

100

Folio _____

No. _____

Residence _____

IN ACCOUNT WITH

G. STEPHENS,

GROCER

55th Street and 9th Avenue,

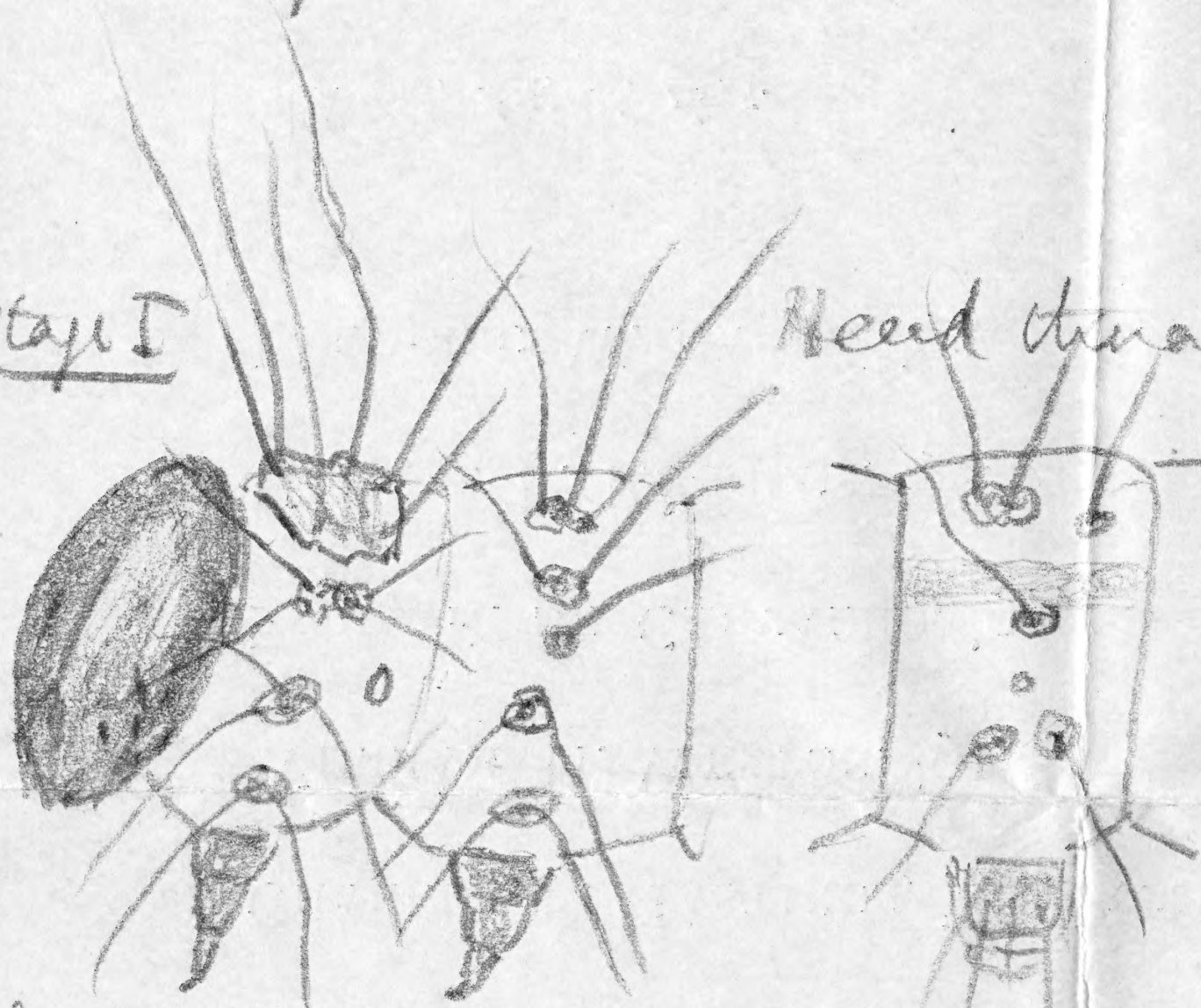
NEW YORK.

J. J. McCLUSKEY, Mfr and Printer, 262 Greenwich St., N. Y.

=390?

Datanaeas on yellow birch Jefferson Highlands N.H. Aug. 10 1895
Egg Round, white with lighter lid and central black spot.

Stage I



Head truncate feet leg plates, c-sh

anal pl. c feet and tubercles black. Body pale yellow a lateral brown band and brown spotting, d. 3, 4 and 12 the latter often faint. In some, traces of a dorsal

line centrally. Hairs pale, most; anal feet long, hairy. Some brown marks along bases of feet, slight. Hd. .45⁺ later beside the distinct brown d. & lat hair fainter 5d and stig; widening into spots on 3, 4 and 12; a brown line next mid-venter.

Molt Aug 18 Brown with lines as broad or broader than spaces greenish yellow. Hd legs, c-sh & anal plate black. Mid-ventral line distinct but pedal only just indicated. Hairs numerous all whitish 10 rather longer than 2^d (about $\frac{1}{2}$ more) all pointed spinulose, the little tubercles black. (Like 390 II)
Look like munista Aug 24.

LAST ADDRESS.

AECHIRAU HONGMA, '74, Railway Office, Nagano, Nagano-Ken, Japan.

JOSHUA B. F. BREED, '76, 1348 Second St., Louisville, Ky.

WALTER D. TOWNSEND, '76, Chemulpo, Korea.

FRANK D. CHASE, '81, Parral, Mexico.

DAVID S. GODDARD, '81, 125 Gorham St., Lowell, Mass.

FRANK C. MORRISON, '82.

JAMES A. HUTCHINGS, '83.

CHARLES F. HASTINGS, '88, Port Royal, S. C.

WILLIAM H. WESTON, '91.

RAUL R. DE CARVALHO, '92.

HORACE F. RUGGLES, '92.

FREDERIC W. BAKER, '93.

H. W. TYLER, Secretary.

Boston, August, 1895.

2 35

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13

13.55

Sweet

1/2 Cracker

11 B. Grapes

Celery

C. Grapes

17 5/8 Sugar

B. Powder

Cucumber

Celery

C. Pear

Cherries

18 2 Sugar

B. Olives

2nd Del. Grapes

1 Walnut

3rd Turnips

6 Bananas

23 C. Grapes

Squash

Salt

D. Tea

B. Flour

1/2 Fig

		13 55
27	Sweet	25
	Corn	18
28	Celery	10
	Eggs	30
	Macaroni	12
	Squash	25
	Walnuts	20
30	Rice	20
	Sweet	25
	Tea	25
	Corn	17
31	Sugar	42
	Lard	35
		<hr/>
		\$ 16.59

PAID

Nov. 4/91
 C. STEFFENS, L. 15 W 5m

377 ♂ pupa ...
 hd to tail, cases prominent. Like *Chrysis*
 94th ... horn hair represent the ...
 appendages to body & also occur on the slight
 leg prominences. Genae flat with 2
 bunches of short hairs. Color brownish black.
 cases faintly creased, not shiny. Body finely
 punctured in the flat areas represent ...

Nov. 1st 1890

1	B powder	25
	Corn	18
	Fig	13
	Banana	15
	Celery	10
5	Sweet	40
	Squash	25
	1st Sugar	40
	2nd Sugar	35
	Coffee	35
	Beans	12
	Eggs	30
8	Match	8
	Celery	10
	Banana	18
	Cucumber	50
	Cocoa	25
	Oil	20
10	B powder	50
	Sweet	25
13	Salt	5
	Eggs	32
		<hr/>
		5.41

5.41

1 Raisin	20
1 Currant	12
14 Am Sweet	25
6 Banana	18
15 Squash	15
1 Celery	10
1 Corn	15
1/2 Fig	13
1/3 Olive	25
18 Am Sweet	25
5 B Sugar	35
1 C Starch	10
1 C Tapioca	25
21 1/2 Beans	24
1/2 Fig	13
1 Celery	10
2 C Sugar	18
1 Corn	40
22 Am Sweet	25
2 1/2 Fig	35
1 Oil	20
<hr/>	
	9.74

9.74

24 B Flour	1 00
5 C Sugar	35
1/3 Powder	50
25 Raisin	40
2 Currant	24
2 S Prachin	24
1 Fig	25
1 Celery	15
26 C Lard	35
Am Sweet	25
1 Celery	16
1 Walnut	20
Squash	25
1 Fig	35
29 B Tapioca	25
<hr/>	
	\$14.68

Paid Dec 2/90

C. Stephens
m

Dec. 1st 1890

1	6 Eggs	18
	5 ^{lb} Sugar	45
	5 ^{lb} C Sugar	35
	3 ^{lb} G Sugar	25
	Am Sugar	25
4	B. Flour	1 00
	2 ^{lb} Meal	15
	1 Coffee	35
	Hammy	20
	Cabbage	10
6	Cocoa	25
	Celery	18
	Squash	25
	1/2 Tin	13
	9/16 Tomat	8
	B. Butter	35
8	Dy Eggs	38
	5 Sugar	35
	3/4 C Sugar	28
	B. Powder	50
	2/4 Lemon	25
10	29/100 Potatoes	00
	9/100 Molasses	20
		<u>6.48</u>

			6.48
	29/100 Beans	24	
	B. Flour	1 00	
12	Dy Eggs	38	
13	Salt	10	
	Matchin	8	
	6 Bananas	20	
	Corn	18	
	Celery	20	
	3 Oranges	15	
16	1/2 Figs	13	
	3 Oranges	15	
	Dy Eggs	38	
18	C Lard	35	
	1 Coffee	35	
	Celery	20	
	Am Squash	15	
19	Dy Eggs	35	
	4 Cheese	60	
	C Corn	18	
20	C Oil	20	
	9/100 Molasses	20	
	6 Lemons	18	
		<u>12.43</u>	

