THE
COLLEGE OF THE HOLY TRINITY
BIRMINGHAM
DESCRIPTION OF THE COLLEGE GARDENS 1880

Patent Erasable Surface.

Patented October 24th, 1865.

USE A SOFT PENCIL, AND ERASE WITH MOISTURE.

Harrison G. Dyar

1885-86

H. G. Dyar.

Catalogue of described caterpillars

Blue Book.

Descriptions begun, September, 1882.

Blue

Book

BB

THE
STANDARD
DIARY

PUBLISHED
FOR
THE TRADE

Copyright, 1874, by Cambridgeport Diary Company.

Calendar.

1876.

	S	M	T	W	T	F	S		S	M	T	W	T	F	S
Janu'y.	..	..	..	..	..	..	1	July.	..	..	..	..	..	..	1
	2	3	4	5	6	7	8		2	3	4	5	6	7	8
	9	10	11	12	13	14	15		9	10	11	12	13	14	15
	16	17	18	19	20	21	22		16	17	18	19	20	21	22
	23	24	25	26	27	28	29		23	24	25	26	27	28	29
	30	31	..	..	..	..	..		30	31	..	..	..	..	..
Febr'y.	..	..	1	2	3	4	5	August.	..	..	1	2	3	4	5
	6	7	8	9	10	11	12		6	7	8	9	10	11	12
	13	14	15	16	17	18	19		13	14	15	16	17	18	19
	20	21	22	23	24	25	26		20	21	22	23	24	25	26
	27	28	29	..	..	..	..		27	28	29	30	31	..	..
March.	..	..	..	1	2	3	4	Sept'r.	..	..	..	..	..	1	2
	5	6	7	8	9	10	11		3	4	5	6	7	8	9
	12	13	14	15	16	17	18		10	11	12	13	14	15	16
	19	20	21	22	23	24	25		17	18	19	20	21	22	23
	26	27	28	29	30	31	..		24	25	26	27	28	29	30
April.	..	..	..	..	..	..	1	Oct'r.	..	..	..	..	..	..	..
	2	3	4	5	6	7	8		1	2	3	4	5	6	7
	9	10	11	12	13	14	15		8	9	10	11	12	13	14
	16	17	18	19	20	21	22		15	16	17	18	19	20	21
	23	24	25	26	27	28	29		22	23	24	25	26	27	28
	30	..	..	..	..	..	..		29	30	31	..	..	..	..
May.	..	1	2	3	4	5	6	Nov'r.	..	..	..	1	2	3	4
	7	8	9	10	11	12	13		5	6	7	8	9	10	11
	14	15	16	17	18	19	20		12	13	14	15	16	17	18
	21	22	23	24	25	26	27		19	20	21	22	23	24	25
	28	29	30	31	..	..	..		26	27	28	29	30	..	..
June.	..	..	..	..	1	2	3	Dec'r.	..	..	..	..	..	1	2
	4	5	6	7	8	9	10		3	4	5	6	7	8	9
	11	12	13	14	15	16	17		10	11	12	13	14	15	16
	18	19	20	21	22	23	24		17	18	19	20	21	22	23
	25	26	27	28	29	30	..		24	25	26	27	28	29	30
									31	..	..	..	..	..	..

RATES OF POSTAGE.

POSTAL CARDS, costing 1 cent each, on which short communications may be written, can be purchased at any post office and sent to any part of the United States or Dominion of Canada.

LETTERS TO ANY PART OF THE UNITED STATES or Dominion of Canada, 3 cents for each 1-2 ounce, or part thereof.

DROP LETTERS, 2 cents for each 1-2 ounce, at all letter-carrier offices; at other offices 1 cent.

VALUABLE LETTERS may be registered on application, at the office of mailing, and the payment of a registration fee of 8 cents on domestic letters. Fees on foreign letters variable.

TRANSIENT NEWSPAPERS, Periodicals, Pamphlets, Books, Book Manuscripts, Proof Sheets, Blanks, Circulars, Engravings, Articles of Merchandise, Seeds, Cuttings, Roots, Bulbs, and other mailable matter, 1 cent for each 2 ounces or part thereof. Newspaper, Magazine and Music Manuscripts are subject to letter postage.

NEWSPAPERS AND PERIODICALS, mailed from a known office of publication or news agency, and addressed to regular subscribers or news agents, issued weekly and oftener, two cents a pound and fraction thereof; less frequently, three cents a pound and fraction thereof. One copy of a newspaper to each actual subscriber residing within the County where the same is wholly or partly printed and published, FREE, except at letter-carrier offices.

ALL PACKAGES of mail matter not charged with letter postage must be so arranged that the same can be CONVENIENTLY examined by Postmasters; if not, letter postage will be charged.

No PACKAGE will be forwarded by mail which weighs over 4 pounds.

ALL POSTAL MATTER, for delivery within the United States and Dominion of Canada, must be PREPAID by stamps.

LETTERS TO GREAT BRITAIN OR IRELAND, 6 cents for each 1-2 ounce. Prepayment optional, but subject to a fine of 6 cents in addition to postage, if wholly or partly unpaid.

LETTERS TO FRANCE, 9 cents for each 1-2 ounce. Prepayment optional.

LETTERS TO GERMANY, direct, 6 cents; by closed mail, via England, 7 cents for each 1-2 ounce. Prepayment optional. Double rates if unpaid.

POSTAL CARDS may be sent to Germany and Switzerland by adding a 1-cent postage stamp.

Letters to other foreign countries vary in rate according to the route by which they are sent; proper information can be obtained of postmasters.

POSTAL MONEY ORDERS.

MONEY ORDER POST OFFICES are established in most of the large cities and towns, at which orders can be obtained upon any other office, at the following rates of commission:—

On orders not exceeding \$10		5 cents.
Over \$10	" " " " " " " "	10 "
" 20	" " " " " " " "	15 "
" 30	" " " " " " " "	20 "
" 40	" " " " " " " "	25 "

No single order issued for more than fifty dollars. Parties desiring to remit a larger sum must obtain additional money orders.

FESTIVALS AND FASTS.

Epiphany,	- - - - -	Jan. 6.
Septuagesima Sunday,	- - - - -	Feb. 13.
Quinquagesima (Shrove Sunday),	- - - - -	Feb. 27.
Ash Wednesday,	- - - - -	Mar. 1.
First Sunday in Lent,	- - - - -	Mar. 5.
Saint Patrick,	- - - - -	Mar. 17.
Palm Sunday,	- - - - -	April 9.
Good Friday,	- - - - -	April 14.
Easter Sunday,	- - - - -	April 16.
Low Sunday,	- - - - -	April 23.
Rogation Sunday,	- - - - -	May 21.
Ascension Day (Holy Thursday),	- - - - -	May 25.
Pentecost (Whit Sunday),	- - - - -	June 4.
Trinity Sunday,	- - - - -	June 11.
Corpus Christi,	- - - - -	June 15.
First Sunday in Advent,	- - - - -	Dec. 3.
Christmas Day,	- - - - -	Dec. 25.

CHRONOLOGICAL CYCLES.

Dominical Letters,	- - - - -	B. A.
Epact,	- - - - -	4.
Golden Number,	- - - - -	15.
Solar Cycle,	- - - - -	9.
Roman Indiction,	- - - - -	4.
Julian Period,	- - - - -	6589.

ECLIPSES IN 1876.

In the year 1876 there will be four eclipses; two of the Sun, and two of the Moon.

I. A partial eclipse of the Moon, night of March 9-10. Visible to the world generally, except to Asia and Australia. Occurring as follows:

	NEW YORK.	BOSTON.
Moon Enters Penumbra,	9d. 11h. 1m. A.	9d. 11h. 13m. A.
Moon Enters Shadow,	10d. 0h. 25m. M.	10d. 0h. 37m. M.
Middle of Eclipse,	10d. 1h. 25m. M.	10d. 1h. 37m. M.
Moon Leaves Shadow,	10d. 2h. 25m. M.	10d. 2h. 37m. M.
Moon Leaves Penumbra,	10d. 3h. 49m. M.	10d. 4h. 1m. M.
Magnitude of Eclipse = 0.298. (Moon's diameter = 1.)		

II. An Annular Eclipse of the Sun, March 25th. Visible to North America and Northern Pacific Ocean. To Vancouver Island, it will be nearly central and annular. To the following places, it will be visible, at the times given, as a partial eclipse only:

	Eclipse begins.	Eclipse ends.
Boston,	25d. 4h. 14m. A.	25d. 5h. 52m. A.
New York,	25d. 4h. 0m. A.	25d. 5h. 38m. A.
Chicago,	25d. 2h. 45m. A.	25d. 4h. 38m. A.
Philadelphia,	25d. 3h. 57m. A.	25d. 5h. 31m. A.

III. A partial eclipse of the Moon, Sept. 3; invisible. Visible to the world generally, except to North America and Pacific Ocean.

IV. A total eclipse of the Sun, Sept. 18th; invisible. Visible to Australia and Southern Pacific Ocean.

THE SEASONS.

Spring begins	March 20d. 1h. 2m. a.m.
Summer begins	June 20d. 9h. 23m. p.m.
Autumn begins	Sept. 22d. 11h. 33m. a.m.
Winter begins	Dec. 21d. 5h. 46m. a.m.

Given in Washington time.

MORNING AND EVENING STARS.

MERCURY will be *evening star* about January 28, May 21, and Sept. 17; and *morning star* about March 10, July 8, and October 28. — VENUS will be *evening star* till July 14, and *morning star* the rest of the year. — JUPITER will be *morning star* till May 17, then *evening star* till December 4, and *morning star* again the rest of the year.

JANUARY.

First Quarter, 4th day, 10h. 40m. A.M.
Full Moon, 11th day, 1h. 39m. A.M.
Last Quarter, 18th day, 4h. 5m. A.M.
New Moon, 26th day, 8h. 58m. A.M.

1876.		BOSTON.			NEW YORK.		
		Sun R. & S.	Moon R. & S.	High Water.	Sun R. & S.	Moon R. & S.	High Water.
1	Satur.	r 7 30	9 32	2 26	r 7 25	9 34	II 29
2	S	s 4 39	10 39	3 5	s 4 44	10 40	.....
3	Mon.	r 7 30	11 47	3 47	r 7 25	11 46	0 33
4	Tues.	s 4 41	morn	4 32	s 4 46	morn	1 19
5	Wed.	r 7 30	0 58	5 24	r 7 25	0 56	2 10
6	Thur.	s 4 43	2 13	6 20	s 4 48	2 9	3 6
7	Frid.	r 7 30	3 33	7 26	r 7 25	3 28	4 11
8	Satur.	s 4 45	4 54	8 35	s 4 50	4 48	5 20
9	S	r 7 29	6 11	9 43	r 7 24	6 4	6 29
10	Mon.	s 4 47	7 19	10 48	s 4 52	7 12	7 32
11	Tues.	r 7 29	rises	11 44	r 7 24	rises	8 27
12	Wed.	s 4 49	6 35	0 11	s 4 54	6 39	9 25
13	Thur.	r 7 28	7 53	1 3	r 7 23	7 56	10 12
14	Frid.	s 4 51	9 7	1 50	s 4 56	9 9	10 54
15	Satur.	r 7 27	10 17	2 34	r 7 23	10 17	11 38
16	S	s 4 54	11 24	3 15	s 4 58	11 23	0 0
17	Mon.	r 7 26	morn	3 57	r 7 22	morn	0 44
18	Tues.	s 4 56	0 30	4 42	s 5 1	0 27	1 29
19	Wed.	r 7 25	1 35	5 32	r 7 21	1 31	2 18
20	Thur.	s 4 59	2 40	6 27	s 5 3	2 35	3 12
21	Frid.	r 7 24	3 44	7 23	r 7 20	3 38	4 8
22	Satur.	s 5 1	4 45	8 20	s 5 5	4 38	5 4
23	S	r 7 23	5 41	9 16	r 7 18	5 34	6 1
24	Mon.	s 5 3	6 30	10 8	s 5 8	6 23	6 54
25	Tues.	r 7 21	sets	10 56	r 7 17	sets	7 40
26	Wed.	s 5 6	5 10	11 39	s 5 10	5 15	8 21
27	Thur.	r 7 20	6 18	.....	r 7 15	6 22	9 5
28	Frid.	s 5 8	7 25	0 39	s 5 12	7 27	9 45
29	Satur.	r 7 18	8 32	1 17	r 7 14	8 33	10 20
30	S	s 5 11	9 40	1 55	s 5 15	9 40	10 56
31	Mon.	r 7 16	10 49	2 34	r 7 12	10 47	11 37

FEBRUARY.

First Quarter, 2d day, 9h. 9m. P.M.
Full Moon, 9th day, 1h. 3m. P.M.
Last Quarter, 17th day, 0h. 12m. A.M.
New Moon, 25th day, 1h. 36m. A.M.

1876.

BOSTON.

NEW YORK.

