair  
 to some spaces. S-V pale yellowish  
 went down legs

Imago June 23 1895 *A. dactyloides*

Cat. no. 11579

*A. dactyloides*

464



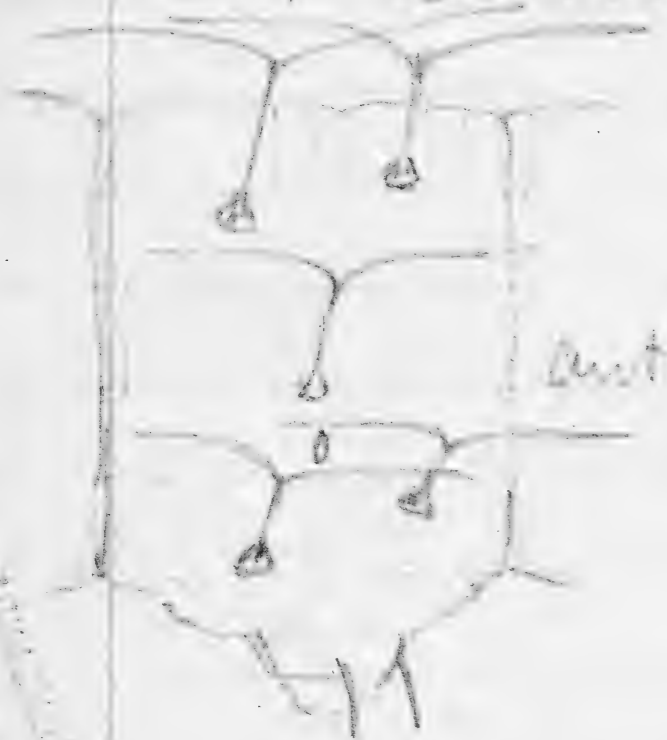
*Tabanus ferrugineus*, hatched from eggs  
 on hay, and ash  
 Lake Valley, Wyo.  
 June 29, 1894  
 Substrate mounted  
 into bottle, II and  
 III with setae  
 brown, each with  
 several glandular  
 setae. IV and V in

line substrate with an extra hair  
 one above them, but this is absent  
 a joint 12. VI present. VII setae  
 and a third joint, in 3 and and  
 1 joint. Many setae on legs.

(Galla 4)