12.43

22	Flour	50
23	Raisins	20
	1 Currant	10
	D ^g Egg	38
	Celery	15
	Squash	15
	2 Raisins	40
	2 Currant	24
	1 Citrus	30
	D ^g Egg	38
24	Celery	18
	Oranges	15
	6 Bananas	20
	4 Walnuts	10
27	5 ^l Sugar	40
	5 ^l Sugar	35
	D ^g Egg	38
30	Flour	1 00
	yeast	2
	1 ^g Sugar	8
	9 ^l Sugar	15
	6 Bananas	20

18.44

Paid Jan 3/91
C. Stephens m^d

Jan. 1st 1891

2	2 ^g Beans	24
	5 ^l Sugar	35
	Flour	45
3	Squash	15
	Celery	20
	2 ^g Sweet	25
	Olives	25
	Oil	20
5	D ^g Egg	38
9	D ^g Egg	38
	1 ^g Cracken	6
13	Oil	20
	Vanilla	25
14	6 ^g Egg	19
	3 ^l Sugar	25
	9 ^l Min	18
	1 ^g Wafers	18
19	5 ^l Sugar	45
	5 ^l Sugar	38
	Salt	10
	Pepper	35
	1 ^g Cracken	12
		<hr/> 5.56

5.56

20 B. Flour	85
Dy 1/4	35
Ma Tohn	8
22 1/2 Potatoes	18
20 Meal	8
26 Potatoes	35
28 Dy 1/4	35
9 Meal	20
C Lard	35
B Powder	50
Oil	20
30 1/2 Lemons	18
31 20 Sugar	56
50 Sugar	45
Dy 1/4	35
<hr/>	
	8 10.59

PAID

Feb. 10/91
C. STEFFENS
M. F.

Feb. 10 1891

4 yeast	2
6 Dy 1/4	35
1 Rice	20
1 Walnuts	18
2 Pearline	25
1/2 Beans	6
7 B. Celery	20
1/2 Lemons	18
B Cocoa	25
1/2 Bananas	20
12 B. Flour	85
B Powder	45
50 Sugar	40
1/2 Bananas	20
13 Dy 1/4	30
1/2 Corn	10
14 Oil	20
1 Coffee	35
1/2 Spinach	25
1 Cheese	1 00
Celery	25
1 Cheenute	18
<hr/>	
	6.42

6.42

16 Apples	9
Do Sugar	30
18 Do Apples	18
9 Beans	00
Cajon	15
Salt	5
21 2 Ransom	40
2 Ransom	30
Petron	30
1 B Cracker	20
24 2 Sugar	45
3 Sugar	28
1 Banana	20
26 Beans	12
B Powder	45
Oil	20
28 1 Apples	18
Salt	10
3 Apples	8
Oil	5
Catch	10

PAID, \$ 10.60

March 11/91
C. STEFFENS.

March 1st 1891

4 2 nd Lemon	20
yeast	2
10 3 rd Sugar	28
B Sugar	25
Salt	10
Match	8
B Flour	85
1/2 Cocoa	50
Banana	20
14 Buckwheat	15
2 Buckwheat	18
yeast	2
2 1/2 Spinach	18
Orange	25
Coconut	18
17 Apples	9
18 H. O.	15
19 C Lard	35
1/2 Meat	5
1 Banana	20
20 Oil	20
Apples	22

470

342 D Nov 1895

Payson

May 13 2 black 2 white |||||

1 black 3 white

still not defined |||

(24)

[one of the $\frac{2}{2}$ was dead and removed]

May 16 dying off like the *Cleocampa*

May 21 2 black 2 white |||||

(20)

May 27 (17)

May 30 several in last stage.

The tuft on Ω preceding the
black pencil may be light
brown

June 4 (11) none seen

no imagos

Vancouver lot badia

all tufts constant 2 & 2, though
brown away replace black and yellow
white or other ones (see description)
Almost all 2 black, 2 yellow in IV but
few white in V

Beginning to come May 13

Secretary

SAMUEL HENSHAW,

of B.S. - white B.S. Made a few feathered hair recalling
enclosed.

A list of the officers nominated at the last meeting is
attached.

most of the large & have trace of the side tufts
now or less distinct some seen with none.
lated to *Agaricus campestris*.

Prof. W. G. FARLOW: Edible forms of mushroom
none in B.

PAPER: *Agaricus campestris*

Election of Officers for 1894-95.

Report of the Walker Prize Committee.

and Trustees of the Walker Prize Committee
Eggs hatched Fall 1881 and hatched out

Reports of the Curator, Secretary, Librarian, Treasurer,

in May 1881 - 5681
Burd 1881 -

May 2d, at 7 3/4 o'clock.

The ANNUAL MEETING will be held Wednesday Evening,

stage I was about 1/2 in. Hd. mm. (50 mm) mm. Hd. mm. (50 mm) mm.

stage II was about 1/2 in. Hd. mm. (50 mm) mm.

1894. Boston Society of Natural History.

April 17-20

Apr 1894 About 100 larvae of mixed BB AB and AA from 342A & 342B

May 4, mostly in third stage, the majority 1 black & three white tufts.

{ 18 with two black, 2 white tufts
2 " 3 black (4th not distinct)

Isolates these May 4, all constant in spite of moults; except 3 "one white" moults & 2 came black and one 2 black tufts.

[white & brown interchangeable - black & brown do] so there are only 2 vars.

342C = 1 black, 3 white, normal guttae

342D = 2 " 2 " trans. ad. cava

342C May 7 some to stage IV tufts all white Saw 1 black 3 white moults pale brown, 3 white moults had faint tuft pale, one 4 white, the other one just a tuft of brownish, another (only) had 4 brownish yellowish ones, the last had black. Mat tufts white grayish or next to black, gray on sides ^{slit}

342D May 7 may molting, no mat. (IX)

May 10 saw moults, mat. tufts all white with dark ends (V?)

Cocoon angle, with no outer preliminary layer

up here a lateral row

(1) 5-5 (2) 5-5 (3) 5-5 (4) 5-5 (5) 5-5

376

unlike the
color of
completing
of the
of the
of the
of the

Cheilocampa americana Flavipes Rehn
 was. Eggs in my own tray, flattened cylindrical,
 at top rounded & a little smaller below,
 somewhat flattened from pressure. Smooth pale
 slate gray, covered with brown spots. 1.4 x .4 x .3 mm
 hatched April 30, 1893. Head round, brown, very
 wide, anterior slightly long, black. The
 labrum pale, several pale hairs w. 4 mm
 Body slightly flattened, tapering post. with
 distinct dorsal elevation on 2. Wings dull
 black, the feet a little paler, covered with
 sparsely, dark, long white hair. Length 2.5 mm
 in the stage advances the pale spaces
 of the increase of size making the body look
 transversely banded, and the hair as seen
 to arise from distinct smooth black tubercles,
 one for each. Molt May 11 1893 1893 1893
 single instar, instar, instar, instar.
Molt May 11 1893 1893 1893
 was instar instar instar instar
 the instar instar instar instar
 was instar instar instar instar
 had instar instar instar instar
 had instar instar instar instar

very like instar instar instar instar
 also instar instar instar instar
 was instar instar instar instar
 1893 instar instar instar instar
 d. line became instar instar instar instar
 of the instar instar instar instar
 transverse instar instar instar instar
 distinct on the instar instar instar instar
Molt May 11 1893 1893 1893
 line above the instar instar instar instar
 black in dorsal area, the sides slate gray
 Line as before, but the space between the
 double d-line ^{near} filled in with a blue gray
 dorsal line, even & regular, these line
 each side of it reddish and round but
 angle. S-d line indicated instar instar instar instar
 lateral line wavy, stop. nearly straight,
 distinct. Hair faint reddish, more
 abundant instar instar instar instar
Molt May 11 1893 1893 1893
 black instar instar instar instar
 line above and instar instar instar instar
 line instar instar instar instar
 narrow instar instar instar instar
 line instar instar instar instar

Calc. 1.0 1.67 2.78 4.6 7.7 rat. 60
 round .6 1.0 2.0 2.8 4.5 6.5 7.5

577

Portly, a diaphanous egg...
 Egg, Spherical, flattened, smooth, brownish below
 smooth, shining, laid in a row.
 Usually found with short brown hairs
 from the body of the mother. It is
 covered with slight prickles on a
 red cloudy base. From the point (noting)
 hatched the head rounded, brown black,
 brown base, brown, densely clothed with
 short dark hairs, thorax feet black. Scent
 large, heavy, many more than 50 or 80, especially
 large, some with long hair which
 covering the head. It is found with large
 clasp. The dense hair contains dark lines
 deep in them giving a pretty appearance as
 general view. Trace of a line to the line
 anterior part of the enlarged base the
 base of each hair. The hair are glass, white
 slightly barbed or cleft with pointed ends.
 Later than from 2 or 3...
 even, some...
 found...

(See page for description) The...
 The...
 2.200 of... (2) ...
 5-8 a pair small red pale...
 tubercles; on 10 a simple large dorsal
 one. Body, vent. black, s-d...
 5-8 vent large & evident, the...
 any small. Ears... (3) large...
 placed near...
 short, black & white...
 more...
 of white lateral...
 base of... (2) large...
 (3) large close type, almost fused...
 base of... side of body...
 with... thick... s-d... lateral...
 yellowish line, the s-d...
 Mottling... black above...
 the...
 median...
 with pale... s-d...
 showing...

red paper, immediately washed between & over-
lapping leaves & between at 11. Also at a little
int. Spun the leaves, they are a brown
yellow. Hd flat a front small brown cap,
shiny black, shiny black; legs not flat.
W. more than normal, c. s. & anal plate black
colored as before but the venter color is deeper
The dorsal feet color (about 1/4 of 1/2) is greenish
with a narrow faint line dark in
which is color on with a narrow, dark
line, hair numerous, pale, fine.