	Sun R. & S.	Moon R. & S.	High Water.	Sun R. & S.	Moon R. & S.	High Water.
1 Tues.	r 7 15	morn	3 14	r 7 11	11 58	.....
2 Wed.	s 5 15	0 1	3 59	s 5 18	morn	0 46
3 Thur.	r 7 13	1 17	4 53	r 7 9	1 12	1 40
4 Frid.	s 5 18	2 35	5 59	s 5 21	2 29	2 45
5 Satur.	r 7 10	3 51	7 12	r 7 7	3 44	3 57
6 S	s 5 20	5 1	8 26	s 5 23	4 53	5 10
7 Mon.	r 7 8	6 0	9 37	r 7 5	5 53	6 23
8 Tues.	s 5 23	6 46	10 38	s 5 26	6 40	7 23
9 Wed.	r 7 6	rises	11 30	r 7 2	rises	8 12
10 Thur.	s 5 25	6 42	.....	s 5 28	6 44	9 1
11 Frid.	r 7 3	7 54	0 37	r 7 0	7 55	9 44
12 Satur.	s 5 28	9 4	1 18	s 5 31	9 3	10 22
13 S	r 7 0	10 12	1 57	r 6 58	10 10	10 59
14 Mon.	s 5 31	11 19	2 36	s 5 33	11 12	11 40
15 Tues.	r 6 58	morn	3 16	r 6 55	morn	0 2
16 Wed.	s 5 33	0 26	4 0	s 5 36	0 21	0 47
17 Thur.	r 6 55	1 32	4 50	r 6 53	1 26	1 37
18 Frid.	s 5 36	2 35	5 48	s 5 38	2 28	2 33
19 Satur.	r 6 52	3 34	6 49	r 6 50	3 27	3 35
20 S	s 5 38	4 26	7 50	s 5 40	4 19	4 35
21 Mon.	r 6 49	5 10	8 49	r 6 47	5 3	5 33
22 Tues.	s 5 41	5 46	9 42	s 5 43	5 40	6 28
23 Wed.	r 6 46	6 16	10 30	r 6 44	6 11	7 15
24 Thur.	s 5 43	sets	11 13	s 5 45	sets	7 56
25 Frid.	r 6 43	6 20	11 51	r 6 41	6 22	8 34
26 Satur.	s 5 46	7 29	0 9	s 5 48	7 29	9 13
27 S	r 6 40	8 39	0 46	r 6 38	8 38	9 52
28 Mon.	s 5 48	9 52	1 25	s 5 50	9 49	10 29
29 Tues.	r 6 37	11 8	2 5	r 6 35	11 4	11 9
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MARCH.

First Quarter, 3rd day, 5h. 4m. A.M.
Full Moon, 10th day, 1h. 28m. A.M.
Last Quarter, 17th day, 8h. 40m. P.M.
New Moon, 25th day, 3h. 28m. P.M.

1876.

BOSTON.

NEW YORK.

	Sun R. & S.	Moon R. & S.	High Water.	Sun R. & S.	Moon R. & S.	High Water.
1 Wed.	r 6 35	morn	2 50	r 6 34	morn	11 59
2 Thur.	s 5 52	0 25	3 40	s 5 53	0 19	0 26
3 Frid.	r 6 32	1 41	4 40	r 6 31	1 34	1 27
4 Satur.	s 5 54	2 51	5 53	s 5 55	2 43	2 39
5 S	r 6 28	3 52	7 9	r 6 28	3 45	3 54
6 Mon.	s 5 57	4 41	8 23	s 5 57	4 35	5 7
7 Tues.	r 6 25	5 18	9 26	r 6 24	5 13	6 12
8 Wed.	s 5 59	5 47	10 21	s 6 0	5 43	7 7
9 Thur.	r 6 22	rises	11 7	r 6 21	rises	7 50
10 Frid.	s 6 1	6 44	11 46	s 6 2	6 44	8 29
11 Satur.	r 6 18	7 52	0 5	r 6 18	7 51	9 10
12 S	s 6 4	9 0	0 43	s 6 4	8 47	9 48
13 Mon.	r 6 15	10 9	1 21	r 6 15	10 5	10 25
14 Tues.	s 6 6	11 17	2 0	s 6 6	11 12	11 3
15 Wed.	r 6 12	morn	2 42	r 6 11	morn	11 48
16 Thur.	s 6 8	0 22	3 27	s 6 8	0 16	0 12
17 Frid.	r 6 8	1 22	4 17	r 6 8	1 15	1 4
18 Satur.	s 6 10	2 17	5 15	s 6 11	2 9	2 2
19 S	r 6 5	3 5	6 18	r 6 5	2 58	3 4
20 Mon.	s 6 13	3 45	7 19	s 6 13	3 39	4 4
21 Tues.	r 6 1	4 17	8 18	r 6 1	4 12	5 3
22 Wed.	s 6 15	4 43	9 10	s 6 15	4 39	5 55
23 Thur.	r 5 58	5 6	9 56	r 5 58	5 3	6 42
24 Frid.	s 6 17	5 26	10 39	s 6 17	5 25	7 24
25 Satur.	r 5 54	sets	11 18	r 5 55	sets	8 0
26 S	s 6 19	7 36	11 57	s 6 19	7 34	8 41
27 Mon.	r 5 51	8 53	0 17	r 5 51	8 49	9 24
28 Tues.	s 6 22	10 11	0 59	s 6 21	10 6	10 6
29 Wed.	r 5 47	11 30	1 44	r 5 48	11 24	10 52
30 Thur.	s 6 24	morn	2 36	s 6 23	morn	11 47
31 Frid.	r 5 44	0 44	3 33	r 5 45	0 37	0 19

APRIL.

First Quarter, 1st day, 11h. 28m. A. M.
 Full Moon, 8th day, 2h. 55m. P. M.
 Last Quarter, 16th day, 3h. 53m. P. M.
 New Moon, 24th day, 2h. 19m. A. M.
 First Quarter, 30th day, 5h. 43m. P. M.

1876.

BOSTON.

NEW YORK.

		Sun R. & S.	Moon R. & S.	High Water.	Sun R. & S.	Moon R. & S.	High Water.
1	Satur.	r 5 42	1 48	4 39	r 5 43	1 41	1 26
2	S	s 6 27	2 40	5 53	s 6 26	2 34	2 39
3	Mon.	r 5 39	3 20	7 4	r 5 40	3 15	3 49
4	Tues.	s 6 30	3 51	8 9	s 6 28	3 47	4 53
5	Wed.	r 5 35	4 15	9 4	r 5 36	4 12	5 49
6	Thur.	s 6 32	4 37	9 53	s 6 30	4 36	6 39
7	Frid.	r 5 32	4 57	10 36	r 5 33	4 57	7 21
8	Satur.	s 6 34	rises	11 15	s 6 32	rises	7 57
9	S	r 5 28	7 50	11 52	r 5 30	7 46	8 35
10	Mon.	s 6 36	8 59	0 10	s 6 34	8 54	9 16
11	Tues.	r 5 25	10 6	0 49	r 5 27	10 0	9 55
12	Wed.	s 6 38	11 9	1 30	s 6 37	11 2	10 36
13	Thur.	r 5 22	morn	2 15	r 5 24	11 59	11 20
14	Frid.	s 6 41	0 7	3 1	s 6 39	morn	....
15	Satur.	r 5 19	0 58	3 50	r 5 21	0 51	0 37
16	S	s 6 43	1 41	4 45	s 6 41	1 34	1 32
17	Mon.	r 5 15	2 16	5 43	r 5 18	2 10	2 29
18	Tues.	s 6 45	2 43	6 41	s 6 43	2 38	3 26
19	Wed.	r 5 12	3 7	7 36	r 5 15	3 4	4 20
20	Thur.	s 6 47	3 29	8 27	s 6 45	3 27	5 12
21	Frid.	r 5 9	3 50	9 16	r 5 12	3 49	6 2
22	Satur.	s 6 50	4 10	10 1	s 6 47	4 11	6 47
23	S	r 5 6	4 31	10 46	r 5 9	4 33	7 30
24	Mon.	s 6 52	sets	11 30	s 6 49	sets	8 12
25	Tues.	r 5 3	9 11	....	r 5 6	9 5	9 0
26	Wed.	s 6 54	10 29	0 39	s 6 51	10 22	9 52
27	Thur.	r 5 0	11 39	1 33	r 5 3	11 31	10 45
28	Frid.	s 6 56	morn	2 31	s 6 53	morn	11 44
29	Satur.	r 4 58	0 37	3 31	r 5 1	0 30	0 17
30	S	s 6 59	1 21	4 35	s 6 55	1 15	1 22
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MAY.

Full Moon, 8th day, 5h. 9m. A.M.
 Last Quarter, 16th day, 8h. 43m. A.M.
 New Moon, 23rd day, 10h. 41m. A.M.
 First Quarter, 30th day, 1h. 5m. A.M.

1876.

BOSTON.

NEW YORK.

		Sun R. & S.	Moon R. & S.	High Water.	Sun R. & S.	Moon R. & S.	High Water.
1	Mon.	r 4 55	1 55	5 41	r 4 58	1 50	2 27
2	Tues.	s 7 1	2 21	6 43	s 6 57	2 18	3 29
3	Wed.	r 4 52	2 43	7 40	r 4 56	2 41	4 25
4	Thur.	s 7 3	3 3	8 32	s 6 59	3 3	5 16
5	Frid.	r 4 49	3 23	9 18	r 4 53	3 24	6 4
6	Satur.	s 7 5	3 42	10 2	s 7 2	3 44	6 48
7	S	r 4 47	4 4	10 44	r 4 51	4 8	7 29
8	Mon.	s 7 7	rises	11 24	s 7 4	rises	8 6
9	Tues.	r 4 45	8 58	....	r 4 49	8 52	8 48
10	Wed.	s 7 9	9 58	0 23	s 7 6	9 51	9 31
11	Thur.	r 4 42	10 52	1 7	r 4 46	10 45	10 15
12	Frid.	s 7 12	11 38	1 53	s 7 8	11 31	10 58
13	Satur.	r 4 40	morn	2 39	r 4 44	morn	11 46
14	S	s 7 14	0 15	3 25	s 7 9	0 9	0 10
15	Mon.	r 4 38	0 44	4 14	r 4 42	0 39	1 0
16	Tues.	s 7 16	1 9	5 5	s 7 11	1 5	1 51
17	Wed.	r 4 36	1 31	5 57	r 4 41	1 28	2 41
18	Thur.	s 7 18	1 51	6 49	s 7 13	1 50	3 35
19	Frid.	r 4 34	2 10	7 41	r 4 39	2 10	4 25
20	Satur.	s 7 20	2 31	8 33	s 7 15	2 33	5 17
21	S	r 4 32	2 55	9 24	r 4 37	2 58	6 9
22	Mon.	s 7 22	3 24	10 16	s 7 17	3 28	7 2
23	Tues.	r 4 31	sets	11 9	r 4 36	sets	7 53
24	Wed.	s 7 24	9 21	....	s 7 18	9 14	8 47
25	Thur.	r 4 29	10 26	0 30	r 4 34	10 19	9 46
26	Frid.	s 7 25	11 16	1 29	s 7 20	11 10	10 41
27	Satur.	r 4 28	11 54	2 27	r 4 33	11 49	11 38
28	S	s 7 27	morn	3 23	s 7 22	morn	0 8
29	Mon.	r 4 27	0 24	4 18	r 4 32	0 21	1 5
30	Tues.	s 7 29	0 48	5 13	s 7 23	0 46	1 59
31	Wed.	r 4 26	1 9	6 8	r 4 31	1 8	2 54

JUNE.

Full Moon, 6th day, 7h. 53m. P.M.
 Last Quarter, 14th day, 10h. 30m. P.M.
 New Moon, 21st day, 5h. 33m. P.M.
 First Quarter, 28th day, 10h. 30m. A.M.

1876.

BOSTON.

NEW YORK.

		Sun R. & S.	Moon R. & S.	High Water.	Sun R. & S.	Moon R. & S.	High Water.
1	Thur.	r 4 25	i 29	7 1	r 4 31	i 30	3 46
2	Frid.	s 7 31	i 48	7 52	s 7 26	i 50	4 37
3	Satur.	r 4 25	2 9	8 41	r 4 30	2 12	5 26
4	S	s 7 32	2 33	9 28	s 7 27	2 37	6 14
5	Mon.	r 4 24	3 1	10 14	r 4 29	3 7	7 0
6	Tues.	s 7 34	rises	11 0	s 7 28	rises	7 43
7	Wed.	r 4 23	8 47	11 43	r 4 29	8 40	8 25
8	Thur.	s 7 35	9 34	0 4	s 7 29	9 27	9 12
9	Frid.	r 4 23	10 13	0 47	r 4 28	10 7	9 56
10	Satur.	s 7 36	10 45	1 32	s 7 30	10 40	10 37
11	S	r 4 22	11 12	2 16	r 4 28	11 8	11 19
12	Mon.	s 7 37	11 35	2 57	s 7 31	11 32	.....
13	Tues.	r 4 22	11 55	3 40	r 4 28	11 53	0 25
14	Wed.	s 7 38	morn	4 22	s 7 32	morn	1 9
15	Thur.	r 4 22	0 14	5 10	r 4 28	0 14	1 56
16	Frid.	s 7 38	0 32	6 1	s 7 33	0 33	2 47
17	Satur.	r 4 22	0 53	6 55	r 4 28	0 55	3 41
18	S	s 7 39	1 19	7 54	s 7 34	1 23	4 38
19	Mon.	r 4 23	1 51	8 54	r 4 28	1 56	5 39
20	Tues.	s 7 40	2 33	9 57	s 7 34	2 39	6 43
21	Wed.	r 4 23	sets	10 58	r 4 29	sets	7 42
22	Thur.	s 7 40	9 4	11 56	s 7 35	8 57	8 40
23	Frid.	r 4 24	9 49	0 24	r 4 29	9 44	9 39
24	Satur.	s 7 40	10 23	1 20	s 7 35	10 19	10 30
25	S	r 4 24	10 50	2 12	r 4 30	10 47	11 19
26	Mon.	s 7 40	11 13	3 1	s 7 35	11 12	.....
27	Tues.	r 4 25	11 33	3 47	r 4 31	11 33	0 33
28	Wed.	s 7 40	11 53	4 35	s 7 35	11 55	1 22
29	Thur.	r 4 26	morn	5 25	r 4 31	morn	2 11
30	Frid.	s 7 40	0 13	6 18	s 7 35	0 16	3 4
...							