H. Hays 62

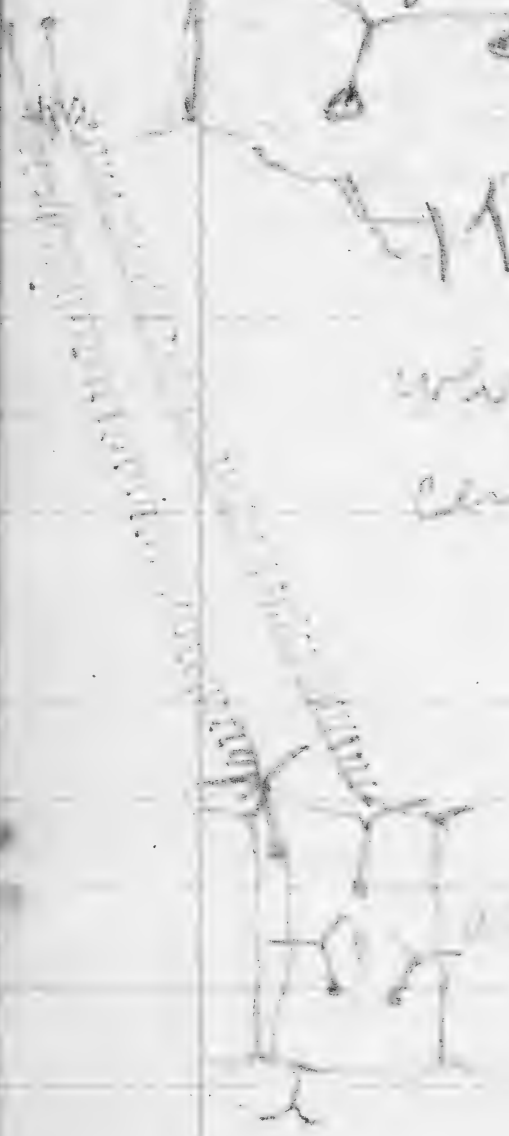
17 = 23 = 465



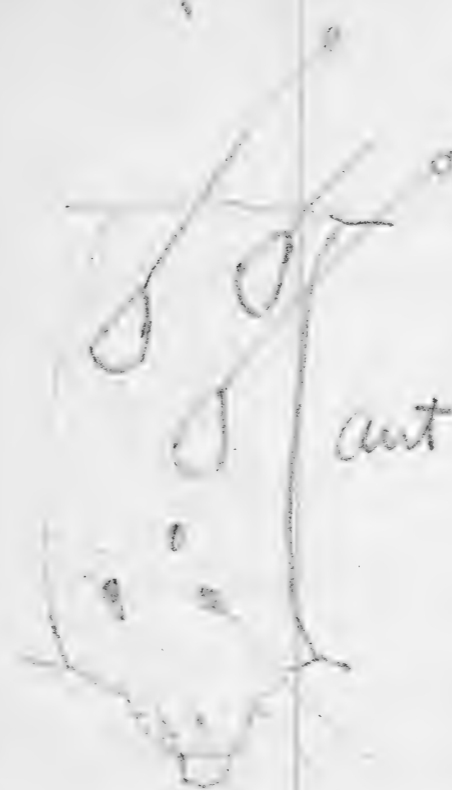
ant

pale green  
 slender body  
 antennae  
 heart-shaped  
 black body  
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 100.5

white with green to black  
 centrally, brown black,



rest remaining normal but difficult  
 to separate from those present on  
 13 ant, especially in S-V region,  
 same at that level



ant

466

from the total, and in  
 Keen Valley, 1894  
 Hatched July 1, 1894

type is, v in line, is  
 a slight fold, distinct, the tip  
 great faint, greenish (v in line)  
 on a side that is brownish  
 not glandular, it is much shorter  
 than v and though evident the  
 view from above is very difficult  
 to see from the lateral aspect,  
 though I finally positioned, saw it.

467

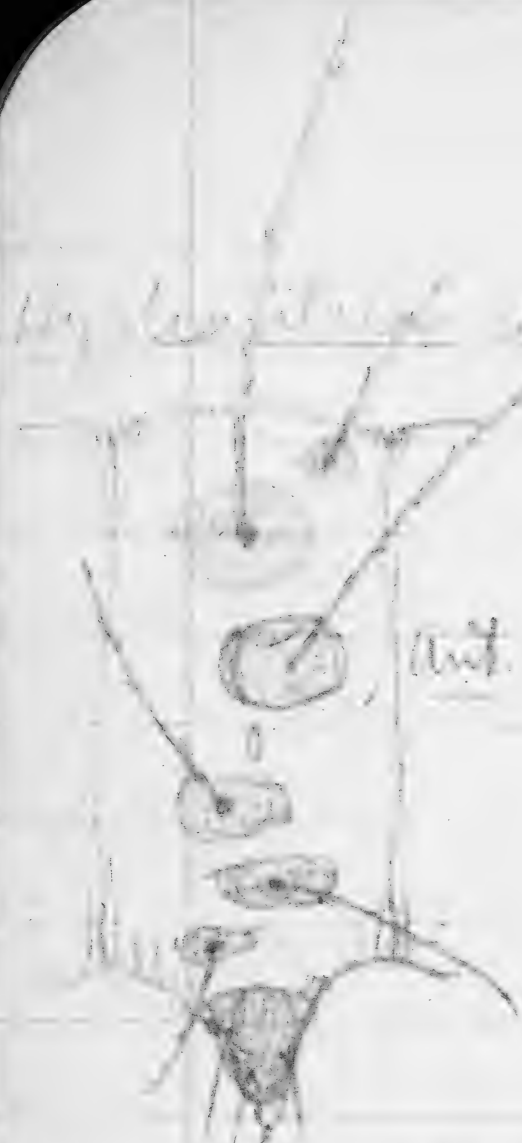
My *Leptocryptus* species on willow

Keen Valley, N.Y.

Hatched July 2 1894

Setae single, with pointed ends and barbed, iv below the spiracle and a little posterior, vi present

small, all normal. Head, feet, to bases, setae, eye and anal plate all black; body yellowish.



468

*Spilostoma muricatum*

June eggs on willow

Keen Valley, N.Y.