... .. 7. Late to
dorsal color brownish yellow
Hd small Hd brown black, shiny, lobes,
media & dorsal sutures small depressed,
narrow. Hd not flat. W. 1/2 normal. Dorsal
area with tubercles 1:1 on 1-4, 5-11 & 12 and
yellow, pale at 11 o'clock, with a purplish
narrow line. Dorsal area, dorsal
elevations on 5 & 12 dark blackish narrow
feet, c. s. & anal plate black. Shy
& S-V feet yellow line, somewhat raised,
the 11 is broken in 11 spots. Long
hair on the back on 11 only, pale, thin
short hair from the skin also pale.

... .. Hd rounded, outline moderate,
leaf chryso depressed. Head flat w. 32mm
late brown with darker brown reticulation
shiny, legs & tip of jaw black. Apertures
Body flattened, 1/2 & 1/2 slight, color of dorsal
hair all white, long hair slightly from tubercles
short narrow on front skin. Tub. small,
1:1 feet 1:1, 2:1 S-V, all bright yellow
Body brownish purple, marked with white
forming a broad d. band entering 2 narrow
purple bands (d & along 10) and a narrow
shy lower beside nothing through 1 vent
1:1 on 1:1 2 are dark. Centered white
around 1-1 except on 4 & 11 stain yellow
feet pale, whitish. Late the color is
dark the appearance is as if white, smaller
with spots of pale purplish, there was no
line or line. The shy is on 11 dorsal feet
1/5 is purplish. Tubercles on small yellow
rows 1:1 on 3-4 (patch on 4) 6-11 the
shy, also extend to 11. Spines black
length 2.5 x 1.5 mm. Head not dipping on
... .. 2/3 of all between 2 & 3, thin, slight
... .. to same
Image of Cat no. 9102 Schizoneura was
intended!

denticles around base of ^{processes} ~~of~~ a row of
 black dots, 2 per seg. ~~of~~ row ^{of} 1 per seg.
 post. to spiracle. The feet black. Process of
 lower length, ^{than} ~~than~~ spir. about as
 long as themselves. (as before on 12) Dd
 $\text{2, 1st } \text{3-5, ; on 13, 2 each side, on 14}$
 (dors. of anal plate) 1 each side. Sd on
 3-5 are slightly thicker than the others.
 Abd. feet yellow, clasper brownish. A few
 ventral black spots. Ground white with
 narrow black edge. Processes flat black
^(sh. l. 3.4)
 not ~~of~~ head same w. 3. mm. Body
 bluish green. Black dots same but
 reduced, in some example also clearly
 connected to spiracle by ~~microscopic~~
~~lines~~ (not noticed?) which ~~is~~
~~distinct~~, on ~~13~~ ~~of~~ 3 & parallel to
 ventral margin abd black. The feet, basal
 joint yellow, 3 terminal black. Abd
 feet yellow with blackish clasper.
 Spir. not more than $\frac{1}{2}$ or $\frac{2}{3}$ as long as
 the processes which are thick, a few
 slight enlargements at base of 11.

Processes 4 rows 2-6 3 rows 7-11.
 $\text{Dsd on } 2-11, 13-14, \text{Dsd } 11; \text{D } 2-12$
 $\text{2 Stg, 13; } \text{3-5, 2-12 } \text{4 S-V, 2-6}$

Processes & spir. all shiny black
 except D on 3-5 ¹² are fixed with yellow
 on the shaft. Spiracles white + black edge
~~with~~ ~~of~~ ~~the~~ ~~rod~~ ~~full~~, median anterior with
 character yellowish green, and shiny with a
 small black spot on scelli & a narrow
 streak each side clasper, mouth white.
 w. 5? mm. Body large, black, cylindrical, slightly
 enlarged at the 12; 12 large square & the
 13 Δ anal plate, yellowish green. Body
 bluish green with a gray tint. The feet
 yellowish green with black tips, abd yellowish
 green outward. Processes D on 3-12 ^{almost} ^{rigid} ^{at} ^{the}
 yellow, ~~head~~ ^{pale} ^{at} ^{base}, ~~the~~ ~~rest~~ ~~black~~
 white shading into pale blue at base, all
 the terminal spir. black as well as the
 short intermediate ^{ones} D 12 on 2 on DSD . The
 spir. are all short ($\frac{1}{2}$ process long) & are present
 absent. Only the apical one is present on ~~13~~ ~~on~~
 base of a few others. Processes club shaped, the 11
 D 2 on 3-5 and D on 12 large & round thicker
 than the others & possessing the normal spirulation
 like as short spir. black spot representing
 stem of apical spir. & 2 concentric rows of
 radiating ones. Spiracles elliptical, white
 with black rim.

Repeated on July 27
 Insects May 7 194 T S. glomeri
 coll. red. coll. coll. 10860

Lateral area purplish, against which
the pale spots are white contrast
Hair on ①-③ black, from ④ shading into
glassy white, from ⑤-⑥ pale salmon
and feet blackish brown, the clippers
slightly reddish.

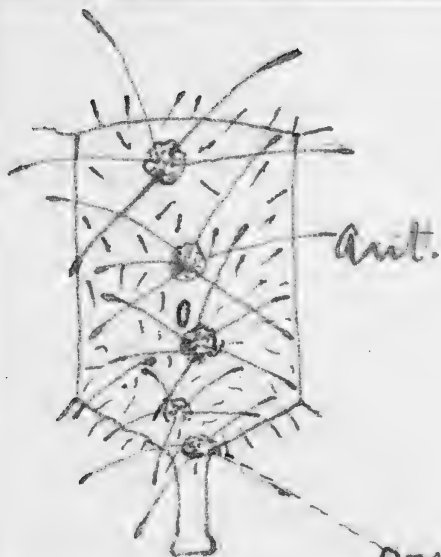
July 24, 1933 ^{2.22} head 2.3? Same yellow dots as
light red d. band ^{later gradient} not prominent. Base of ant
③ distinctly light reddish, contrasting and
forming a broken d. band. Lateral area
below ③ marked with yellowish, then
a very gray. Base of ant ④ not
very pale. Abd feet salmon reddish.

Walt. Hest. Head sunny black, w 2.8? mm.
Ant black, marked with white*, bearing
a broken d. band below which the
ant ③ one distinctly light red, slightly
at the base, other hair bearing white
granulation only black. ④ very black.
D band rather broad, very yellowish,
becoming yellowish white in the center
and the color is not seen when the
segs are contracted. *Foot on seg. 1
above d. band. ⑤ have smooth shiny

seg. apex as also the large d. band is
ant ④ ⑤ less reddish than ③. Hair
rich, subcleft, black, becoming pale
laterally, and pinkish red from 3-4 warts
have about 20-25 mm long. All black
clippers large, black hair. Labrum slightly pale
base of ant. 1 abd feet pale salmon.
The feet shiny black
w/2 pushed for several hours and in
ant 6/10 had covered on surface of
ant with stems, a large reticulate net
with rather broad meshes - yellowish.
Pupa cylindrical, smooth, also tapering,
18x5, color blackish anular with
a whitish black, becoming a short
a thick, slightly curved, with a tuft
of spiny hairs.

seg. apex as also the large d. band is
ant ④ ⑤ less reddish than ③. Hair
rich, subcleft, black, becoming pale
laterally, and pinkish red from 3-4 warts
have about 20-25 mm long. All black
clippers large, black hair. Labrum slightly pale
base of ant. 1 abd feet pale salmon.
The feet shiny black
w/2 pushed for several hours and in
ant 6/10 had covered on surface of
ant with stems, a large reticulate net
with rather broad meshes - yellowish.
Pupa cylindrical, smooth, also tapering,
18x5, color blackish anular with
a whitish black, becoming a short
a thick, slightly curved, with a tuft
of spiny hairs.

Abolanderi
Mango Aug 29, 1933. Col. no. 9456



Ant.

Corresponds to

last whorl on leafless seqs.

= VII; VIII not seen anywhere.

(Single data)

BB 383

Pterophoridae



That Miss Zella Peabody is a Graduate
in Piano Playing, having pursued the
highest branches of Musical Study under my
personal instruction, I fully recommend her as an Instructor

CHARLES H. WEBSTER.



Hd 1.2 yellowish broad white d. a stig line
 all setae edges tubercles large black, a little
 pointed, row conical; setae distinct, pale smooth
 simple, rather long. 12 enlarged
 i-vi vii 3 on leg plate no other form

Hd .75 yellowish white line very faint. Tubercles
 blackish, slightly conical, setae simple
 smooth. Same but characters less developed

Hd .5 yellowish, hd a tubercles testaceous the
 latter well marked, large a little conical
 setae same

[omit later 1.8 1.9] — 2.8

.35 .53 .80 1.2 1.8 2.8 — 16.8

.5 .75 1.2 2.8 — 16.8

.32 .50 .77 1.2 1.8 2.8 r.65 — 18.8

285
 35
 140
 148
 182
 65
 910
 92
 1092
 1183
 69
 5915
 7098
 769
 69
 3845
 344
 499
 33
 2495
 404
 11088
 1088

Mrs. H. G. Dyar,

City

Madam:

Your favor of even date enclosing check for \$25.- in payment of rent on Piano is to hand and we have duly placed the amount to your credit.

Please accept our thanks.

We shall send a tuner to attend to the Piano on Monday as requested.

Yours truly

A handwritten signature in cursive script, appearing to read "Helen Brown". The signature is written in dark ink and is positioned below the typed text "Yours truly".

Calc. .32 .54 .90 1.5 2.5 4.60

Found .3 .5 .8 1.5 2.5

285

Alysiid (*Maculata nigripes*) Jap. 1922

Stage hd. 3 mm Hd. bilobed, shiny pale brown
ocelli black, 2nd, 3rd, 4th, 5th, 6th, 7th
antenna at 5-6, 12 enlarged d. Feet
normal, but those on 7 & 8 are rather
small, not used in walking, not
at rest. Larvae loop, rest on 1st
3 pair of legs. Color subtranslucent greenish
yellow, faint orange center of each
seg. most distinct on 5-7, enclosing
the blackish smooth minute piliferous
tubercle feet blackish, non-fine, pale.