JULY.

Full Moon, 6th day, 10h. 54m. A.M.
 Last Quarter, 14th day, 9h. 12m. A.M.
 New Moon, 21st day, 0h. 9m. A.M.
 First Quarter, 27th day, 10h. 35m. P.M.

1876.

BOSTON.

NEW YORK.

		Sun R. & S.	Moon R. & S.	High Water.	Sun R. & S.	Moon R. & S.	High Water.
1	Satur.	r 4 27	0 35	7 12	r 4 32	0 39	3 57
2	S	s 7 40	1 2	8 6	s 7 34	1 7	4 50
3	Mon.	r 4 28	1 35	8 59	r 4 33	1 41	5 44
4	Tues.	s 7 40	2 15	9 51	s 7 34	2 22	6 37
5	Wed.	r 4 29	3 2	10 40	r 4 35	3 9	7 25
6	Thur.	s 7 39	rises	11 26	s 7 33	rises	8 8
7	Frid.	r 4 30	8 48	.....	r 4 36	8 42	8 52
8	Satur.	s 7 38	9 16	0 28	s 7 33	9 11	9 34
9	S	r 4 32	9 39	1 8	r 4 38	9 36	10 13
10	Mon.	s 7 37	9 59	1 48	s 7 32	9 57	10 50
11	Tues.	r 4 33	10 18	2 25	r 4 39	10 17	11 26
12	Wed.	s 7 36	10 37	3 3	s 7 31	10 38	.....
13	Thur.	r 4 35	10 56	3 43	r 4 40	10 58	0 29
14	Frid.	s 7 35	11 19	4 27	s 7 30	11 22	1 14
15	Satur.	r 4 36	11 47	5 19	r 4 41	11 52	2 6
16	S	s 7 34	morn	6 20	s 7 29	morn	3 5
17	Mon.	r 4 38	0 23	7 26	r 4 43	0 29	4 11
18	Tues.	s 7 32	1 9	8 38	s 7 28	1 16	5 23
19	Wed.	r 4 40	2 10	9 47	r 4 45	2 17	6 33
20	Thur.	s 7 31	sets	10 51	s 7 26	sets	7 35
21	Frid.	r 4 42	8 19	11 48	r 4 46	8 14	8 31
22	Satur.	s 7 29	8 48	0 13	s 7 25	8 45	9 24
23	S	r 4 44	9 13	1 2	r 4 48	9 11	10 10
24	Mon.	s 7 28	9 36	1 47	s 7 23	9 36	10 51
25	Tues.	r 4 45	9 56	2 30	r 4 50	9 57	11 34
26	Wed.	s 7 26	10 16	3 12	s 7 21	10 18	.....
27	Thur.	r 4 47	10 39	3 55	r 4 52	10 43	0 42
28	Frid.	s 7 23	11 5	4 43	s 7 19	11 10	1 30
29	Satur.	r 4 49	11 35	5 37	r 4 54	11 41	2 23
30	S	s 7 21	morn	6 35	s 7 17	morn	3 21
31	Mon.	r 4 51	0 12	7 36	r 4 56	0 19	4 21

OCTOBER.

Full Moon, 3rd day, 6h. 12m. A.M.
 Last Quarter, 10th day, 5h. 36m. A.M.
 New Moon, 17th day, 5h. 13m. A.M.
 First Quarter, 25th day, 3h. 10m. A.M.

1876.		BOSTON.			NEW YORK.		
		Sun R. & S.	Moon R. & S.	High Water.	Sun R. & S.	Moon R. & S.	High Water.
1	\$	r 5 57	3 53	9 58	r 5 57	3 55	6 44
2	Mon.	s 5 39	4 59	10 39	s 5 40	4 59	7 24
3	Tues.	r 6 0	rises	11 18	r 5 59	rises	8 0
4	Wed.	s 5 36	5 56	11 55	s 5 37	5 59	8 39
5	Thur.	r 6 2	6 24	0 15	r 6 1	6 29	9 22
6	Frid.	s 5 33	6 59	0 57	s 5 33	7 5	10 6
7	Satur.	r 6 4	7 44	1 45	r 6 3	7 51	10 54
8	\$	s 5 29	8 40	2 37	s 5 30	8 48	11 50
9	Mon.	r 6 6	9 48	3 35	r 6 5	9 55	0 21
10	Tues.	s 5 26	11 4	4 41	s 5 27	11 10	1 28
11	Wed.	r 6 9	morn	5 53	r 6 7	morn	2 38
12	Thur.	s 5 23	0 22	7 1	s 5 24	0 27	3 47
13	Frid.	r 6 11	1 40	8 5	r 6 9	1 43	4 50
14	Satur.	s 5 19	2 55	9 0	s 5 21	2 57	5 45
15	\$	r 6 14	4 8	9 47	r 6 11	4 8	6 34
16	Mon.	s 5 16	5 19	10 32	s 5 18	5 18	7 17
17	Tues.	r 6 16	sets	11 14	r 6 14	sets	7 56
18	Wed.	s 5 13	5 33	11 53	s 5 15	5 38	8 36
19	Thur.	r 6 18	6 3	0 13	r 6 16	6 9	9 21
20	Frid.	s 5 10	6 40	0 56	s 5 12	6 47	10 3
21	Satur.	r 6 20	7 25	1 40	r 6 18	7 32	10 47
22	\$	s 5 7	8 18	2 28	s 5 9	8 25	11 35
23	Mon.	r 6 23	9 18	3 15	r 6 20	9 25	0 0
24	Tues.	s 5 4	10 21	4 5	s 5 6	10 27	0 52
25	Wed.	r 6 25	11 25	5 0	r 6 23	11 30	1 46
26	Thur.	s 5 1	morn	5 55	s 5 4	morn	2 41
27	Frid.	r 6 28	0 30	6 50	r 6 25	0 33	3 35
28	Satur.	s 4 58	1 35	7 40	s 5 1	1 37	4 25
29	\$	r 6 30	2 41	8 29	r 6 27	2 42	5 13
30	Mon.	s 4 56	3 48	9 15	s 4 59	3 47	6 1
31	Tues.	r 6 33	4 58	10 0	r 6 30	4 56	6 46

NOVEMBER.

Full Moon, 1st day, 6h. 47m. P.M.
 Last Quarter, 8th day, 0h. 33m. P.M.
 New Moon, 15th day, 8h. 4m. P.M.
 First Quarter, 23rd day, 11h. 42m. P.M.

		BOSTON.			NEW YORK.		
1876.		Sun R. & S.	Moon R. & S.	High Water.	Sun R. & S.	Moon R. & S.	High Water.
1	Wed.	r 6 34	6 11	10 46	r 6 31	6 8	7 30
2	Thur.	s 4 52	rises	11 30	s 4 55	rises	8 12
3	Frid.	r 6 36	5 38	.....	r 6 33	5 45	9 4
4	Satur.	s 4 49	6 31	0 43	s 4 53	6 38	9 55
5	S	r 6 39	7 39	1 37	r 6 36	7 46	10 49
6	Mon.	s 4 47	8 55	2 35	s 4 50	9 1	11 48
7	Tues.	r 6 41	10 13	3 33	r 6 38	10 18	0 19
8	Wed.	s 4 45	11 30	4 35	s 4 48	11 34	1 21
9	Thur.	r 6 44	morn	5 37	r 6 41	morn	2 23
10	Frid.	s 4 43	0 44	6 37	s 4 46	0 46	3 22
11	Satur.	r 6 46	1 56	7 34	r 6 43	1 57	4 18
12	S	s 4 41	3 6	8 26	s 4 44	3 5	5 10
13	Mon.	r 6 49	4 16	9 15	r 6 45	4 14	6 1
14	Tues.	s 4 39	5 26	10 1	s 4 43	5 22	6 47
15	Wed.	r 6 52	6 35	10 45	r 6 47	6 30	7 30
16	Thur.	s 4 37	sets	11 29	s 4 41	sets	8 11
17	Frid.	r 6 54	5 19	.....	r 6 50	5 26	8 57
18	Satur.	s 4 35	6 9	0 34	s 4 40	6 16	9 43
19	S	r 6 56	7 6	1 19	r 6 52	7 13	10 27
20	Mon.	s 4 34	8 8	2 5	s 4 38	8 14	11 10
21	Tues.	r 6 59	9 13	2 50	r 6 55	9 18	11 57
22	Wed.	s 4 33	10 17	3 35	s 4 37	10 21	0 21
23	Thur.	r 7 1	11 21	4 20	r 6 57	11 24	1 7
24	Frid.	s 4 32	morn	5 8	s 4 36	morn	1 54
25	Satur.	r 7 4	0 24	5 57	r 6 59	0 25	2 43
26	S	s 4 31	1 29	6 49	s 4 36	1 29	3 34
27	Mon.	r 7 6	2 36	7 39	r 7 1	2 35	4 24
28	Tues.	s 4 30	3 46	8 31	s 4 35	3 43	5 15
29	Wed.	r 7 8	5 1	9 23	r 7 3	4 57	6 9
30	Thur.	s 4 29	6 20	10 18	s 4 34	6 14	7 4
..	..						

DECEMBER.

Full Moon, 1st day, 6h. 20m. A. M.
 Last Quarter, 7th day, 9h. 39m. P. M.
 New Moon, 15th day, 1h. 30m. P. M.
 First Quarter, 23rd day, 6h. 57m. P. M.
 Full Moon, 30th day, 5h. 15m. P. M.

1876.

BOSTON.

NEW YORK.

	Sun R. & S.	Moon R. & S.	High Water.	Sun R. & S.	Moon R. & S.	High Water.
1 Frid.	r 7 10	rises	11 13	r 7 5	rises	7 55
2 Satur.	s 4 28	5 21	.....	s 4 33	5 28	8 52
3 S	r 7 12	6 37	0 35	r 7 7	6 43	9 50
4 Mon.	s 4 28	7 58	1 33	s 4 33	8 3	10 44
5 Tues.	r 7 14	9 18	2 28	r 7 9	9 22	11 38
6 Wed.	s 4 28	10 35	3 21	s 4 33	10 37	0 6
7 Thur.	r 7 16	11 48	4 13	r 7 11	11 49	1 0
8 Frid.	s 4 28	morn	5 7	s 4 33	morn	1 54
9 Satur.	r 7 18	0 58	6 2	r 7 13	0 58	2 48
10 S	s 4 28	2 7	6 56	s 4 33	2 5	3 41
11 Mon.	r 7 20	3 16	7 49	r 7 15	3 13	4 33
12 Tues.	s 4 28	4 25	8 41	s 4 33	4 20	5 26
13 Wed.	r 7 21	5 33	9 32	r 7 16	5 27	6 18
14 Thur.	s 4 29	6 39	10 22	s 4 34	6 32	7 8
15 Frid.	r 7 23	sets	11 10	r 7 18	sets	7 52
16 Satur.	s 4 29	4 57	11 54	s 4 34	5 4	8 38
17 S	r 7 24	5 59	0 16	r 7 19	6 5	9 24
18 Mon.	s 4 29	7 3	0 59	s 4 35	7 8	10 6
19 Tues.	r 7 25	8 7	1 41	r 7 20	8 11	10 44
20 Wed.	s 4 31	9 10	2 21	s 4 36	9 13	11 23
21 Thur.	r 7 26	10 12	3 0	r 7 21	10 14	.....
22 Frid.	s 4 32	11 15	3 39	s 4 37	11 15	0 25
23 Satur.	r 7 27	morn	4 21	r 7 22	morn	1 8
24 S	s 4 33	0 18	5 6	s 4 38	0 17	1 52
25 Mon.	r 7 28	1 25	5 57	r 7 23	1 23	2 43
26 Tues.	s 4 34	2 36	6 52	s 4 39	2 32	3 37
27 Wed.	r 7 29	3 51	7 54	r 7 23	3 46	4 39
28 Thur.	s 4 35	5 9	8 56	s 4 41	5 3	5 41
29 Frid.	r 7 29	6 27	10 0	r 7 24	6 20	6 46
30 Satur.	s 4 37	rises	11 2	s 4 42	rises	7 45
31 S	r 7 30	5 29	11 59	r 7 24	5 35	8 43

CHICAGO ALMANAC, 1876.

JANUARY.

First Q'ter, 4d. 9h. 34m. a.m.
 Full Moon, 11d. 0h. 33m. a.m.
 Last Q'ter, 18d. 2h. 59m. a.m.
 New Moon, 26d. 7h. 52m. a.m.

FEBRUARY.