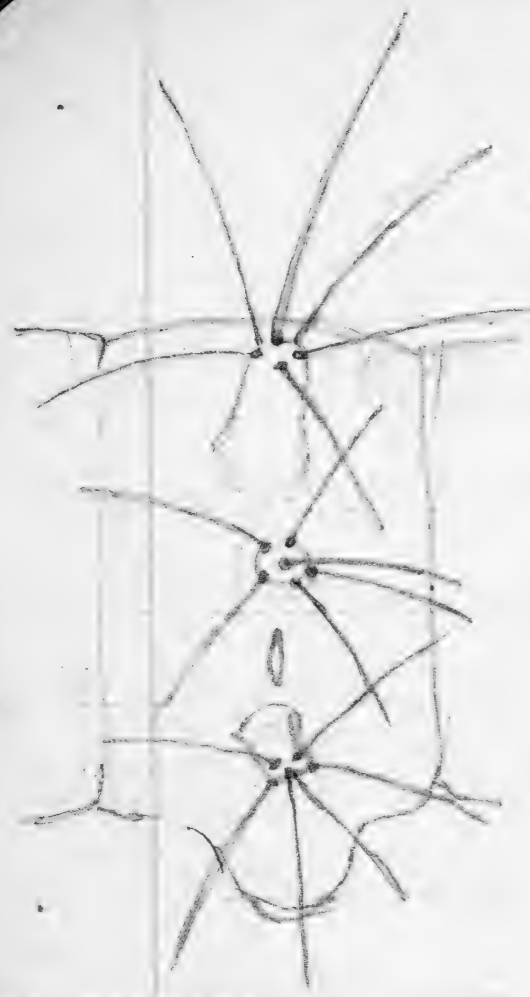
near brook, hatched July 3 1894 Keen Valley, N.Y.

Tubercles large blackish, setae pointed bases of ii and iii black, (vi absent.)

i, iv and v Head and leg plates scarcely colored Body brown yellowish, no marks





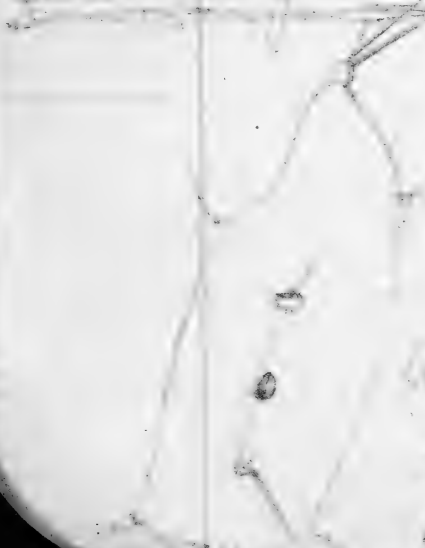


469

*Teledia polyphemus*  
on white Birch at  
Keene Valley, N.Y.;  
hatched July 3, 1894  
wants greenish and  
apparently the full  
structure of the  
mature larva (of

which take note). No unpaired dorsals;  
i-i on 12 closer than on other segments  
than bases united, but not apex remote  
on 13, a pair on anal plate (13 post)  
Only 3 rows anywhere except 3 and 4  
where there are 4 (2 S-V); on 13 only  
two and on 12 post only the one.

male pupa 31. Three tubercles, 4 on 3 & 4



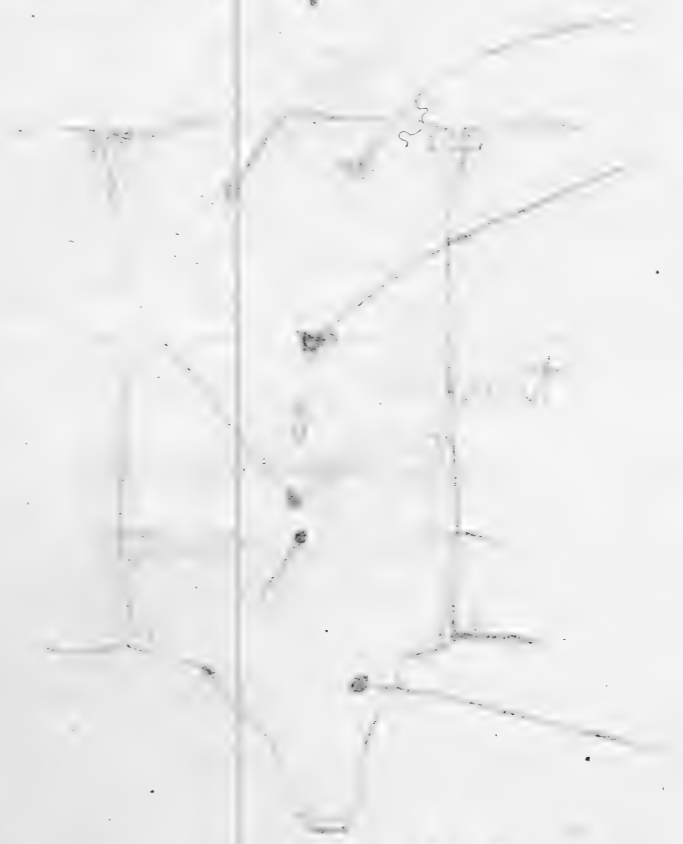
It has 2 on 3 and on  
slight <sup>hair</sup> on anal plate, a  
number of I hairs (spines)  
but dorsally and S-V. Only 3 on  
2 the S-V locality. Subanal  
oval and 2 on 3, 4 etc.