Stage hd. 5 mm Hd. shiny bilobed, bulging
at front, shiny orange, shiny pale brown
ocelli black, a few hairs. Body thick at
5, 6 & 12 & elevates in 2 humps in the
partly of rest. Feet normal, all used,
though the lower legs are short. Tubercle
① ② on 5-7 & ② on 12 are large and
the other, conical, black, otherwise
much as before but a little more
distinct orange humped and the legs
is more whitish, still watery.

Stage hd. 8 mm Hd. as before. Body somewhat
more white & honey yellow, becoming
grey around the bases of the larger
tubercles. Tubercles a few shiny black.
5, 6, 7 & 12 distinctly enlarged dorsally,
especially at 12, & held elevated.
Tubercles conical, ① ② on 5-7 and
① ② on 12 especially large and
projecting, a whitish patch laterally
between 11-12. Setae fine, long, white.
Tubercles normal ② and ③ small on 5-7
circle black with white center.

Stage hd. 1.5 mm Hd. shiny bilobed, shiny
dark orange with yellow & 8 white spots
on each lobe. Hair white hairs.
Body marked with black, white & red
somewhat mottled but tends to form
transverse varicosities. Feet & tubercles
black, the latter conical and characteristic
as before. Hair long, fine, white, single
center (5-7), 12 each legs lateral marked
with orange. Lateral white spots are
supplanted by a pair of white ones
around distance 5-8. [See 06372]

386

leaf and lower in the wood...
July 2, 1901. 1st stage, normal, median suture
distinct, lobes full but scarcely separated
very dorsal, covered with large granules
black, not shiny, with scant pile
normal, abundant near mouth w. 3.2 mm
52 very small, body feet black (color
p. 13 again small. A narrow c-sh
reaching spiracles on 6-10-11. with a
dorsal suture; the feet well pointed
3rd joint small, pointed with terminal
spine. These structures shiny black.
Body blackish purple, granular
mottled with gold granules, the
d. vs. shows darker. Much, on 12-13
d. 1 very hairy with very minute, short
pointed stiff black pile. Spiracles
small, oval, black. Ant. edge of 2 white
and apically on 11 & 12 ant. the large
transverse snow white patches, the
posterior divided along mid line into
two elliptical areas.

but distinct
pencil pattern distinct

Mar 31 1901

387

Big yellow looper - on ^{California} Nyctica cerifera
on ~~stems~~ ^{smalling} ~~stems~~
in wood-hole, near, July 12, 1903 Hd very slightly
bilobed, lobes full laterally, clypeus large, ^{not high}
antennae not deep, color light yellow with 4
round black spots on each lobe,
a spot over ocelli & some smaller brownish
one on clypeus. Labrum white. w 2.4 mm.
The feet dark to black, abd on 12 & 13 feet only
Body light yellow, about 12-annulate but
somewhat irregularly with very narrow deep
brown long lines. S-d, dist; lat., supra-stig,
& stig point (the 2 latter connected before &
behind each spiracle by a conspicuous black
patch between them or white spot around
the black spiracle); s-v, just below s-v ridge,
narrow; 2 ventral (red line) quite distinct
abd feet with brown black spots like
those on head, the feet less distinct
annulate with brown. (Tachina in one)
legs made com. coarse open net work of
yellow silk on leaf. Hd 1.7 mm
Janeyo sep 4. 13, 1903 Zerene catenaria
cat no 9532 a pale brown submacul
black

Calc. 1.28 1.98 3.2 5.16 rates .02
 Found 1.2 2/0 3.2 5.

388

Apatela like *Agria* outline but ate bayberry
 Fall, like our eastern species & without red.
 Shie. tawny becoming paler. Wood's Holt,
 stage hd 3.3^{15th Aug 52} July 20, 1893 hd whitish mottled
 into brown & shaded with black in
 a diffuse band from ocelli upward and
 on each edge of the clypeus. Mouth parts
 black, black and under side of head.
 A few pale hairs. 12 large, slightly bilobed,
 rather flat in front, shining, overlaid
 by long white hair from 2-3 & partly concealed.
 Rods cylindrical, tapering gently posteriorly.
 12 enlarged d. sh. ft. waists 1 as large
 as any other, only a flat ant. 1 set. 1 lat.
 1 minute, post step. 5 S-V, 1 S-V post, middle
 on 2-4 1 absent, 5 like higher up. On 12 1
 1 are nearly a hair & 1 is longer. On 13, 4 waists
 alternate & close, convex & one low one sd
 on 13 post. 10d striped, mottled with
 white & black, the black predominating
 & becoming continuous, centrally on
 the apex & adjoining the narrow base
 yellow d. lines. A horn red 15 3

between 2 hours
 " " ✓ 4.6 = 7 tufts black & white
 bent, the former broken & obs. and, of
 yellowish white, pale red in the middle
 tufts pale, with fleshy tufts very pale,
 long & spreading, thin, with a few black
 ones at extremities & certain tufts of
 plumbeous hair. These are a few very short
 plumbeous hair from 1-3 on 3 & small tufts
 on 4. Longer from tuft from 1-2 on 5 and
 small white tufts from 1-5. 3 equal
 separated white tufts from 1-3 on 6, the
 very thin looking, fan like around base
 a few hairs from 1 on 10. A black somewhat
 divided pencil from 1-2 on 12, faint &
 entering each, and white tufts 3-12.
 with 10d enlarged. 40 bilobed horn, smooth in color
 9-10 d. black line at margin of clypeus & patch
 beside eyes. The feet. 1 is white 5 mm. 10d smooth
 same as the narrow yellowish & like horn showing a
 series of white from d. patches. Waists all very pale.
 Spinules white, slender rods. Some slightly hooked like
 1 long hair and 1 post lateral hairs but less 7-10
 short & much plumbeous hair (narrower hole length) mixed
 with the 10d of horn. Tufts all fine light plumbeous
 horn or very leather color, 10d on 4 and the long 10d on 12
 a little darker in shade. Small tufts from 1 on 7-10
 same as the long single hairs, 15 mm. Venter & feet pale
 blackish like 1-2 feet present in a row on entire
 ventral surface of horn. 10d horn 2d 10d 10d
 10d horn. Along the waist line a few fine
 plumbeous hairs 1-3 a few white 1-4 1-5 faint di
 10d horn present. 10d 1/2 10d 10d 10d 10d
 I hope may 1894 cat no 10863 *Apatela* *Schreiner*

389 = ^{other on elm}

Purple Aphididae on beach plants Artemisia maritima

[Previously found on apple at Lincoln Hill?]

1st stage, slightly bifurcated, median suture deep before vertex and shallow behind, flat in front. Blackish waxy, shiny, darker below. Clypeus black with central spot of purple pale marks from a ^{shaded} mark which under clypeus. Side feet marked with pale. Basal ant pale. A few reddish hairs. W. 3.5 mm.

Body green with 12 enlarged d. & a round-quadrate elevation which bears ①② at the corners & pedicels central. Warts slight, consisting of scarcely more than an aggregation of 3-10 filiform tubercles with a slightly enlarged common base. ① as large as any, ② rather small, just to spine. On 2, ③③ are scattered over the large d. ob. not distinctly aggregated into warts. ④ absent 2-4, ⑤ stig. On 3, 4 at end of close row to a single 1st one post.

Hair very thin, long, quite thick, tapering reddish, with a few short pale ones s-r from body. Body lilac, shading into blackish lat. s-r. C-sh, feet 13 post blackish, a series of d. brown gran. shape or divided thick red spots 1 per seg from 5-11 (red dash on 3-4) in a sub-elliptical velvet black patch which surrounds ① & ②. ① shining black black at base, ② as a yellowish white patch ^{on 5-11}. A diffuse blackish broad d. shade connects these marks & covers dorsal part of 12 which is unadorned. 13 purplish with its warts as well as the sides of ③-⑤ dorsal feet color. A lateral black line just above ③. Below ③ the blackish s-r shade begins. Spiracles black with white center.

Images Apr. 27, 1898, cont. no. 10854

Acromyza occidentalis

Microgaster
 on black oak Wood North
 Mass. July 23, 1893. Egg nearly spherical,
 somewhat cup shaped, the lid like top
 showing distinctly of its contrasting color
 with a central depressed black micropyle
 color white, the side somewhat grayish
 in contrast with the very white lid
 diam .9 mm, width lid .6 mm. Height .55 mm
 Under glass obj. aa smooth or faintly reticulate
 like hen egg, micropyle white or black,
 punctured. Under glass C divided into
 small rounded hexagonal areas by
 low reticulations. Micropyle in a slight
 depression, elevated, irregularly granular
 The reticulations are less distinct at the
 sides, becoming obscure punctate. The
 bottoms of the eggs are flattened and covered
 to adhere to the leaf by a white substance
 Stage I hd round, smooth, not bilobed. The
 sutures not evident. Mouth and antennae
 projecting; entire shiny black w. .50 mm
 a few short glassy white setae arise from
 minute colored tubercles. Prothoracic shield




black
 rectangular, a little wider centrally than
 at the corners, slightly rounded, bearing 3
 glassy tapering hairs from minute tubercles
 at each ant. corner, 1 at post corner and
 1 each side middle line behind the center.
 On a 5d black spot bear 5 setae from
 colored tubercles with black apices. A
 small black spot just behind the spiracles
 a large spot below with 4 setae and another
 above base of foot with 3 shorter setae
 The feet shiny black with dark hairs. Spir-
 acles black. On 3-4 ② as a rule a black spot
 surrounding the tubercle, head like which bear
 setae, 3 in number. ③ with 2 setae. ④ 1 seta
 ⑤ ant. 2 setae. ⑥ center 2 setae. On 5-12 ① ant
 a little above s-d, large, 2 setae. ② post. s-d
 smaller, 1 seta. ③ lat. 1 seta. ④ s-s post, 1 seta
 s-s a little below ant and to iv, 1 seta. ⑥
 absent, base of leg clear. ⑦ on 5-6 ^{13 out} in line of leg
 4 setae, not well connected by black, scattered
 ⑧ single minute dot each side median ventral
 line, center of plate of abd feet 7-10 black
 with several setae. plantae pale colorless
 black. On 13 2 next dorsal spots in line