First Q'ter, 2d. 8h. 3m. p.m.
 Full Moon, 9d. 11h. 57m. a.m.
 Last Q'ter, 16d. 11h. 6m. p.m.
 New Moon, 25d. 0h. 30m. a.m.

D. M.	D. of W.	Sun Rises	Sun Sets.	Moon R. & S.	D. M.	D. of W.	Sun Rises	Sun Sets.	Moon R. & S.
1	Sa.	7 29	4 38	9 34	1	Tu.	7 14	5 14	morn
2	S	7 29	4 39	10 41	2	W.	7 13	5 15	0 2
3	M.	7 29	4 40	11 49	3	Th.	7 12	5 17	1 18
4	Tu.	7 29	4 41	morn	4	Fr.	7 11	5 18	2 36
5	W.	7 29	4 42	0 59	5	Sa.	7 10	5 19	3 51
6	Th.	7 29	4 43	2 14	6	S	7 9	5 20	5 1
7	Fr.	7 29	4 44	3 34	7	M.	7 7	5 22	6 0
8	Sa.	7 28	4 45	4 55	8	Tu.	7 6	5 23	6 47
9	S	7 28	4 46	6 11	9	W.	7 5	5 24	rises
10	M	7 28	4 47	7 19	10	Th.	7 4	5 25	6 45
11	Tu.	7 28	4 48	rises	11	Fr.	7 2	5 27	7 56
12	W.	7 27	4 49	6 38	12	Sa.	7 1	5 28	9 6
13	Th.	7 27	4 51	7 56	13	S	6 59	5 30	10 14
14	Fr.	7 26	4 52	9 9	14	M.	6 58	5 31	11 20
15	Sa.	7 26	4 53	10 19	15	Tu.	6 57	5 32	morn
16	S	7 26	4 54	11 26	16	W.	6 55	5 33	0 27
17	M.	7 25	4 55	morn	17	Th.	6 54	5 35	1 33
18	Tu.	7 25	4 57	0 31	18	Fr.	6 52	5 36	2 35
19	W.	7 24	4 58	1 36	19	Sa.	6 51	5 37	3 34
20	Th.	7 24	4 59	2 41	20	S	6 50	5 38	4 26
21	Fr.	7 23	5 0	3 45	21	M.	6 48	5 39	5 10
22	Sa.	7 22	5 1	4 45	22	Tu.	6 47	5 41	5 47
23	S	7 22	5 3	5 41	23	W.	6 45	5 42	6 17
24	M.	7 21	5 4	6 30	24	Th.	6 44	5 43	sets
25	Tu.	7 20	5 5	sets	25	Fr.	6 42	5 44	6 22
26	W.	7 19	5 6	5 13	26	Sa.	6 41	5 46	7 31
27	Th.	7 18	5 7	6 21	27	S	6 39	5 47	8 41
28	Fr.	7 18	5 9	7 28	28	M.	6 37	5 48	9 53
29	Sa.	7 17	5 10	8 34	29	Tu.	6 36	5 50	11 9
30	S	7 16	5 11	9 42	...	...	...	...	...
31	M.	7 15	5 12	10 51	...	...	...	...	...

CHICAGO ALMANAC, 1876.

MARCH.

First Q'ter, 3d. 3h.58m.a.m.
Full Moon, 10d. 0h.22m.a.m.
Last Q'ter, 17d. 7h.34m.p.m.
New Moon, 25d. 2h.22m.p.m.

D. M.	D. of W.	Sun Rises	Sun Sets.	Moon R. & S.
1	W.	6 34	5 51	morn
2	Th.	6 32	5 52	0 26
3	Fr.	6 31	5 53	1 41
4	Sa.	6 29	5 55	2 51
5	S.	6 28	5 56	3 52
6	M.	6 26	5 57	4 42
7	Tu.	6 24	5 58	5 19
8	W.	6 23	5 59	5 48
9	Th.	6 21	6 0	rises
10	Fr.	6 20	6 1	6 46
11	Sa.	6 18	6 2	7 54
12	S.	6 16	6 3	9 1
13	M.	6 14	6 4	10 10
14	Tu.	6 13	6 6	11 18
15	W.	6 11	6 7	morn
16	Th.	6 9	6 8	0 23
17	Fr.	6 7	6 9	1 22
18	Sa.	6 5	6 10	2 17
19	S.	6 4	6 12	3 5
20	M.	6 2	6 13	3 46
21	Tu.	6 0	6 14	4 18
22	W.	5 58	6 15	4 44
23	Th.	5 57	6 16	5 7
24	Fr.	5 55	6 17	5 28
25	Sa.	5 54	6 18	sets
26	S.	5 52	6 19	7 37
27	M.	5 50	6 20	8 54
28	Tu.	5 49	6 21	10 12
29	W.	5 47	6 23	11 31
30	Th.	5 46	6 24	morn
31	Fr.	5 44	6 25	0 44

APRIL.

First Q'ter, 1d. 10h.22m.a.m.
Full Moon, 8d. 1h.49m.p.m.
Last Q'ter, 16d. 2h.47m.p.m.
New Moon, 24d. 1h.13m.a.m.
First Q'ter, 30d. 4h.37m.p.m.

D. M.	D. of W.	Sun Rises	Sun Sets.	Moon R. & S.
1	Sa.	5 42	6 26	1 48
2	S.	5 40	6 27	2 41
3	M.	5 39	6 28	3 21
4	Tu.	5 37	6 29	3 52
5	W.	5 35	6 30	4 16
6	Th.	5 33	6 31	4 39
7	Fr.	5 32	6 32	4 59
8	Sa.	5 30	6 34	rises
9	S.	5 29	6 35	7 51
10	M.	5 27	6 36	9 0
11	Tu.	5 25	6 37	10 7
12	W.	5 24	6 38	11 9
13	Th.	5 22	6 39	morn
14	Fr.	5 21	6 40	0 7
15	Sa.	5 19	6 41	0 59
16	S.	5 17	6 42	1 42
17	M.	5 16	6 43	2 17
18	Tu.	5 14	6 45	2 44
19	W.	5 13	6 46	3 8
20	Th.	5 11	6 47	3 31
21	Fr.	5 9	6 48	3 52
22	Sa.	5 8	6 49	4 12
23	S.	5 6	6 50	4 34
24	M.	5 5	6 51	sets
25	Tu.	5 3	6 52	9 12
26	W.	5 2	6 53	10 29
27	Th.	5 1	6 54	11 39
28	Fr.	4 59	6 55	morn
29	Sa.	4 58	6 56	0 37
30	S.	4 57	6 57	1 22
...	...	...	...	...

CHICAGO ALMANAC, 1876.

MAY.

Full Moon, 8d. 4h. 3m.a.m.
Last Q'ter, 16d. 7h.37m.a.m.
New Moon, 23d. 9h.35m.a.m.
First Q'ter, 29d. 11h.59m.p.m.

D. M.	D. of W.	Sun Rises	Sun Sets.	Moon R. & S.
1	M.	4 56	6 58	1 56
2	Tu.	4 54	6 59	2 22
3	W.	4 53	7 1	2 45
4	Th.	4 51	7 2	3 5
5	Fr.	4 50	7 3	3 25
6	Sa.	4 49	7 4	3 45
7	S.	4 48	7 5	4 7
8	M.	4 46	7 6	rises
9	Tu.	4 45	7 7	8 59
10	W.	4 44	7 8	9 58
11	Th.	4 43	7 9	10 52
12	Fr.	4 42	7 10	11 38
13	Sa.	4 41	7 11	morn
14	S.	4 40	7 12	0 16
15	M.	4 39	7 13	0 45
16	Tu.	4 38	7 14	1 10
17	W.	4 37	7 15	1 32
18	Th.	4 37	7 16	1 53
19	Fr.	4 36	7 17	2 12
20	Sa.	4 35	7 18	2 33
21	S.	4 34	7 19	2 58
22	M.	4 33	7 20	3 27
23	Tu.	4 33	7 20	sets
24	W.	4 32	7 21	9 21
25	Th.	4 31	7 22	10 26
26	Fr.	4 30	7 23	11 17
27	Sa.	4 30	7 24	11 55
28	S.	4 29	7 25	morn
29	M.	4 29	7 26	0 25
30	Tu.	4 28	7 27	0 50
31	W.	4 28	7 28	1 11

JUNE.

Full Moon, 6d. 6h.47m.p.m.
Last Q'ter, 14d. 9h.24m.p.m.
New Moon, 21d. 4h.27m.p.m.
First Q'ter, 28d. 9h.24m.a.m.

D. M.	D. of W.	Sun Rises	Sun Sets.	Moon R. & S.
1	Th.	4 27	7 28	1 31
2	Fr.	4 27	7 29	1 50
3	Sa.	4 26	7 29	2 12
4	S.	4 26	7 30	2 36
5	M.	4 26	7 31	3 4
6	Tu.	4 26	7 31	rises
7	W.	4 25	7 32	8 47
8	Th.	4 25	7 32	9 34
9	Fr.	4 25	7 33	10 14
10	Sa.	4 25	7 34	10 46
11	S.	4 25	7 34	11 13
12	M.	4 24	7 35	11 36
13	Tu.	4 24	7 35	11 57
14	W.	4 24	7 36	morn
15	Th.	4 24	7 36	0 16
16	Fr.	4 24	7 36	0 34
17	Sa.	4 25	7 37	0 56
18	S.	4 25	7 37	1 22
19	M.	4 25	7 37	1 54
20	Tu.	4 25	7 37	2 36
21	W.	4 25	7 37	sets
22	Th.	4 26	7 38	9 5
23	Fr.	4 26	7 38	9 50
24	Sa.	4 26	7 38	10 24
25	S.	4 26	7 38	10 51
26	M.	4 27	7 38	11 15
27	Tu.	4 27	7 38	11 35
28	W.	4 28	7 38	11 55
29	Th.	4 28	7 38	morn
30	Fr.	4 28	7 38	0 16
...	...	...	...	...

CHICAGO ALMANAC, 1876.

JULY.

Full Moon, 6d. 9h.48m.a.m.
 Last Q'ter, 14d. 8h. 6m.a.m.
 New Moon, 20d.11h. 3m.p.m.
 First Q'ter, 27d. 9h.29m.p.m.

D. M.	D. of W.	Sun Rises	Sun Sets.	Moon R. & S.
1	Sa.	4 29	7 38	0 38
2	S	4 29	7 38	1 5
3	M.	4 30	7 38	1 38
4	Tu.	4 30	7 38	2 19
5	W.	4 31	7 38	3 6
6	Th.	4 32	7 37	rises
7	Fr.	4 32	7 37	8 49
8	Sa.	4 33	7 36	9 17
9	S	4 34	7 36	9 40
10	M.	4 35	7 35	10 1
11	Tu.	4 36	7 35	10 20
12	W.	4 36	7 34	10 39
13	Th.	4 37	7 34	10 58
14	Fr.	4 38	7 33	11 22
15	Sa.	4 39	7 32	11 50
16	S	4 40	7 32	morn
17	M.	4 40	7 31	0 26
18	Tu.	4 41	7 31	1 13
19	W.	4 42	7 30	2 14
20	Th.	4 43	7 29	sets
21	Fr.	4 44	7 28	8 19
22	Sa.	4 44	7 28	8 49
23	S	4 45	7 27	9 15
24	M.	4 46	7 26	9 38
25	Tu.	4 47	7 25	9 58
26	W.	4 48	7 24	10 19
27	Th.	4 49	7 23	10 42
28	Fr.	4 50	7 22	11 8
29	Sa.	4 51	7 21	11 38
30	S	4 52	7 20	morn
31	M.	4 53	7 19	0 16

AUGUST.

Full Moon, 5d. 0h.48m.a.m.
 Last Q'ter, 12d. 4h. 9m.p.m.
 New Moon, 19d. 6h.36m.a.m.
 First Q'ter, 23d. 0h.28m.p.m.

D. M.	D. of W.	Sun Rises	Sun Sets.	Moon R. & S.
1	Tu.	4 54	7 18	1 1
2	W.	4 55	7 17	1 55
3	Th.	4 56	7 16	2 55
4	Fr.	4 57	7 15	rises
5	Sa.	4 58	7 14	7 46
6	S	4 59	7 12	8 7
7	M.	5 0	7 11	8 27
8	Tu.	5 1	7 10	8 45
9	W.	5 2	7 9	9 4
10	Th.	5 3	7 7	9 27
11	Fr.	5 4	7 6	9 52
12	Sa.	5 5	7 4	10 23
13	S	5 6	7 3	11 3
14	M.	5 7	7 1	11 56
15	Tu.	5 8	7 0	morn
16	W.	5 9	6 58	1 3
17	Th.	5 10	6 57	2 21
18	Fr.	5 11	6 55	3 45
19	Sa.	5 12	6 54	sets
20	S	5 13	6 52	7 38
21	M.	5 15	6 51	7 59
22	Tu.	5 16	6 49	8 21
23	W.	5 17	6 48	8 44
24	Th.	5 18	6 46	9 8
25	Fr.	5 19	6 45	9 37
26	Sa.	5 20	6 43	10 12
27	S	5 21	6 42	10 56
28	M.	5 22	6 40	11 47
29	Tu.	5 23	6 38	morn
30	W.	5 24	6 37	0 45
31	Th.	5 25	6 35	1 47

CHICAGO ALMANAC, 1876.

SEPTEMBER.