470

*Crucis*

Eggs of gray *Crucis* laid July 3, 1894, Keene  
Valley, N.Y. Shape of a melon, a little  
truncated at the two small ends with  
about 12 sharp distinct longitudinal  
ridges like *Crucis*, crossed by  
a great number of fine transverse  
striae not reticulated into cells  
and scarcely flexing the apical sit-  
line of the ridges at all. Color  
white, faintly greenish. .5 x .3 mm

hatched July 17 i, ii, iii normal, ii  
being rather



small. iv  
v above each of the  
the lower small  
both on 12 & 13  
the same size  
with a distinct  
one on 12 & 13  
& post.

*Crucis mutabilis*



Egg on white birch 4000 ft July 22 1895. Greenish  
white, smooth shiny, a little more greenish  
at apex. Reticulation narrow rather reg-  
ular, hexagonal but found and low,  
all defined 1 um. height .7. Shape very  
near  $\frac{2}{3}$  spherical & little too much tucked  
under at base.

Hatched July 1. Just like 471 g.v.

July 2 By stage II Like 471 II

NEW YORK  
POST OFFICE  
MAY 10 1864

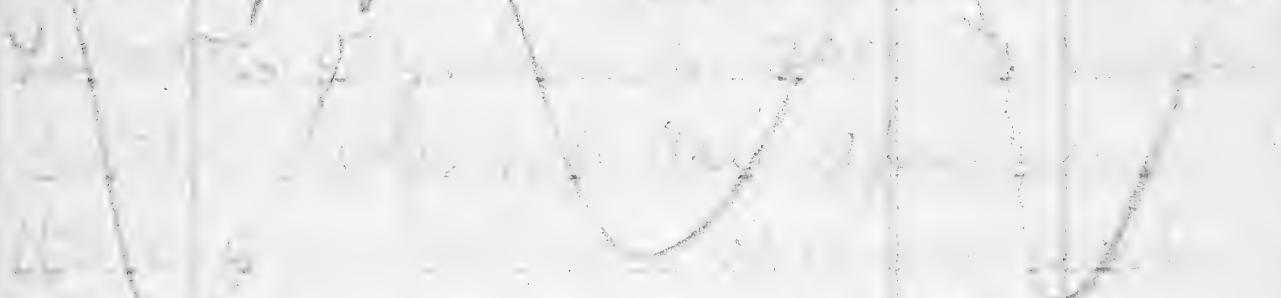
Dear

~~West 99 St~~

~~land~~ city  
A. H.



anatomy spindle centered



sty line composed of oblique  
pale bands yellowish dashes.  
adduced line broader and  
greenish white dorsal  
red medially on joint 13.

Body black, 5.5 mm long  
greenish yellow, thorax  
black, with dusky transverse  
setae fine, short black, distinct  
but without distinct

Feet all used. Setae minimal, pointed  
at end, i-ii present on line, iii absent  
sty iv 5-1 post, v ant (vi absent)  
three or more on leg. Leg 4 setae on  
colours with body. No anal plate this  
body is yellow with a green shade  
before it has eaten  
anything. Length 3 mm.

eat, leaf from ...  
No other ...

July 11 4d light green, not shiny  
behind the plate cells a dark  
reddish band runs to middle of side  
ending in a blackish shade and  
centering with an oblique line in  
midy which runs over spiracles on 2  
and ends on 3 at lateral line.