each with 1 seta. between them a tolerably
distinct median, median to 12 then to anal
plate. a s-d seta in front of the incisure.
A lateral one behind it. A s-v one in front
which is row ② already mentioned. Row
③ before antenna. Anal feet rather long, truncate
with no evident clefts, black with
8 or 10 long black setae. Suranal plate
hemispherical, black, indented on its
irregular and edge centrally with a
row of 6 marginal setae post. and one
each side the indentation and. Color
light yellow with a d. & lat reddish
brown diffuse bands. not reaching the
extremities, with faint traces of dorsal
s-d, stig and s-v bands. Skin smooth
and shiny with no hair except those
from the spots. Bases of abd feet mostly
covered with black granules under Zeis C
The granules become absent and ^{to 5, but}
are present s-v on legless segs slightly.
Length about 4 mm. Sit on punk or wax
it gregarious & elevate both extremities
when disturbed. Tails the no. hairs

become very distinct on bases of the feet,
3, 4, 12 & sometimes centrally which giving the
appearance of patches or transverse bands.
July 28 Head higher than wide, slightly
narrowing upwards, not bilobed, the sutures
well impressed; clypeus $\frac{1}{3}$ as high as head
s, shiny black, minutely shagreened a few
setae from very small tubercles, one from
the vertex of each lobe rather longer than the
other - Cell 5 in a semicircle, from the center
of which arises a seta. Antennae black, with
a pale basal enlargement. The setae are
minutely barbed or cleft throughout their length
with 9 mm. The feet shiny black. Body red-
dish brown. with red, s-d, lat, stig, s-v
(interrupted by bases of legs) & medio-v, yellowish
line, becoming confluent posteriorly. C & h rounded
rectangular, roughened by its piliferous
tubercles, black. Anal plate, hemispherical
with a central indented indentation, black.
Anal feet black, long, projecting backward
being several stig, black setae. Other
setae on the body, all pale, those of the
last stage supplemented by a large
(median)

390 A

On white oak & contracta. Spherical, flattened at base, a distinct saucer-shaped depression or hollow on top, occupying rather more than half of the white lid. Microscopic black granules, slightly elevated at the center of the depression. Surface faintly shagreened. Lid white, sides grayish. diam. 7 mm height 7 mm width of lid 6 mm. Aug 7, 8 AM stinging shell
 [sample] Lid round, not lobed, smooth shiny black with a few coarse & minute setae from minute tubercles. Body normal, small feet not much dev. black with a band of long black setae. C-sh  hollow out in front, 3 setae from each of the rounded sides, 1 from post. corner, yellowish abundant with black. Body yellow the setiferous tubercle situated in blackish area, ^{5 setae} long pale, cleft all along the length - 1 unit @ ant. 2 setae, large. ② just 1 seta. ③ lat 1 seta, ④ 5-8, in line, 1 seta each. A faint red reddish band, feet black. On 2 other patches with 2 or 3 setae and

the last (s-v) row runs only 2-6. Anal plate Δ 3 setae on dist margin on each side & one each side mid line on ant margin - blackish. All setae from minute tubercles.

Upper Aug 16 ^[sample] stinging shell, not with white anal plate black. Body red, brown, stripe to dark yellow. 2^d hair abundant, about $\frac{1}{2}$ as long as 1^d, long ones on c-sh. Line narrower than spaces, bases of feet pale, no wavy warts on with lines.

Upper Aug 26 Red, stinging shell, no tubercles, hair, has all short, 1^d about $\frac{1}{2}$ as long as 2^d. 1^d & plates of feet black. Pedal line present, bases of feet pale. Hair all white. Looks like minista

Upper Aug 31 Same, line a few yellow, not confluent. S-sh yellow or faint, as in some. Could be angustis, but = minista = 390

[390C]

narrow. Hair thick very long, almost
trifled. Hd. plates & feet black, the
base of abd. concolorous.

390C

As before, but by mistake, at 10:00, Aug 25
I collected a ♀ (see same page as I)
in stage II which from with stage
about narrow thin space. (or as broad)
and of course, feet black, and
abd. plates & feet black. When I
looked at it I thought, except the long
hair from the abdomen stage, and
the long hair on head, it was quite
like the black one. I was
in pedicel was indicated as being
just about to connect with body.

Aug 25 This narrow, yellowish white
hair white, abundant, $2\frac{2}{3}$ as long as
or about as long, all long, curved
hair much longer. Pedicel, as usual
black. Body blackish brown. Pedicel line
appears to be absent.

Aug 31 A marked change. Suddenly
very hairy, more so than contracts. Red,
purplish brown, hair white, the hair
wings very narrow, lower on head,
pedicel line absent, and is ventral

370 B

Egg on white silk contracta sp. small.
 flattened base, smooth top down shaped
 no depth in nor any of any kind, the
 whole microp. presence, unpigmented white
 lid as wide as egg, reaching half way
 from the side in lateral view. diam 7 H. 7
 Lower half grayish, top pure white.
Larvae in stage II must be contracta not
 other wasp. the canal for cold
 outwardly black. Body yellowish with
 d. & lat black narrow bands, s-d & s-s
 fainter reddish ones. Hair white, the
 2^o hair about $\frac{1}{2}$ as long as 1^o, now minute
 black stipules. Head above brown. (old 1)
 III ^{1st stage} 2^o hair $\frac{3}{4}$ as long as 1^o, all white, the
 1^o hair head very long, both 1^o & 2^o body
 now black, shiny, yellow, now, head, H. 15
 IV 2^o hair very abundant, almost
 the length of 1^o hair, all white, all in 1^o
 the black stipules from all the stipules
 distinct, stipules stipules. 5^o hair stipules
 lateral line and stipules 1 1/2 7. 8. 175 118
 May 1 Aug 29 yellowish contracta
 16% at 2.8 now suddenly very hairy

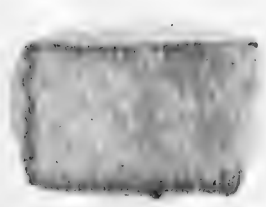
391

391

1 egg on base of yellow leaf 1st
 K.V. 6-27-98 possibly contracta
 yellowish stipules along. 15-20
 mostly narrow, basal
 tuberculate, with irregular
 a considerable area
 a small stipule
 appears to quickly stipules
 and opaque stipules
 acuminate, but stipules
stipules
 2^o hair $\frac{1}{2}$ as long as 1^o, all white, the
 1^o hair head very long, both 1^o & 2^o body
 now black, shiny, yellow, now, head, H. 15
 IV 2^o hair very abundant, almost
 the length of 1^o hair, all white, all in 1^o
 the black stipules from all the stipules
 distinct, stipules stipules. 5^o hair stipules
 lateral line and stipules 1 1/2 7. 8. 175 118
 May 1 Aug 29 yellowish contracta
 16% at 2.8 now suddenly very hairy

4 eggs on back of willow leaf
K.V. 6-27-98 possibly eximura
very pale yellow with a greenish
tinge, slightly shiny. 85 diam
width measuring 6 across
reticulate, a little irregular
a considerable area
around the micropyle,
apparently solidly granular
and opaque as if
succulents, but may not
sufficient

collected July 2 Like *unicoloris*
collected July 5 = *unicoloris*



S. unicolor?

Egg more than hemispherical, flat
at base. Diameter .8 mm. 60 diam
etc. scarcely reticulated, rather
faintly reticulated creased, but
covered rather sparsely with erect,
minute short pale filae, each with
very frequent, with enlarged pointed
tubel tip

Larva cylindrical, tubercles large

① with enlarged bases 5 & 12

sculpture densely - dorsal part

smooth - Hd slightly raised,

rounded, light brown, with a

few pale setae, width .4 mm

1/2 inch of molted with red brown

on a pale ground. On 4, 6, 7 &

a light yellow spot somewhat

less distinct, on other seg.