Full Moon, 3d. 3h.23m.p.m.
 Last Q'ter, 10d.10h.31m.p.m.
 New Moon, 17d. 4h. 4m.p.m.
 First Q'ter, 25d. 6h.13m.a.m.

D. M.	D. of W.	Sun Rises	Sun Sets.	Moon R. & S.
1	Fr.	5 26	6 34	2 52
2	Sa.	5 27	6 32	3 59
3	S	5 28	6 30	rises
4	M.	5 29	6 28	6 52
5	Tu.	5 30	6 27	7 11
6	W.	5 31	6 25	7 32
7	Th.	5 32	6 23	7 55
8	Fr.	5 33	6 21	8 24
9	Sa.	5 34	6 20	9 1
10	S	5 35	6 18	9 50
11	M.	5 36	6 17	10 50
12	Tu.	5 37	6 15	morn
13	W.	5 38	6 13	0 2
14	Th.	5 39	6 11	1 20
15	Fr.	5 41	6 10	2 42
16	Sa.	5 42	6 8	4 1
17	S	5 43	6 6	sets
18	M.	5 44	6 4	6 23
19	Tu.	5 45	6 2	6 45
20	W.	5 46	6 1	7 8
21	Th.	5 46	5 59	7 36
22	Fr.	5 47	5 57	8 10
23	Sa.	5 48	5 55	8 51
24	S	5 49	5 53	9 38
25	M.	5 51	5 52	10 33
26	Tu.	5 52	5 50	11 33
27	W.	5 53	5 48	morn
28	Th.	5 54	5 46	0 38
29	Fr.	5 55	5 45	1 44
30	Sa.	5 57	5 43	2 50
...	...	...	...	...

OCTOBER.

Full Moon, 3d. 5h. 6m.a.m.
 Last Q'ter, 10d. 4h.30m.a.m.
 New Moon, 17d. 4h. 7m.a.m.
 First Q'ter, 25d. 2h. 4m.a.m.

D. M.	D. of W.	Sun Rises	Sun Sets.	Moon R. & S.
1	S	5 58	5 42	3 55
2	M.	5 59	5 40	5 1
3	Tu.	6 0	5 38	rises
4	W.	6 1	5 36	5 59
5	Th.	6 2	5 35	6 27
6	Fr.	6 3	5 33	7 2
7	Sa.	6 4	5 31	7 48
8	S	6 5	5 29	8 44
9	M.	6 6	5 28	9 52
10	Tu.	6 8	5 26	11 7
11	W.	6 9	5 25	morn
12	Th.	6 10	5 23	0 25
13	Fr.	6 11	5 21	1 43
14	Sa.	6 12	5 20	2 57
15	S	6 14	5 18	4 10
16	M.	6 15	5 17	5 21
17	Tu.	6 16	5 15	sets
18	W.	6 17	5 14	5 36
19	Th.	6 18	5 12	6 6
20	Fr.	6 19	5 11	6 44
21	Sa.	6 20	5 9	7 29
22	S	6 21	5 8	8 22
23	M.	6 22	5 6	9 21
24	Tu.	6 24	5 5	10 24
25	W.	6 25	5 3	11 28
26	Th.	6 27	5 2	morn
27	Fr.	6 28	5 0	0 33
28	Sa.	6 29	4 59	1 37
29	S	6 30	4 58	2 43
30	M.	6 32	4 56	3 50
31	Tu.	6 33	4 55	5 0

CHICAGO ALMANAC, 1876.

NOVEMBER.

Full Moon, 1d. 5h.41m.p.m.
 Last Q'ter, 8d.11h.27m.a.m.
 New Moon, 15d. 6h.58m.p.m.
 First Q'ter, 23d.10h.36m.p.m.

D. M.	D. of W.	Sun Rises	Sun Sets.	Moon R. & S.
1	W.	6 34	4 54	6 12
2	Th.	6 35	4 53	rises
3	Fr.	6 36	4 52	5 41
4	Sa.	6 38	4 50	6 35
5	S	6 39	4 49	7 43
6	M.	6 40	4 48	8 58
7	Tu.	6 41	4 47	10 16
8	W.	6 42	4 46	11 33
9	Th.	6 44	4 44	morn
10	Fr.	6 45	4 43	0 46
11	Sa.	6 46	4 42	1 58
12	S	6 47	4 41	3 8
13	M.	6 48	4 40	4 17
14	Tu.	6 50	4 40	5 27
15	W.	6 51	4 39	6 36
16	Th.	6 52	4 38	sets
17	Fr.	6 53	4 37	5 23
18	Sa.	6 54	4 36	6 13
19	S	6 56	4 36	7 10
20	M.	6 57	4 35	8 11
21	Tu.	6 58	4 34	9 16
22	W.	6 59	4 33	10 20
23	Th.	7 0	4 33	11 24
24	Fr.	7 2	4 32	morn
25	Sa.	7 3	4 32	0 26
26	S	7 4	4 31	1 31
27	M.	7 5	4 31	2 38
28	Tu.	7 6	4 30	3 47
29	W.	7 8	4 30	5 2
30	Th.	7 9	4 29	6 21
...	...	...	...	...

DECEMBER.

Full Moon, 1d. 5h.14m.a.m.
 Last Q'ter, 7d. 8h.33m.p.m.
 New Moon, 15d. 0h.24m.p.m.
 First Q'ter, 23d. 5h.51m.p.m.
 Full Moon, 30d. 4h. 9m.p.m.

D. M.	D. of W.	Sun Rises	Sun Sets.	Moon R. & S.
1	Fr.	7 10	4 29	rises
2	Sa.	7 11	4 29	5 25
3	S	7 12	4 29	6 40
4	M.	7 13	4 28	8 1
5	Tu.	7 14	4 28	9 21
6	W.	7 15	4 28	10 38
7	Th.	7 16	4 28	11 50
8	Fr.	7 17	4 28	morn
9	Sa.	7 17	4 28	1 0
10	S	7 18	4 28	2 9
11	M.	7 19	4 28	3 17
12	Tu.	7 20	4 28	4 26
13	W.	7 21	4 28	5 34
14	Th.	7 21	4 29	6 40
15	Fr.	7 22	4 29	sets
16	Sa.	7 23	4 29	5 1
17	S	7 24	4 29	6 2
18	M.	7 24	4 30	7 6
19	Tu.	7 25	4 30	8 10
20	W.	7 25	4 31	9 13
21	Th.	7 26	4 31	10 14
22	Fr.	7 26	4 32	11 17
23	Sa.	7 27	4 32	morn
24	S	7 27	4 33	0 20
25	M.	7 28	4 33	1 26
26	Tu.	7 28	4 34	2 37
27	W.	7 28	4 35	3 52
28	Th.	7 28	4 36	5 10
29	Fr.	7 29	4 36	6 27
30	Sa.	7 29	4 37	rises
31	S	7 29	4 38	5 32

SATURDAY, JANUARY 1, 1876.

January. Rec. Paid
1 Cash on hand

SUNDAY, JANUARY 2, 1876.

MONDAY, JANUARY 3, 1876.

TUESDAY, JANUARY 4, 1876.

Q Q

WEDNESDAY, JANUARY 5, 1876.

Q P

THURSDAY, JANUARY 6, 1876.

FRIDAY, JANUARY 7, 1876.

SATURDAY, JANUARY 8, 1876.

BB

SUNDAY, JANUARY 9, 1876.

RRP

MONDAY, JANUARY 10, 1876.

TUESDAY, JANUARY 11, 1876.

WEDNESDAY, JANUARY 12, 1876.

8 85 R P

THURSDAY, JANUARY 13, 1876.

[Faint, illegible handwriting in cursive script, likely bleed-through from the reverse side of the page.]

FRIDAY, JANUARY 14, 1876.

- No 1 = *Calloschista chlorea*
 No 3 = *Gastrophysa velutina*?
 " 4 = *Limacodes ocapla*?
 " 5 = *Euclea querceti*
 " 7 = (No. 13)

SATURDAY, JANUARY 15, 1876. (see Aug 26)

Description of cats. found
 September 5, 1882.
 Color green (sometimes
 brown) with a light
 stripe on the back.
 On the 3, 6, 7 & 10 segments
 a brown spot. A few
 hairs on each ring.
 They eat much hage.
 When at rest they
 somewhat resemble a
 spring peewee is
 made of silk and bits
 of substance on which it
 is made (chrysalis 1/10
 in long, brown and
 shiny (No. 2. See Nov 25)

(see 536)

No 6 (see June 14)

SUNDAY, JANUARY 16, 1876.

1. A. villosa, var. pectorata

This caterpillar means
is about $1\frac{3}{4}$ in. in length.
The body and head
are white; the belly,
a stripe on the back,
and a row of spots
on each side, black.
The feet are red.

It is covered with
long white (sometimes
yellow) hairs growing
immediately from
the skin, and rather
thin. It has on the
2nd 3rd & 11th seg. a long
black pencil, and
on the rest of the
next page

No 6.

MONDAY, JANUARY 17, 1876.

(see June 14)

rest (except the 4th)
a few black hairs. It
eats wild cherry, cherry,
and maple, and is
found in Sept. No 6

No 7

Let. found on clover
Aug. 1885. near the
road. Length $1\frac{3}{4}$ inches
Last pair of legs not
used. Black spot on the
scutellum. Head large
and red. Color purple
with 2 narrow longitudinal
stripes ^{on} the back, ^{and} ^{black}
3 black lines on each

TUESDAY, JANUARY 18, 1876.

sides curved on in the
back extending from
the head to near the
tail where they change
into 2 black spots.

Below on each side
a yellow stripe.

Black marks above
each foot. A black
elevated spot on each
side of the 4th segment.

Sasypitru anguina

(see 38107)

No 8

WEDNESDAY, JANUARY 19, 1876.

Cat found on wild cherry
Sept 7, '83, $1\frac{1}{4}$ in long.
Color black, legs
yellowish. Head black.
10 yellowish marks on each
ring from which are a
few white hairs. Along
back an interrupted
red stripe edged with
velvety black, extending
to the 10th segment. On
the 11th is a black
elevation ✓

Cat 127

Aeronycta occidentalis (?)
" *lobeliae*

(Larva known by French & Coquillett)

THURSDAY, JANUARY 20, 1876.

Green limacode, Sept 53
wild cherry, 2 Purple
spots. 10 or 12 Red
horns. (Probably described
in other book)

Green with a broad
yellow stripe on the back
which is mostly obscured
by 2 large purple spots
edged with red and
contracted in 2 places.
There are 7 pairs of little
red prickly warts situated
before between & behind
the spots used at the
(H) contraction. (Aug 87)
Adonota spinuloides

FRIDAY, JANUARY 21, 1876.

Notodonta from Cerabbe island
Plant bough on black oak.
Green head with 2 black
lines. Yellow stripe on
each side of back. white
dorsal line. Marked
irregularly on back
with purple. Also yellow
line on each side.
third feet not used.
When fully grown ^{some} = 13
^ (dotting?)

~~*Notodonta bilineata*~~
Eschsch.

Heterocampa manto
G.H.H.

11
SATURDAY, JANUARY 22, 1876.

V *Limacodes* from Waterbury
Sept 85. Oval flat. green
On back a 8-shaped
patch of red, dark purple
bordered with yellow.
a red spot toward head
On wild cherry.

VI After shedding skin spot
on back connected with
spot near head.

~~*Tortricidia testacea*?~~

~~*Homocidus minutus*?~~

~~*Limacodes flavipes*?~~

~~*Tortricidia pallida*?~~ }

~~*Tortricidia flavula*~~ }

* Copied 12

27/98
SUNDAY, JANUARY 23, 1876.

All-green *limacodes*.
The back is elevated
into 2 ridges and in
consequence has a tail.
Wild cherry, maple etc.
(Probably described in other
books) Sept 85.

(Two kinds. light or yellow-
green and dark or
blue green. These may
be different species)
They are (May 86) -

Light green = *Limacodes fasciolar*
Dark green = *Pachyneurina albipuncta*
(See Oct 8) (and to
Pachyneurina)

MONDAY, JANUARY 24, 1876.

Very much resembles 10 except that the purple is much more extensive continuing in a band with 4 lateral projections on the head to tail.

On elm Sept '83. at Livingston. Probably = 10.

Same as 10 no!

Sciodonta bilineata
See BB 206

TUESDAY, JANUARY 25, 1876.

Looper found on flowers of thistle (at Bell's dock) and aster (in the flower bed) in Sept. '83. Color green with or without a redish line along the back. The head is brownish and notched on top.

Moved to chrysalis in Sept. Brownish yellow, line on back and wing cases black.

Green with white strip rings.

Synchlora rubroraria?

WEDNESDAY, JANUARY 26, 1876.

Caterpillar found
 in Aug and Sept. on
 white oak. Color white
 ash or reddish. Remain
 on the back of the
 leaf with its head
 turned to one side
 touching the body. (May
 be described in the
 other book)

15 Same? on Beech July 27, 1890
 Hd pale whitish, antenna
 palpi white, legs partly black
 Several hairs growing from
 slight tubercles, 2 near apex
 of each lobe most distinct
 W. 1.4 mm. Body (see Sept 27)

Aug 12 '50 Hd. flattened in front, depressed at vertex, yellowish green.