Palpi reddish, 2.5 mm ± length smooth  
(the setae minute dark) Green with  
a broad greenish white dorsal band  
filled in with dull red; a narrow  
wavy sd line; a row of white dots  
for lateral line; a few yellow dots  
for sty line, all the foldings  
symmetrically and 8-11 slightly tinged  
with orange. Spine light red  
dish. Feet green, the thoracic ones  
marked with black at the joints  
Spiracle on 2 white with black in  
the oblique line, yellow below  
and smoky red above and is very  
faintly repeated on joint 4. No  
more than 9 setae on legs late

The pupae  $4\text{mm} \pm$  held out flat  
rounded head and flattened before  
light green, a white line each side  
and another from palpi across  
to vertex of each lobe. A band behind  
ocelli runs back to end. 3 or 4 spiracles  
one curving up post; smooth purplish  
red, fading to yellowish on its lower side.  
Body soft yellowish leaf green, tapering  
post, full plump, cylindrical. A  
broad yellowish white ad-d. line, the  
space between filled in with reddish  
on 13; faint trace of a broken s-d, and  
2 or 3 round yellow dots head, and  
superstig. Dorsum faintly white  
shaded, s-v region clear soft green.  
The feet reddish, black at tip. Abd.  
uncolored with body. Setae extremely  
minute except on legs. Claspers  
dirty brownish. Length about 30 mm.

Imago Aug 15 1894 Cat no 11040

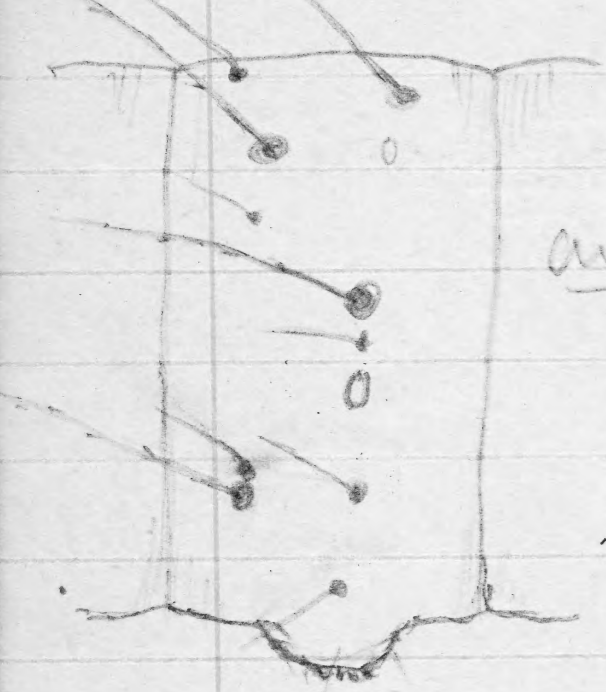
*Lophodonta ferruginea* ♂

472

Egg and larvae of *Fenestica ferruginea*  
eating woolly lice on alder July 4/94  
Keene Valley, N.H. Mature elongate  
like *Chrysocentrus* but retraced, segments  
deep and strong; s-v ridge prominent,  
larvae flattened, evenly rounded.  
Hair arise sparsely all over the  
body but indistinct, but especially  
from 2-d, lat and s-s areas  
the former of which are gathered  
together into rather distinct warts.  
Hair about white, barbed, not  
obscuring the body at all. Color a  
whitish grey with a broad white  
s-d band, and tubercle ① pale  
orange bordered below with blackish,  
D. region whitish with dark narrow  
dorsal line, a faint white stig.  
line. Down from lice adheres to it  
warts appear to represent roughly  
i, ii, iii and iv+v.

Little larva all grayish (see alcohol)

egg laid singly under the lice on  
the bark - white (see shell in alcohol)



Hatched July 12 1894  
white. Hd. thro.

ant feet, e-th, anal  
plates and  
tubercles black  
setae brownish  
barbed, the  
primary ones

long; secondary much shorter  
with smaller tubercles. A  
curved little pore resembling a  
spiracle situated sd. below  
tubercle i.

473

Two eggs on back of <sup>white</sup> birch, pale green  
shiny, <sup>very thin</sup> hemispherical with a slight  
cleared ring around micropyle;  
base flat; w. 1 mm, height .65 mm  
Reticulation flat and narrow the  
cells rather round, become small  
at micropyle the ring whitish  
[vacuolated?] [use higher power] July 4 1894  
(died)