except 5 & 12, on 11 extending

abrupt forward & back, forming

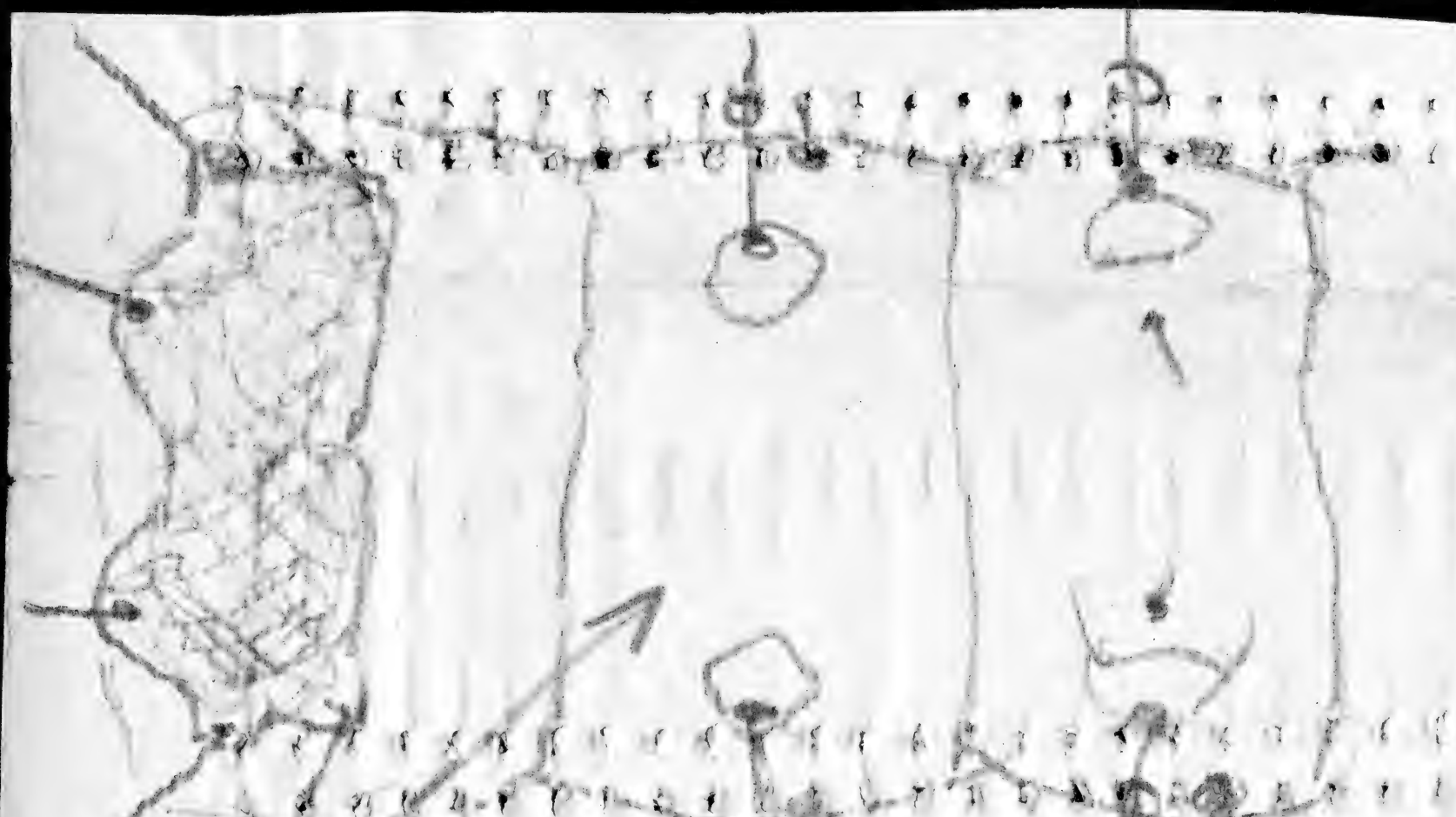
moderate on the V. Tubercles
dense, quite as on ① & ②
This part blackish, abd.
black outwardly (except anal)
Setae long slender, pale,
slightly swollen at base,
glandular, often with
a drop of clear liquid
under ④ & ⑤
(occasionally under ⑥)

Egg (265 diam.) Beautifully
reticular, the irregularly
hexagonal cells radiating
out from the micropyle in
concentric circles. (9 cells in
first circle) like shingles
on a dome, the pile like
structure arising from the

angles of the reticulation
as slender rods of about
equal thickness throughout,
not appearing swollen at tip.
The covering more regular, hex-
agonal further down the side
391A

Same egg and larva on
white birch, Keene Valley
N.Y. June 19, 1894. Setae
as follows, glandular with
drop of fluid at end or middle
① near central ② a little past of
it ③ top of, the space
and middle, black, resem-
bling a tubercle, ④ 5-8 feet,
⑤ below and, (⑥ absent, base of
leg clear) 5 setae on black
leg plate. On legs: seg
⑦ is 3 tubercles in Δ , ⑧ is one

⑥ being equally absent
in the higher stages [5 + 6]
Altus on hazel stage I as above
III June 4d dull brown blotched
a tubercled water, with
Red dark various brown, a little
lighter at side of 3-4 pair i marked
with yellowish. all uniform to
11 when a yellow oblique dark
5th dependent V-mark. The
post-cocleas also all brown
i with curved lines, and ii
slightly so; slight purple on
band 12. Setae glandular; vi present
III July Like next but paler
on 3-4 yellowish brown; body dark
brown, the post wings yellow
V-mark on 11 very distinct. Later
the thro. side become light green
and there is a yellow mark at
apex of 11



Another has a tiny tubercle
and seta dorsal of (ib) on
joint 4, not visible from 3



Woolly grey, all red brown, mottled
yellow spot represent V-warts and
A part of the patch, i.e. yellow on
I on 4 with a Δ shaped patch on II
all the rest mottled greenish vinnous, hump
52 12 vinnous, also 5-V. Setae glandular
Evidently going to be unicornis (Put
in bag on tree June 27)

.....
.....

.....
.....

.....
.....

390 B

Eggs on white oak Quercus 3/11 small
flattened base, smooth, top dome shaped
no depress or any ring of any kind, the
black microples scarcely impressed. White
lid as wide as egg, reaching half way
down the side in lateral view. Diam. 7 H. 7
Lower half grayish, top pure white.

Larva in stage II must be contracta and
with except. the canal fed cold
internally, black. Body yellowish with
d. band black narrow band, s-d s s-s
faintly whitish ones. Hair whitish, the
2nd hair about 1/2 as long as 1st, from umbilicus
black tubercles. Hecils about 1 mm. (Std 1.1)

III ^{same} 12th of hairs 3 as long as 1st, all white, the
1st on head very long, with 1st, 2nd Body
black, stage yellow, rounded. Hd 1.5

IV ^{same} 22nd of hairs very, 3, about 3
in length - 1st as long as 2nd, all white, the
1st on head very long, with 1st, 2nd Body
black, stage yellow, rounded. Hd 1.5
Lateral line not sharp - 1 part 11-12-13-14

May 29 yellow oak very young Q. contracta
1st and 2nd hairs id. very hairy

391

Schizura unicolor on Cestus, Cornus etc
1st hair 1/2 of 2nd, 1/2 higher than wide, 1st hair
not as above, lobe pointed, dark red-
brown, obscure, mottled with a very faint
blackish band from ant. to apex of lobe
before the lateral angle under. mm.
not so high as head, 3-4 height, a low
hump, horn on 5 with plicate apex. Tubed,
3 slightly elevated on 9, and a low
prominence on 12. Anal not distinct
but not used, and 11-13 head elevated
color reddish or dried leaf brown, a deep
brown d. band 2-4, narrow, just to
the hump & defining, and on 5, the lateral
clear pale patch on 3-4. The feet not
A darker brown lateral line & narrow
oblique s-d lines on 5-10, filled in part
with pinkish 5-8, with a deep brown
stroke on 9 & forming the apex of the yellowish
white V-shape on 10 which is continued
on 11 almost reaching the lateral line there
A brown dorsal shade 12-13, & a whitish
11-13. Setae rather long, brown, normal ④
subapical feet, 11 on dot 5-10-10

Calc. .51-.68 .93-1.2 1.7-2.25 3.0-4.0 5.6-7.4
Found .9-1.2 1.7-2.25

392 (=31)

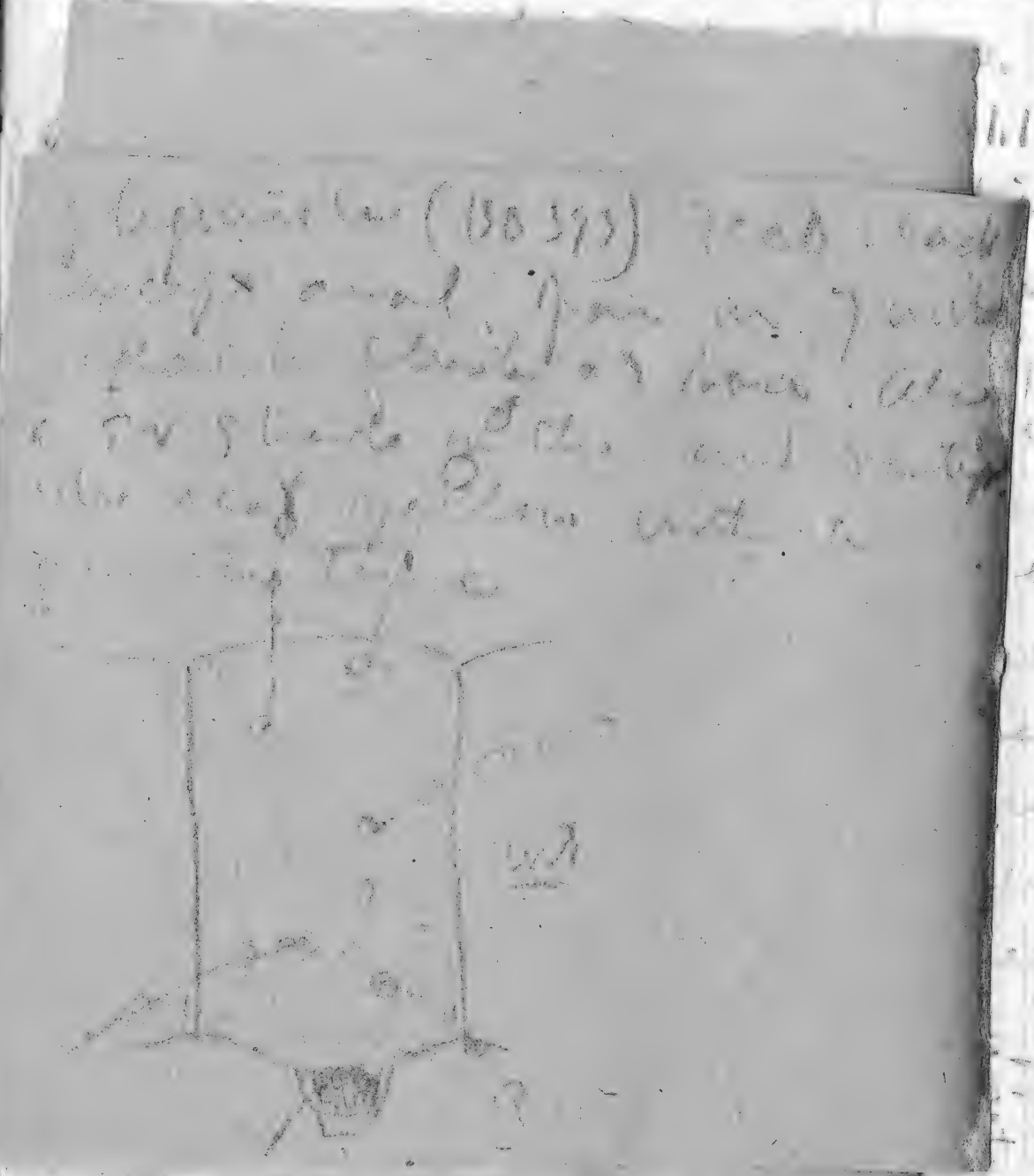
Arizotoma ^{virginiana} white oak, woods Holl, near July 25, 1917
Hd elliptical, deeper than wide, and lobed,
clypeus small, the upper $\frac{2}{3}$ of it anterior &
the median impressed, shining brown-
black, mouth & clypeus darker. ^(Stage hd 1.05, 1.15, 1.20, 1.20) 1.2 mm (100)
Body apparently cylindrical, the 5-v ridge
quite prominent on 12. Stage black
5-v and 6-v are continuous with body,
intermediate. On 5 a pair of long 5-d
hairs, black spinose with 2 long &
short lat of 2.6 mm. Same of short anal
black tubercles ① sd ② lat ③ 4-12
scarcely distinct, hairs ant lat. On
5-d & lat and on each side anal plate
Body dark brown, brown, dorsal & anal
ventrally (except anal) black ^{small 5-d}
Mouth of 30 Hd same, glabrous dark ^{small 5-d}
red, labrum yellow & brownish. 1.7 mm
Body part in brown with red lines, white
long black setae on 12, many on 13
Hd same, shining black, tubercles 10-12
d 1-13 and 13 and 14, 15, 16, 17, 18
Mouth of 30 spinose brownish, same long