15A

oak Belmont L. J. Aug 96
Setae single in lat & 2 stages
except vi. Brown, a blotch
dusky blackish d. spine,
and by pale areas around
i & ii. These areas reddish
brown colorless, with body
side slightly mottled.
Subacle (setae white
sprache black. Talitree
vary a little in amount
of darker shading. Same

Trace of a yellowish d.
line. Spots 3-12, 12 spot
3-4, two 6-10, faint joint
one (i) on 11 and a large
 Δ spot (i-ii) on 12,
iii cir with reddish ring.

over

15 A

Oak Bellport L.I. Aug 96
Setae single in lat & 2 oblique
except vi. Brown, a blotches
dark blackish d. spine,
and by pale areas around
i & ii. These areas reddish
brown concolorous with body
Side slightly mottled.
Subventral (setae white
space black. Tail like
vary a little in amount
of darker shading. Some

have trace of line a side
Hd mottled reticulated
with black on very pale
ground. w. 3.5

Are all diff from ex-
cept white tubercles -
to J.

hamamelis

15 B

Like 15A but no black
shades. i & ii surrounded
by bright yellow areas.
Trace of a yellowish d.
line. Spots 3-12, 12 spot
3-4, two 6-10, giant joint
one (i) on 11 and a large
 Δ spot (i-ii) on 12.
iii cir with reddish ring
ovata

WEDNESDAY, JANUARY 26, 1876.

Caterpillar found
in May and Sept. on
white oak. Color white
ish or reddish. Remain
on the back of the
leaf with its head
turned to one side
touching the body. (May
be described in the
other book)

15 Same? on Dec 27, 1890
Hd pale whitish, antenae &
palpi white, legs partly black
Several hair growing from
slight tubercles, 2 near apex
of each lobe most distinct
W. 1/4 mm. Body (See Sept 27)

THURSDAY, JANUARY 27, 1876.

Aug 12 50 Hd flattened in front, depressed at vertex, yellowish green
a black line from vertex of each lobe to each side beneath
eyes black. mouth pale jaw brown. W. 1.3 mm Body with dorsal green
as in moth. but much brighter, more on 13. yellowish, tipped
with brown. Body green with oblique white lines in 5 & space
a faint yellow subterminal line with red brown spots below
it. on legless segs. 7th. feet 2 to 3 on 13. 14th brown outwards
Aug 19 50 Hd. long, thin, widely, narrow, vertex flattened in front
& depressed in vertex, green, shining, a white line along
mouth pale, antennae whitish, 22.5 mm Body on 13. 14th
green, all small except on 12 & 13, a slight red
consistency of 2 small tubercles. markings as before but
more distinct & approaching the ones of 13.

"prata". On
and Sept '85.
stained with
a red
interrupted
line near
each seg.
the 3th
hence
and 16th
gest.
prata.
green bands
beneath each
see Nov 91

17

FRIDAY, JANUARY 28, 1876.

Sphinx found at
Livingston, Sept '85 on
'round leaf-long bud
stuff' Reddish green
redder at the sides
and a red line on the
back. Horn red. Head
red. Can be drawn
part way under the
1st segment. Black
marking above the feet.

Hemaris sp.

18

SATURDAY, JANUARY 29, 1876.

A. L.

Sept

at

her

the

the

an

ele

se

and

35-

From Englewood N. J.
June 7 1896 In young
stage the
tubercles

large and

quite distinct through the
an colorous

Hemaris appennina

17

FRIDAY, JANUARY 28, 1876.

Sphinx found at
Livingston Sept '83 on
'round leaf - long bud
stuff' Reddish green
redder at the sides
and a red line on the
back. Horn red. Head
red. Can be drawn
part way under the
1st segment. Black
marking above the feet.

Hemaris sp.

18

SATURDAY, JANUARY 29, 1876.

A horn looper found
Sept '83 on wild cherry
at Livingston. It
has ⁴ bands going ^{are}
~~has several spots on~~
~~the~~ ^{around} of ferruginous.
The head is slightly cristated
and there are 2 black
elevated dots on the 1st
segment. It eat only at
night.

Endropia hypochinca

19

SUNDAY, JANUARY 30, 1876.

Green & brown wingless
found on white oak
Sept. 13, 1885. Color green
broad stripe on back
brown. Spins a web
among the leaves.

Cat 129

Amelita luniculata
Huber (det Aug 1900)

20

Copied

MONDAY, JANUARY 31, 1876.

Wet down on 'round-leaf-
long bud' Livingston Sept.
1885. Head green with 2
brown stripes. areole green
on both sides purplish
on top. Slight hump on 4th
and less one on 7th.
Between them back marked
with purplish. 2 yellow
spots on 7th segment.
Rest of body to 11th segment
(where is a slight hump)
green marked with
whitish. Last segment
purplish.

Oudemasia badia

TUESDAY, FEBRUARY 1, 1876.

Small cat on 'long-hand'
 Lin. Sept. '83. Thicker at
 4th seg. On 4th & 5th 2 black
 spots. Cat. Brown vari-
 gated with white-brown
 feet white-brown.

Probably this on maple Jefferson
 Highlands N.H. July 1895. ate some
 dogbane blossoms and moulted
 once (Put it out for a noctuid
 caterpillar apparently perfectly normal
 for noctuidas, small, obscure)

WEDNESDAY, FEBRUARY 2, 1876.

ash spring on Chapman
 Sept. '83. Light green.
 Spines on sides of black
 and yellow. Horn ^{blue} green
 speckled with black.
 Head green with 2 black
 stripes. Tops of feet black
 (Desc. in other work)

Ephux kalmae

THURSDAY, FEBRUARY 3, 1876.

Marapea on flory-bud
Livingston's Sept. '83.
Green with white lines
and white markings
on sides. Spiracles brick
red.

Same as 17 only
younger.

FRIDAY, FEBRUARY 4, 1876.

Aspaten on wild cherry
Sept. 1884. Long with a
few black hairs - brown
green. Broad red-purple
stripe on back edged
with white. Head green
with 2 black lines.
(May be described in other
book)

Or *Aspid?* 4/2/93

B. all green with yellow
8th line. Tubercles normal
(nocturnal) black brown distinct
with long black setae
a few black dots on head
(See 605)

SATURDAY, FEBRUARY 5, 1876.

Green cat. on maple.
 Head large green.
 Jaws yellow. A yellowish
 stripe on each side.
 Sept '85. Yellow on tail.

Madata gibbosa

$\frac{1}{2}$ Rupa (4p '85) Black. Of usual
 shape. Punctured, wing
 cases creased. Cremaster
 tapering, then straight,
 ending in 2 divergent
 points that curve upward
 (toward dorsum)
 (See Sept 22)

SUNDAY, FEBRUARY 6, 1876.

Small green cat. on black
 oak. Head rather large.
 Brownish line on each
 side and also on
 each side of head.

MONDAY, FEBRUARY 7, 1876.

Argyria at Compton
 Village N.H. pure R86
 4 yellow tufts, 5
 black pencil on
 1, 5 and 11 the account
 color grey, head black
 yellow hairs etc.
 ♀ imago out July 6.
 white, black stripe on
 top & underneath.
 another ♀ out July 7
 I put her out and
 a ♂ nova came.
 Brown & white crescent

Argyria nova

TUESDAY, FEBRUARY 8, 1876.

cut on hop July 10 '86
 Black with spines (young)

Young ♀ 29 as far
 as I know. Aug. 7.

WEDNESDAY, FEBRUARY 9, 1876.

Cent. of *Craptia* on
 leaf July 10, '86
 probably 28 days
 older.

Head red. Body purplish
 lined with yellow.
 Spine yellowish or
 white. Red line on
 each side of body.

Craptia luteo-guttata

THURSDAY, FEBRUARY 10, 1876.

Cent on red raspberry etc
 Jefferson N.H. Aug 86.
 Black on each side
 transverse red stripe
 with red vent &
 tanning hairs. On back
 2 interrupted long. white
 stripes & 1 yellow inter-
 rupted longitudinal
 stripe on each side.
 Head black & reddish.
 Red beneath.

Eats anything June 29, '87
 Head black tinged white
 reddish with white hairs
 Body velvety black
 (see Nov 5)

FRIDAY, FEBRUARY 11, 1876.

Dyscampa on beech
 Jefferson N.H. Aug 23, '86
 Color purplish. speckled
 with white. Bluish
 at base of spines
 which are black.
 2 long black spurs
 near head. Head
 light mahogany
 color. Spiracles black.
 Out Apr 22 1887

Dyscampa pellucida

SATURDAY, FEBRUARY 12, 1876.

Bristle Out 12, 1881,
 Black, 2 long white strips
 and two black hairs
 Head black.

Cratichneumon

SUNDAY, FEBRUARY 13, 1876.

In swamp weed flat
to June 11, 1887
black, black heavily
spines, body
stuffed to anarchy
with red. Head black

Militaria Plecton
by French's description

MONDAY, FEBRUARY 14, 1876.

In honey June 11, 1887
"Clippia" Head
black, 4 black lines
before & behind
body & hairs yellow
brown. On 4, 5 & 11
segments black tufts
with white hairs
with "mottled" ends
[3, 4, 5, 6 segs. Brown
tufts mixed with
white, 11, 12 segs. black
tufts. 2 white warts
(see Nov 2)

Parorgyia christiani
leucophaea
var. basiflora

TUESDAY, FEBRUARY 15, 1876.

An Irish hazel
June 6, 87. White

1/2 of transverse
yellow stripes
Hazel white.

1/2 of head shiny white
and mottled with brown

Eyes brown. Skin 2 joints 2
parts over head. Body

white, a dark shade

showing bet. the joints, and

1 yellow transverse diagonal

band's on joints 3-11 inc.

contiguous when body con-

tracted. At rest body bent

head touching middle body

(See Nov 15)

WEDNESDAY, FEBRUARY 16, 1876.

Oxyia on kind of beech
June 8, 87. at Shanken

withish gray hair
and 4 tufts mixed
with mould white

8 smaller tufts & 2 red

tufts. Head black,

body whitish, 4 black

genitals and little

" along the sides

* Hop-hornbeam

Parorgyia (see 486)

described by me as possible

Parorgyia cinnamomea-

THURSDAY, FEBRUARY 17, 1876.

Leucocampa on black
oak at Champenok
June 8, 87. Very
much resembling
C. americana but
has 10 -shaped
white spots along
the back (gray on
sides, blue on back
edged with black
and white. 10 white
spots edged with
black and between
2 long red lines
edged with black)

distinct ✓
C. tibatica

FRIDAY, FEBRUARY 18, 1876.

Spins a house on
unknown shrub. *
Semi-transparent
blackish above
white beneath
Head white with
4 black spots

Champenok, June 8, '87
(**Corvus floridanus* and
C. paniculata)

Thy. alba pudens
Pupa. Greatest diam. through
mid. cast. abd. segs tapering
dark brown black showing
brownish at the juncture
of the parts. Body punctured
thru, wing & leg cases etc
finely wrinkled. cremaster
thick 1 mm long, furnished
with stiff spiny hooks.

See Oct 5

SATURDAY, FEBRUARY 19, 1876.

White cat. on white
hazel "purpling"
green with a few
white hairs from
blackish parts &
blackish in many
back. Head and
neck behind head
black.

Cocoon on branch of
leaf of dark & thread
shape.

One hatched a year.

Nola sex maculata
(See Nov 21)

SUNDAY, FEBRUARY 20, 1876.

Introlenta on rock oak
from creek at Esopus
Does not use tail feet
green with 3 rows.
white & yellow stripes
the middle one, on
4, 5, 6 segs. wider with
3 stripes and come
together again, and
on 8, 9, 10 there
are 2 narrow back-
ward to the other
stripes. Head green
with 2 red stripes.

Found on witch hazel Aug 88 (only
Aethocampa ~~lineolata~~
gutticollis)

MONDAY, FEBRUARY 21, 1876.

Ceet. white, head
 reddish white. Thin
 white hairs. On
 first seg. 2 red
 pencils; on 3rd
 & 10th segs. a
 red tuft. June '87
 Another on maple, Plattsburgh N.Y.
 Sept 11, 1894. Hd white, covered with
 angular light red patches. white
 above apex of Δ
 obscure the crown of Δ , except in
 narrow irregular lines; join black
 bases of antennae and labrum pale
 shiny; w. 4 mm. Body greenish
 white with wrinkled irregular
 transverse white lines. Spin-
 acles white, each [see May 12]
 surrounded and

TUESDAY, FEBRUARY 22, 1876.

A larva on currant
 yellow on each side
 on back, between
 greenish & beneath.
 about 15 black dots
 on each segment
 Head green with
 2 black spots June '87

Empiteler fibularis

WEDNESDAY, FEBRUARY 23, 1876.

A chrysalis suspended
by the tail on an unknown
shrub (possibly shaped like)
one lower twig ant.
June 27, '87. Color, white
on each ring a row
of elevated yellow
spots and black
dots very like cases
mentioned with black
and yellow. Tail black
antennae cases spotted
with black

Probably Melitaea Phaetora

THURSDAY, FEBRUARY 24, 1876.

A "wiggles" on black
oak, White Co. July 1, 1887
greenish black, with
head & ant. seg. black
several black shiny
dots on each segment
faint yellowish line
on the sides. Spins
a web in the leaves

Caeoccia ferridana Cten
per C. H. Fernald

FRIDAY, FEBRUARY 25, 1876.

For full description of full grown cat see Vol. 1

Eggs laid by ♀ *Triopha*
cinnabrosa July 2nd
 Hatched July 6. 1st inst.
 Brownish black hair.
 Head black. 1st moult July 8.
 Black, black spinis & head
 mottled. 2nd moult July 12.
 Black with 8 spinis white.
 3rd moult July 17. Black &
 head black, spinis orange.
 Whitish marks on sides.
 4th moult July 22. Black
 speckled with yellowish
 spinis orange but black
 on 1st ^{of last} segs. Head red.
 5th July 29. *Leucophaea* July 30
 Imago Aug. 6 [100 caterpillars]

94 *cinnabrosa* 2 interrogations imago

SATURDAY, FEBRUARY 26, 1876.

Scymnus cinnabrosa
Leucophaea on black
 rasp berry July 7, 1887
 Yellowish with long
 brown stripes.
 8 black dots. Head
 black with very
 humped.

Stage I

Stage II

Keene Valley N.Y. July 12 1894

SUNDAY, FEBRUARY 27, 1876.

Aetian satyr willow
July 12, 1887. Yellowish
with thin light
lines. 2 broad
black lines. Stages
on back & one on
each side head
black

Spilargis aetia

MONDAY, FEBRUARY 28, 1876.

Sphinx on ground near
willows in field to
July 16, 1887. Rather
small. green ^{oblique} on
sides row of white
spots. bordered before
with light purple
head with white marks
purplish behind. Horn
green, 2 dark lines
(see Nov 13)

~~Sphinx gordius~~
~~Sphinx notatus~~
Sphinx luscitosa Clem?

TUESDAY, FEBRUARY 29, 1876.

Spun up leaves of
Willow July 16, 1887
whitish line of pink
spots on each side
head light orange

~~to~~ = 59 1/2

WEDNESDAY, MARCH 1, 1876.

Centa. hatched from
caterpillar with black spot
eggs on wild cherry
July 18, 1887. Orange colored
with black branching
spines.

Hyperichus Id

THURSDAY, MARCH 2, 1876.

(about July 20)

Spiny on woodbine
 whitish thickly mottled
 with brown. 4 long.
 inter. brown bands
 head marked with
 brown. Elevated shiny
 brown spot on tail
 surrounded by a
 black & a broad
 brown ring.

Elymus abbotii

FRIDAY, MARCH 3, 1876.

July 27, 1876 Little cat. on
 "long" grass" white, black
 band, black spots on each
 apt. brown on each side
 by 6 low legs brown dorsal
 line. Moults July 28 stopped
 "moulting". head black, face
 whitish ^{long, yellow, stripes} body black feet reddish
 Moults Aug 2, reddish white
 line. Head black, white hair
 Moults Aug 8 reddish black with
 white line, long white hairs
 When full grown black with
^{or more} one lateral interrupted white
 line. Hairs long white.
 Head black (See Dec 17)
Satanus intrepidus

SATURDAY, MARCH 4, 1876.

Fast cat of yesterday
Aug 1 1857. Green
with 2 longitudinal
yellow lines.

SUNDAY, MARCH 5, 1876.

Satana on brick
last on Aug 1 87.
Black body black.
8 longitudinal white
lines & white hair
feet red.

* Also on brick. Like
BB 52 but stripes more
distinct and more
yellow. Hair less
long.

* *Satana Augustii*

MONDAY, MARCH 6, 1876.

Little cats hatched
from yellow eggs on
September Aug. 3, '87
yellow & black hairs
brown spots on head.
Aug 8, 1 month, yellow, black hair
body and head
black. Two dark
brown mixed
with black.

Probably =

Spilomena aerea

TUESDAY, MARCH 7, 1876.

Little cats on ash Aug 87
Appearance of *Hartiana*
americana. Green
with 2 transverse black
stripes on each ring
between which is a
row of 6 yellow tubercles
with short hairs. Head
black with brown-yellow
stripes. Body green beneath.
Tubercles on 1st & 2nd
segments black.

Aug 6 green black spots. 4 before 1
Behind yellow. Head & black spots

Spilomena promethia

WEDNESDAY, MARCH 8, 1876.

yellow breed *Oxyia*
wild cherry Aug. 1877
yellow with black
dorsal band inclining
to yellow tufts. head
yellow. 2 black pencils
on 1st ring, 1 black
on 2nd with horns
on 1st ring. A few
white hairs.
Also on maple etc.

Oxyia leucostigma
(a cat. var.)

Is it though?

Oxyia definita

THURSDAY, MARCH 9, 1876.

Limnæodes "maple-thing"
Maple & wild cherry, Aug.
Aug 87. Green with a
row of points all around
thorax behind longest
reddish before; 2 yellow
lines on 2 ridges on
the back joined behind
the middle by two yellow
spots with red centers
the lines interrupted
between the spots.

Limnæodes innervata B.
This fits description

FRIDAY, MARCH 10, 1876.

"Bashful cut." on wild
cherry, spinning between 2
leaves a house resembling
a cocoon. Semi-transparent
greenish or pinkish
white, with or without
faintish dots at the
sides, more distinct
toward the head.
Head large, shiny,
white with orange
shading outwardly and
partly covered by the
skin of the first ring

Mamestra confusa

SATURDAY, MARCH 11, 1876.

Little cut. on white oak
Aug. 9 '87. Head black: body
yellowish with long whitish
hairs. Tufts on 4th 5th and
last segments, 2 or 3 in wait.
Went Aug 14. Tufts black.

Evidently young of BB 34
Parorgyia leucophaea
H. D. Sept 18, 1893

SUNDAY, MARCH 12, 1876.

Pyramis on death
 Aug 07. Black with white
 dots, row of yellow
 spots (not crescents) on
 sides, red ring at
 base of each spine.
 Spine & head black

Pyramis black with

MONDAY, MARCH 13, 1876.

Wild cherry Aug 87.
 Small, clear green with
 a few white hairs.
 A dorsal stripe beginning
 on the 2nd segment
 of yellow containing on
 each segment orange
 red shading less
 distinct towards the
 middle of the segment. Head
 yellow, with orange
 shading at the top.
 (or 8 segments) = 8

Same as 8

TUESDAY, MARCH 14, 1876.

Cypripedium wild cherry
Aug 87. Black with
leaved black and
black veins on lobes.
Black crest on 11th eye.
On 4th the dorsal
greenish & followed
by gray hairs. 2
warts white.
Hybernati (very - how)

Large eye on back of head & blackish. 8th
N. 8th. June 21 1875. 1.4 height. 1.8
Anterior green, above transparent brown
firmed. Retraction well marked
numbered 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
but with the same shape - perpendicular but
varying angle irregularly angled
shoulder nearly smooth. Nails on angles
under C. 1st. no hairs the 11th eye has been
at angles in shaded side are rather
fine on June 21 running through other
Hatched June 23 1st marked by 11th eye wide

Shown marked at 2nd eye
next to stripe. Yellow between
hairs. Mould - brown reduced to points

Large egg on back of leaf of black birch. JH
N.H. June 21 1895. TD 1.4 height .8

Proto of green, shell transparent larva
formed. Reticulation well marked

~~narrow~~
but with distinct top hexagonal but
varying size irregularly subcircular
toward vertex minute pale but angles
under C obj. no hairs, the lighter lines seen
at angles on shaded side are rather
fine air pores running through shell
Hatched June 23. H. rounded high than wide

brown. A pair of large 3 pronged c-antennae as
fold as larva emerges, 3 prongs, 3 pair at base. Other
setae from ordinary tubercles but i on 5-10
12 & anal plate look whitish succulent
Body pale streaked with red at the sides.

In less than 24 hours they grow
out into the long tubercle which burst
centrally, colored at first, then anther.
abraded with crimson. Anal feet
long divergent. (Put it out)
another egg on yellowish, pale green, ground
glass color, bright, subtranslucent.

TUESDAY, MARCH 14, 1876.

Ceryle on wild cherry
 Aug '87. Black with
 head black and
 black ~~feathers~~ on body.
 Black crest on 11th cov.
 On 4th the lateral
 preceps and followed
 by gray hairs. 2
 white white.
 Hybernate any (now)

WEDNESDAY, MARCH 15, 1876.

Notodonta on maple Aug '87
 Last feet not used
 long. Color brown, yellow
 spot near tail shaped
 like arrow head pointing
 forward. Before it a
 yellowish dot. On 1st
 seg. a pair of branching
 horns like antlers. I
 head red brown ^{side of head}
 after moult head with
 white smooth. Body green
 with white dorsal stripe
 interrupted at 7th seg.
 and on island near the tail
 3 brown marks at side one
 next to elaps. Yellow between
 horns. Molt - brown reduced to points

Head, horns, color, with black

THURSDAY, MARCH 16, 1876.

Acronycta on Birch by 87
 Larva green shaded
 with reddish brown
 all over the back.
 Head green, marked
 shaded with brown
 2 little points on
 the first segment
 within the head.
 Stands out to resemble
 a stick.

Acronycta pistaceata Gu.

FRIDAY, MARCH 17, 1876.

Acronycta on elm. Aug '87
 Resembles 10. Green with
 a few black hairs, short.
 Head with 2 black lines
 alternately white. Purple
 on back as follows Strip
 from 2nd to 10th seg
 except 8th. On 4th, 6th
 9th wider. On 5th, 7th
 10 reduced to 2 purple
 spots. H¹ ² ³ ⁴ ⁵ ⁶ ⁷ ⁸ ⁹ ¹⁰
 white at sides below
 purple and red spots
 on purple when it is
 extensive. Interrupted
 yellow line on sides

67
SATURDAY, MARCH 18, 1876.

Looper on wild cherry
They spin in common
a hollow tunnel and
"mark" the inside.

Green with 4 black
longitudinal stripes
on the back, the extreme
one the widest. Head
light orange color.

Hydra undulata

68
SUNDAY, MARCH 19, 1876.

which are in use to separate the g
As they point out the ultimate cl
are physiological. The generic
of such a nature as would scare
the higher forms. This results
the bacteria. As we proceed fir
of life, the organization become
we reach organisms which pres
so slight that morphology almos
ters, and entirely fails to differen
If conjugation is absent and
been present, the cells reproduci

Bimaculata Purple spots on
feet many up & all going is
a dark purple white streak
low covering sides to spiracle
and reaching white dorsal
band 5-10 & many down
a streak on 12, also reaching
down & purple dots all on
rest of sides & bases of feet
S. low heavily pink streaked;
the space 11-13 filled in
with purple. Oak

Mr L. Goutel

which are in use to separate the g
As they point out the ultimate cl
are physiological. The generic
of such a nature as would scarce
the higher forms. This results
the bacteria. As we proceed fr
of life, the organization become
we reach organisms which pres
so slight that morphology almos
ters, and entirely fails to differen

If conjugation is absent amo
been present, the cells reproduci
lent parts, a condition of affairs
Weismann for the primitive for
characters acquired by any specie
conditions, strictly inherited. I
such thing as species among th
number of intergrading varieties.
show constant characters, but it
another culture would ever be f
characters.

But owing to the nature of t
most part, on previously prepar
probable that they are degrade

67
SATURDAY, MARCH 18, 1876.

Looper on wild cherry
This species is common
a hollow house and
"marks" the inside.
Green with 4 black
longitudinal stripes
on the back, the extreme
one the widest. Head
light orange color.

Hydra undulata

68
SUNDAY, MARCH 19, 1876.

Caterpillar on 'Long bud' say 27
tapering at each end
Color light green
with 3 longitudinal
yellow lines, 2 brown
spots on 4, 7, 8 & 10 segs
contiguous to the outer
yellow lines & other
slight brown markings.
Head green with some
black dots in 2 patches.
Its shape is fusiform
owing to the tapering,
especially behind.

MONDAY, MARCH 20, 1876.

Looper on 'long bird'
Brown with 4 black
dots on each wing.
Black dorsal line with
brown center from head
to 3rd segment. Reddish
spot on each side of
5th seg. On top of 4th
6th & 2 with dots
with black between
2 elevated brown points
on 11th. Head brown
slightly mottled as
is the whole insect

70

will eat *viciniana staminea*
TUESDAY, MARCH 21, 1876.

Gatana on wild plant?
from Owl Creek Britton
May '87. Black with
8 longitudinal yellow
stripes. Head & tail
dark red and
blackish to black.
Spot on 12th segment
black.

1st seg. Head, spot on 1st
segment and tail light
orange red. Body black
with 4 longitudinal
yellow stripes on each
side. Few white hairs
interrupted yellow lines beneath

Gatana fluitans

(see cat 30)

71
WEDNESDAY, MARCH 22, 1876.

Grafts common on Elm
and other trees Aug. '87.
Yellowish white with
darkish markings
and a row of red
dots on each side
Spine white tipped
with black. Petiole
white. 2 spines on it
black.

film Grafts common
made Grafts var. dasyne

copied in the 72 (see Oct 15)
common Tara
8/190
THURSDAY, MARCH 23, 1876.

one-tailed "tail"
Viburnum acerifolium
large berry "leaf" *dentatum*
Aug 26, 1887. Hairly ca. 1?
color brown with a
notched head, elongated
above the 4th segment
and a single tail.
also on "long bud".
Hypocotyl on stems.
In Spring (June 1 1888)
one-tailed, always single
head brown notched
white & green ^{or purplish & ferruginous} like *Lonicera*
erect color. White on
sides & along back, in
middle of side upward
brownish green ^{or ferruginous} projection

Prosopis rosea ?