rat 2.55
Stage hd 3.5 lat 2.3, shining brown, etc.
On 5 2 small small, 3 long 4-12 sharp
spinose conical, 13 angular, 2 apices
small on post edge anal plate. ② lat.
2-13, like lat but shorter, a small one on
edge anal plate. ③ on 2-v fold 2-12, ④ 5-v
2-6, 11, 13 ant. Hairs same as
all tubercles shining black. Body shining
brown with smooth and white granular
tubercles. Black (appearing gray), a dull
ferruginous ^{small} 5-d & 5-v strip. This part

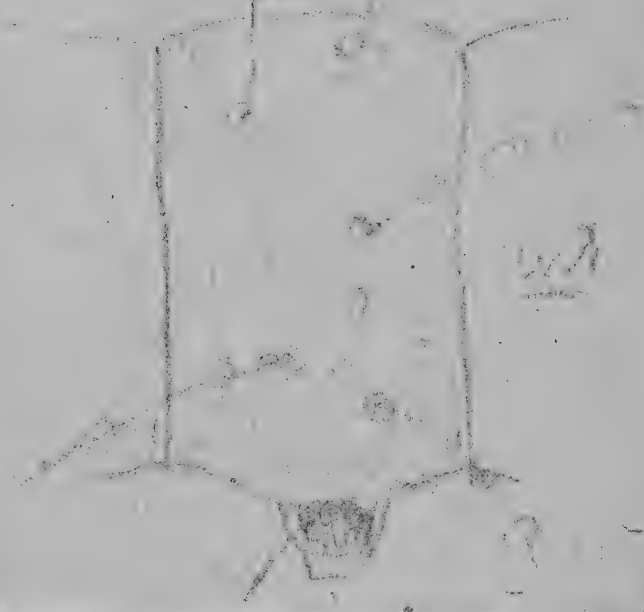
Basal plate pale brown, also feet
 black ventrally. Spiracles large black
 305 Aug 12 appearance gray, and light brownish

393

Eggs *Masson's leguminosae* on blades white to pale,
 2-10 in a batch on underside. Under hole Aug 1.



leguminosae (303 393) 7000 black
 body anal. pair on 7 with
 spiracles black at base. Also
 a few strands of the anal ventral
 also anal yellow with a
 pair of feet



449 *Masson's leguminosae* 305/4
 450 *Masson's leguminosae* 305/5
 451 *Masson's leguminosae* 305/6
 452 *Masson's leguminosae* 305/7
 453 *Masson's leguminosae* 305/8
 454 *Masson's leguminosae* 305/9
 455 *Masson's leguminosae* 305/10
 456 *Masson's leguminosae* 305/11
 457 *Masson's leguminosae* 305/12
 458 *Masson's leguminosae* 305/13
 459 *Masson's leguminosae* 305/14
 460 *Masson's leguminosae* 305/15
 461 *Masson's leguminosae* 305/16
 462 *Masson's leguminosae* 305/17
 463 *Masson's leguminosae* 305/18
 464 *Masson's leguminosae* 305/19
 465 *Masson's leguminosae* 305/20

(58393)

Handwritten notes, possibly describing a specimen or collection. The text is very faint and difficult to decipher, but appears to include words like "specimen" and "collected".



4 1/2 in. top edge 10 1/2 in. length
Handwritten text, very faint and illegible.
Several lines of cursive script covering the page.

Barrel plate pale brown, old part
black underneath. Spreads large black
Sat Aug 12 appearance gray and light brown

Eggs: Junonia leucodes on black white oak,
2-10 in a cluster on under side. Under hole Aug 1.
10-12 - hemispherical, flat below. Smooth
shiny above white green. Diam 1.1 mm
Set of 7 under 3rd pair (6 diam.)
covered with small sloping raised hexagonal
reticulation which become gradually
smaller toward the margin. Below,
there are minute flattened tubercles
is not depressed. The sides are slightly
on the side but become round below and
flattened on under side where they become
somewhat irregular forming a triangular
area of small elongate nets. The center of
which is used always as center of egg.

Approximate diam of
reticulation of upper
surface = .05 mm (50 μ)
Diam of egg = .45 mm (450 μ)
Diam of 3rd pair = .1 mm (100 μ)
Diam of 6th pair = .15 mm (150 μ)
Diam of 7th pair = .2 mm (200 μ)
Diam of 8th pair = .25 mm (250 μ)
Diam of 9th pair = .3 mm (300 μ)
Diam of 10th pair = .35 mm (350 μ)
Diam of 11th pair = .4 mm (400 μ)
Diam of 12th pair = .45 mm (450 μ)
Diam of 13th pair = .5 mm (500 μ)
Diam of 14th pair = .55 mm (550 μ)
Diam of 15th pair = .6 mm (600 μ)
Diam of 16th pair = .65 mm (650 μ)
Diam of 17th pair = .7 mm (700 μ)
Diam of 18th pair = .75 mm (750 μ)
Diam of 19th pair = .8 mm (800 μ)
Diam of 20th pair = .85 mm (850 μ)
Diam of 21st pair = .9 mm (900 μ)
Diam of 22nd pair = .95 mm (950 μ)
Diam of 23rd pair = 1.0 mm (1000 μ)
Diam of 24th pair = 1.05 mm (1050 μ)
Diam of 25th pair = 1.1 mm (1100 μ)
Diam of 26th pair = 1.15 mm (1150 μ)
Diam of 27th pair = 1.2 mm (1200 μ)
Diam of 28th pair = 1.25 mm (1250 μ)
Diam of 29th pair = 1.3 mm (1300 μ)
Diam of 30th pair = 1.35 mm (1350 μ)
Diam of 31st pair = 1.4 mm (1400 μ)
Diam of 32nd pair = 1.45 mm (1450 μ)
Diam of 33rd pair = 1.5 mm (1500 μ)
Diam of 34th pair = 1.55 mm (1550 μ)
Diam of 35th pair = 1.6 mm (1600 μ)
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Diam of 40th pair = 1.85 mm (1850 μ)
Diam of 41st pair = 1.9 mm (1900 μ)
Diam of 42nd pair = 1.95 mm (1950 μ)
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Diam of 44th pair = 2.05 mm (2050 μ)
Diam of 45th pair = 2.1 mm (2100 μ)
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Diam of 390th pair = 19.35 mm (193

to 1895
17

A row of *Beccaria guttata*? on *Gilgipoda* 8/3/93
 Head oval, higher than wide, flattened in front,
 smooth, green. A purplish band on a whitish
 ground preceded by a narrow black line
 from above base of joint to vertex, joining the
 one on other side; a short similar band
 on post lat 2 of head at ventral side. ocelli
 black, jaws black antennae yellowish. W.S. 5 mm
 Body smooth, the minute black normal
 setae from whitish spot; anal feet
 slender, slightly used; body slightly arched
 not extremely, appears enlarged centrally
 from the position of rest of larva. It has a
 white s-d line broken on 2 & 11 dorsal
 area yellow to green, lat. area deep
 green, brown dotted, spiracles yellowish
 The anal edge of 2 a narrow yellow line
 containing two purple brown spots. +
 narrow white d. line edged with black
 linear line to 4. On 5 it divides into 3,
 coming together again on 8, forming an
 elliptical area; on 9 it again divides
 the way a branch which joins the s-d

near on 11 joins to the break, the central
 part missing, it is 13 units. It is yellowish
 white, scarcely black broken first to 4.
 S-d line narrow black broken above.
 Besides these normal marks there are
 the following dark purple brown patches:
 (1) a narrow oblique line s-v on 4 from
 base of post ventral (backward) (2) a
 s-d pyramidal patch on 7 between d &
 s-d bands (3) a single dorsal cordate
 patch, the depression out, situated on 8,
 dividing the d. line and band, reaching
 the s-d on each side. A few black setae and
 a blackish line in side of anal feet.
 In front of the head a red spot the junction
 of the d. line from a white spot, and the
 branches of the d. line become indented and
 yellow centrally on 7 & ant. on 11
 (I might have described the
 line of the s-d line
 as to the s-d line
 and hind legs (tailed to emerge) etc.

Another on *Gilgipoda* Highland N.H. June 28 1895
 Hd 2.4 + 2. white line bluish, the central one not
 defined. Besides the marks described there is an s-d
 line s-v patch about post on 7 and 10, s-d line the total
 s-d line on 4; the d. patch on 8 is contained only
 9 post a small area, cleft behind the cleft (as also
 3 s-d patches on 7) filled in with white. A cloudy
 s-d patch on 12. Anal horns short conical red
 with black tip. Band on head minute black filled in
 with purple (indented behind with yellow

Calc. .62 .95 1.44 2.18 3.3 ratios .66

Found - .9 1.5 2.2 2.9-3.2

395

Cecita bilineata on elm wood, Nov 4.

Stage? hd 2.9 mm Hd as in guttata with only purple stripe on white ground. D yellow green but blue green ^{purple spots} ~~hairs~~ ^{hairs} white s.d. black edged above. line on 2-4, bend up to 12. Dorsal triple white shade. Setae rather coarse, 12 with enlarged reddish base.

Stage hd 2.2 mm Same but 12 white d. shade, but narrow single yellowish line. 12 with enlarged base. faint yellow stig. line also in 2.9 stage.

Stage hd 2.8 mm ^(sh hd 9 full) Hd slightly bilobed, pro-
above, m. anterior deep shiny brownish black, clypeus pale, appearance black. Body with anal feet elongated, first enlarge 4 & 12 where the Flange black tubercles. 12 are uniform light green yellowish s.d. line faintly 12 anal feet reddish 2 dorsal purple brown patches, 2-5, 10-12, incised or almost notched at increase. Setae rather coarse, blackish, single from normal, conspicuous tubercles.

rest all pale. Length about 9 mm
W3 hd 1.5 green with black line
Body same, s.d. band moderate, distinct
white yellow, no other line. Anal feet
orange, purple spot on back as before.

396

A Schizura on willow Woods Holl, Aug. 4, 1893
Exactly like unicornis but head & body
light fleshy brown, the markings brownish
blackish, not well defined. whitish
d. shade on 5-8; V white with a faint
greenish shade and on 9-10. Head
obscurely finely mottled with purplish
width of head about 3.2 mm. No band
Imago Aug 24 A large ♀ S. unicornis

397 (=186)

A Schizura on hop hornbeam Woods Holl, Aug 5.
(shhd 2.8)
Hd 2.8 mm high, slightly lobed, whitish ground
thickly mottled with brown streaks which
scarce from any vertical bands. Rather low
prominent on 5, 9, 12 bearing ① with enlarged
whitish glandular bases. ① same as 8 without hump
Body marked like head, oblique white shaded
streaks 5-8 & lateral line. Dorsum 2-4 ^{velvety brown} darken
aid 3-4 whitest (not green) slightly red marked
V distinct, yellow white with enclosed dot on 11
Otherwise much as in unicornis but paler, darker than 396
Molt Aug 12 Hd 4.2 Same as just Aug 15 V less defined, reddish centered
= leptinoides but V more distinct than in planchet ones

Calc. .66 .99 1.48 2.2 3.3

[See BB217] 398

Schizura unicornis
This single egg on white oak. Woods Holl, Aug 1
Egg Hemispherical, flattened below, light yellow
brown. .85 mm under mag. 60 diam evident set.
265 diam 9 pyriform pointed cells around the summit
central unicellular, then in alternating radiating con-
centric circles for 5 rows of hexagonal elongate cells, then
for a cluster of about 2 rows the cells are replaced by
an irregular reticulated vacuolated area forming a band
around top of egg. then the cells are continued again somewhat
irregular pentagonal or hexagonal around the side
diam central area .18 mm, of vacuolated ring .08 mm whole egg .80.
of one lateral cell about .03
Larva Hd slightly bilobed, blackish, shiny
width 4.7? Tubercles ① all with distinct
enlarged bases, on 2, 5, 7, 9 & 12 none distinct
on 5 forming a high fat cushion on which
the 2 tubercles ① rest. Setae very long,
richly covered with dew drops, pale.
Yellowish green, shading into reddish
mottled on the sides, 2, 5, 7, 9 & 12 reddish
throughout. Feet and tubercles black
① on 3, 4, 6, 8 & 11 distinctly surrounded by
bright yellow. 11-13 elevated; anal feet pale
Molt Aug 9 Hd. distinctly bilobed, arching to
vertex the lobes pointed. Ground greenish
white with a brown black defined band from
base of antenna to center of each lobe, then
bands crossed at 6 by a band just

On the inside side
the reticulation
become very broad
about the cells
because of central
after separated by
as much as 100
on diameter. The
width is very much
in any 6 compared
at least 1/2 inch can
the bottom; on side
the center is up
then had been a
junction of the side
there. In fact the
mainly occur in the
net, between cells
between them with
narrowing & on
forming the cells

Tubercles minimal in amount
with black dot in tubercles

before venters of clasper. & another $\frac{1}{2}$ way to apex. the latter contains a series of setiferous tubercles. all bands continued to back of head. jaws dark, ^(sl. bell 1.0 mm) as ^{mm.} Dorsum scarcely elevated anywhere but the tubercles of ① have separate elevated snout like bases. on 5 & 12 becoming slightly confluent. These long processes ($\frac{1}{2}$ as long as the black glandular setae) are distinct on 5, 6, 7, 8, 9 & 12, present but less on 10, very slight on 11. On 2-4 & 13 the 5 d tubercles have enlarged conical bases. The feet black, all the rest ^{reddish} colored much as before, yellow (vinous red, the latter laterally & dorsally, also on 2, 5, 7, 9, 12, forming a dorsal line 2-4 & 11. Later sides 3-4 whitish almost translucent, contrast with brown dorsal band. The vinous feet become brownish leaving the yellow snout distinct on bases of tubercles & 5 d on 3, 4, 6, 8, 11 & 12 and a some irregular lateral patches. Molt Aug 13 hatched 1.5 (see Aug 15) Hd greenish white, the 2 broad vertical bands dark red brown with black edges. The trans. bands are somewhat ^{slightly} jointed & connected by a line along ^{midline} sutures & one upward from ocelli, forming a \times -shaped mark in front, and a \times -shaped one on side. A band on first edge of head, setae black, distinct with swollen tips. Slight processes on 5, 9, 12 with long furcate tips. ①, ② on 6-8 also very long the other tubercles smaller conical, but all the setae coarse, black with swollen glandular tip. 11-13 elevated anal feet slender, long ^{setiferous} 13 small markings peculiar & irregular. A watery greenish patch edged with brown on side 3-4 containing yellow tubercles, a white d. patch on 6 & 7 each with ^{2 dots on 8, tubercle ① yellow} central crimson line, & tubercles ① yellow. A white V. mark on 10 & 11, broken into 3 patches, the 2 post on 11 yellow, with white dorsal dot

399
Egg in clam - Mrs. Holt. Aug 7. ^{60 diam} evident reticulated ^{265 diam} Small nodular pyritous cells around anisopyle. The area far about five rows of concentric cells slightly depressed. Cells gradually growing larger & more regular hexagonal down the side. forming a neat reticulum with narrow strands. Cells vary from pentagonal to hexagonal. On the ^{slight} ridge surrounding the depressed vertex the meshes are minutely accreted, but not enough to broaden them much or to confuse the reticulum. Rather more than hemispherical flattened base, shining light yellowish. diam. 8 mm.
Hatched Aug 9 Hd lobed, antenae distinct; blackish brown, shining with a few pale setae. W. 5 mm. Anal feet up, black. Tubercles black, ① all more or less elevated with long pale divergent setae yellowish vinous laterally and also d on 2, 5, 7 & 12. Feet all black. C. the anal pl. blackish brown. Length on hatching 2.5 mm. (resembles a Schizura in coloration & structure, but ① is less developed)
Hd rather .55 mm
Molt Aug 13 Same as BB 398! Hd .9 mm.

Sides of 12-13 light yellow. Dorsum of 2-5, 8-10 and 12-13 dark red brown lateral region 5-12 with a coarse broad reticulum of red work on a greenish yellow ground, the meshes broad and the spots predominant, & becoming confluent into the lateral portion of the V on 11. The feet long yellow with red ^{outer} line and reddish. Venter pale. [Schizura ipomoeae]
Next day (Aug 16) had become a regular ipomoeae the patch on 3-4 became green, the white dorsal one on 5-7, a black one on 8 and the V distinct
[See BB 217 where the last three stages are described III, IV and V]

400

Sessid larva boring in pith of small twigs of pine with
a hole from which a lump of gum exudes. Woods Hole
Mass. Aug 10, 1893. Stage hd 1 mm. partly under 2, clipped
lay, scale etc. anterior endents, shiny brown, blackish
around lower sides abd. feet 7-13. Ceb. lay, over all
d. part of 2, light brown. Tuberc. ① ant, ② ant, ③ ant, ④ ant
⑤ supra stig. ⑥ sub stig. ⑦ post SV, ⑧ ant, etc. ⑨ D. on 10
9, 5, 6, 11, 13, 13 ant. all reddish brown, tuberc.
small blackish with small dark. bases.

Spiracle ringed with black.

Diapause in a hollow under the lump of gum.

The empty pupa case protrudes from a hole in
the gum, cylindrical, long, slender, slightly
smaller at the extremities, capped and protruding
7 abd. segs. are furnished with two rows of spine
each, pointing backward. Color blackish
brown, the abdomen light brown. No coc-
masses, but a few spin. diverts irregular
from the last segment. 9 x 2 mm.

Part of a minor well known