2 spines June 5, come out in leaf 1 but June 15

FRIDAY, MARCH 24, 1876.

"Marsh cat" on yellow
flowering annual on
lower run. Aug 26, '87.
Spinning a kind of web
and "pinking". Brown
yellow, black head &
first and last few
segments. Black line
on back & some of black
spin on each seg.
Head notched

(Hybernate in a web)

= 43(?) = 33(?)

Milvina phantoms(?)

SATURDAY, MARCH 25, 1876.

great leaper on dish
Aug 26, '87. Greenish
brown with several
brownish wintery
humps. First segs
smaller, last pair
of fore legs protruding

Eugonia almaria

SUNDAY, MARCH 26, 1876.

Mammals on ray
used by St. Bernard
brown dorsal stripe
4 yellow stripes
on hind side between
2 yellow stripes purple
& black stripes.
Head reddish brown
with whitish. Ben
band bifurcate on
1st seg & black.

MONDAY, MARCH 27, 1876.

On rock oak Aug 87
yellow longitudinal
line, between two
blue with 4 black
lines. Head and
hump on 10th seg.
orange yellow. Last
feet not used.
Also on black and
white oak and maple
the latter if this used
is *E. albifrons*.
(See 8859)

E. albifrons

TUESDAY, MARCH 28, 1876.

Leaf on creek border
 bush Sept 87. Body
 and head black.
 Thick short hairs
 on sides brown
 on back white
 after 4th segment
 On 8th, 9th 10th segs
 a short black
 tuft the hair is
 longer than the
 other hairs. On mouth
 hair reddish brown.
 Dorsal back all
 black. All hair
 mixed with white
 hairs giving mouldy appearance
 (see July 12)

WEDNESDAY, MARCH 29, 1876.

Leaf on geranium
 Sept 87. Light green
 with a whitish dorsal
 line. 1, 3, 4 & 14 the segs
 marked with darker
 green and the back
 shaded with whitish.
 14th segment marked
 sep. Head greenish
 with lighter shading.

Mamestra adjuncta

Already described

THURSDAY, MARCH 30, 1876.

Looper larva at end of
 chrysalis. Larva
 not! Aug. 1887.
 Green with thin
 sub-dorsal longitudinal
 yellow line.
 Head green and
 not notched.
 2 lateral yellow
 lines not reaching
 to head.
 Labials green with
 + longitudinal white
 line. Wing and leg
 case streaked with
 white.

Cleora pulcherrima

FRIDAY, MARCH 31, 1876.

Mamestra? on golden
 rod Sept '87. Color black
 a dorsal red stripe,
 narrow. On sides a
 broad yellow line
 marked with black,
 below a red line.
 Black hump on 10th
 segment separating the
 red line to a red spot
 on 11th segment. Head
 black with slight white
 marks. Black on back
 longitudinally streaked
 with white very finely.

SATURDAY, APRIL 1, 1876.

Andromeda ligustina

Datana on *Andromeda*
like wild plum
but has been
(like poison ivy).
Chloro with
rows of
white spots over
20 in a row. Head
spot on 1st segment
and tail dark
appeared.

(5480 III)

Datana major

SUNDAY, APRIL 2, 1876.

Forktails on willow
green with lateral
yellowish ^{or white} line. Back
entirely brown with
white bloom
dark brown. Distinct
lump on 3rd segment
white bloom more
distinct than brown
and edged with
white. *Harpyia* ^{multicauda} *aquatica*
var *Harpyia* double dent.
stripe on back edged
with yellow with a
brown projection in middle
lateral line wanting
var = *Harpyia occidentalis*

MONDAY, APRIL 3, 1876.

Spiny on sides
Sept 27. Green
with white spots
on sides and
another from head
to the rest.

Slight emarginate
red spot in 2 rows
head with 2 white
lines. Horns black.

Emeritus geminatus

TUESDAY, APRIL 4, 1876.

Datana on sumach
Sept 27. Black with
iris yellow and
broad. Head, spot
on segment and
tail black. Very
tubby hairs.

Datana perspicua

WEDNESDAY, APRIL 5, 1876.

Sphinx eating square
stemmed weed. Sept 87.
Head, spots on segs,
horn, tail and legs
ochre yellow and shining
all but the latter sprinkled
with yellow. Body black
above yellow beneath
an interrupted yellow
dorsal line, interrupted
lateral line. Back
dotted & sprinkled
with yellow. Beneath
lined with black in
two directions.

Scilephila

THURSDAY, APRIL 6, 1876.

Cast on Lilac Sept 87.
Much damaged especially
11th segment. The last feet
appear beneath it.
A few white hairs to
which the shed heads
stick and project as
a string from the neck.
Back brown, much
streaked with white
at the sides and
whitish brown at the
neck.

Makes a hole in wood
for cocoon.

Harrisianus sexguttata

FRIDAY, APRIL 7, 1876.

Part green flanged horns
on witch hazel Sept 87.
bealer brown. On 2,
3, 6, 7 and 8 segments
2 green flanges. On
4 and 5 segs. 2 brown
flanges. On 11th 4 brown
points. Head brown
very slightly notched.

SATURDAY, APRIL 8, 1876.

Heterocampa eaten when
left 87. Green with 2
white lines on the back
approaching each other on
2, 3 and 10th segments.
Also a dorsal stripe
after the 3rd segment.
On 4th & 10th 2 red
marks the latter not as
red. Slight lateral line.
Head green with 2 white
edged with brown lines.
Last feet not used. a
few black hairs. (See 206A)

Scaphyta bilineata (206A)

89
SUNDAY, APRIL 9, 1876.

Sphinx on ash Sept 87
Yellow green above
slightly blue green
below. Lanting
line on sides of
white edged above
with green. Head
green with 2 white
stripes. Horn green
slightly reddish.
tail speckled with
black.

Sphinx undulosa?

It is per description of C.H. F. and

90
MONDAY, APRIL 10, 1876.

Hanged loops on brick
willow maple etc. Sept 87
holer dead-leaf brown
On 4, 5, 6, 7, 8 segments
a pair of large pointed
projections or "flanges"
On 2, 3 slightly ones
2 points on top of 11th
(1 in other book)

Endropia ornantaria?

91
TUESDAY, APRIL 11, 1876.

Electra on grass
Sept 27. Bluish green
on the yellow spots
on the sides and
on top of first few
segments. On 3 &
4th segment a thin
blackish subdorsal
line.

brownish. Rostrum
spotted with black.

Sept 28. Same. Bluish, dark
tint on 4 & 11th. The black
is more or less replaced
by orange on both sides
sides are orange (yellow
when young) middle later

92
WEDNESDAY, APRIL 12, 1876.

Same as 91? but younger?
Brownish but yellow
on 2, 3, 4, 6, 7, 8, 9 & last
segments. Head black
2 tufts like 91.

Same as 91
band of black smooth
thin ground. Ground
& subdorsal black line of
mother, less distinct anteriorly.
Black spots on sides
first white line.
Much subject to variation
(see Oct 1)

Deltophysa albospina

93
THURSDAY, APRIL 13, 1876.

On bare-wood Sept 87
Black & head black
with thin white
hair along sides
a row of yellow crescent
and 2 rows of sub-
dorsal faint yellow
spots

Is it the same of
Acronycta oblongata
desculchida ~ 415?

94 Late 55 band cover whole
space V-VI median and is pale
ochraceous brown. Venter black
though less so than dorsum
mots i, ii white on central segment
other testaceous & pale ochraceous

86511 on 94
FRIDAY, APRIL 14, 1876.

On blackberry Sept 87. 333
General resemblance to
juvency. Black & head
black. Thin white hair
growing from warts, on
foot 3 & last 3 segment
brownish yellow. On
sides skin brownish
Another from a boy Johnson Highland
N.H. June 29 1895. Hd shiny black
no marks on 2. Ant Red velvet
black a broad diffuse faint
reddish ss stripe, including
the tarsus v & vi. Structure of
brunna a broad black diffuse
ant mostly pale hair about body
near white but brown red
i-ii on 3-6, 12. Spreads white

SATURDAY, APRIL 15, 1876.

Like unicorn on beech
 brown horn with green
 neck. Dark brown
 top of back white
 V near tail and
 on 3, 4, 5, 6 segs. Large
 white spots. Head
 with black lines
 forked hump on 1 & 2
 segs.

Also on willow with
 large hump

(say "double humped")
 Hump on 1 & 2 pointed,
 2 humps on 8, double on
 on 11. Light on 7 (see 8 & 25)

(This description is rough)
Coccyzus biguttatus

SUNDAY, APRIL 16, 1876.

"Roots"

~~Catocala on lindens~~
 White in June 5, 1888
 Ash gray with many
 longitudinal rows of
 black points. Two black
 elevations on 10th segment
 Beneath yellowish
 green. Head gray
 with black marks
 & black spots on collar
 A row of little white
 "roots" along each side
 below, where the colors
 meet.

Catocala crogana

MONDAY, APRIL 17, 1876.

On elm June 1888
 Light green, humped
 on 11th segment
 yellow lateral and
 dorsal lines and
 one between the
 latter pointed upward
 where the hump comes.
 Also body spotted
 with yellow
 Oct July 18, 1888

Pyrophiola pyramoides

TUESDAY, APRIL 18, 1876.

Epantheria scribneri
 eggs laid June 26, 1888
 round green and rough
 (Egg body)

WEDNESDAY, APRIL 19, 1876.

On black oak July 28, 1888
 Light green, darker
 lateral stripe. Small
 Head black. Molt same
 head yellow. Also dorsal
 stripe. Molt same. Head &
 hump on 11th seg. Light orange
 lateral stripe. Blackish in
 front & behind. Black
 spots on last segment.
 Hind feet not used
 Molt color light yellow
 black band at sides. a
 lateral and dorsal black
 line. tending to hump
 last segment marked
 with ^{broken} 5 black stripes

THURSDAY, APRIL 20, 1876.

Head and hump bright
 orange.
 Molt same. Head
 and hump traces of two
 more lateral black lines
 below & above the bluish
 space. These are slight
 on previous molt. Black
 spot on 4, 5 segs below behind
 abd. legs in line. Also
 on other segments, particularly
 the last. Also bluish on
 back each side of dorsal
 line. Molt
 Same to mature larva
 See BB 76
 Edema

FRIDAY, APRIL 21, 1876.

Egg of *Euplexia lucipara*.
Nearly spherical, flattened
at base marked with about
25 longitudinal ribs and
numerous transverse ridges
the former somewhat irregular
resulting to a depression at top.
Color whitish with a
circle around the center and
a spot on top of purplish
brown, these marks more
or less confluent. Aug. 1887
Length about .5 mm.

Larva white with black
spots from each which
arises a horn. Head legs
and cervical spot. Black

See Oct 27

SATURDAY, APRIL 22, 1876.

They eat their egg shells.
It walks like a hopper
leaving only 10 legs. Hatched
Aug. 11. Remain stretched out
on the back of the leaf.

1st moult Aug. 16. Semitransparent
whitish with black dots
faint as before. Head whitish
mouth parts black.

2nd moult Aug 20. Same.

3rd moult Aug 25. Whitish, black
lateral band, with trace of
subdorsal on hind legs.
Black villiferous dots.

4th moult Sept 1. Same. Lateral
band blackish above. 6 subdorsal
white, 3 dorsal pattern of

5th moult Sept. does not walk like
hopper. Semitransparent, marks

Sept 1 per leaf. color of larva not observed.

2nd moult. Black dots. Black dots. Black dots.

SUNDAY, APRIL 23, 1876.

Egg of *Tarachea erastroides*
 conical, flat at bottom
 marked by 14 longitudinal
 ribs, alternate one
 slightly project at top
 the others not quite
 reaching, and many
 transverse ridges only
 slightly elevated.
 Color uniform green
 width .25 mm length .35 mm
 Aug. 1888.

Hatched Larva furnished with
 16 legs like a geometrid
 green, elevated around
 each segment, then
 brownish. Head, covered

MONDAY, APRIL 24, 1876.

shield and prolegs black.
 Hatched Aug 11.

Sept 26
 1888

TUESDAY, APRIL 25, 1876.

Egg of *Angerona crocatoria*.
 whitish elliptical
 flattened above & below.
 Color green becoming
 red. Length about .6 mm.
 Aug 1888

Heterodana. Whitish green
 with 2 subdorsal black
 stripes. Head: cervical
 shield pale orange. Legs
 also black stripes beneath.

Chama whitish green
 with 2 subdorsal
 and one stripe below
 reddish brown. Head
 conspicuous with body
 brown & pale whitish

WEDNESDAY, APRIL 26, 1876.

green with two lateral
 reddish brown lines contin-
 uing with the head, and
 a band beneath.

(Really same as before)

Spout same. Back
 dark whitish green.

beneath paler green
 stripes reddish brown
 also one on each side of

head. A pair darker
 green dorsal line

Small Back pale

little dorsal line

Below pale, a darker band

in the middle. Head concolorous

Hibernata.

THURSDAY, APRIL 27, 1876.

About to "cove" in grass
 Aug 1887. Black shaded
 with reddish at sides
 being a faint lateral
 line and the
 sub dorsal showing
 only on last 3 or 4
 segments. Head black
 spinules white,
 tufts of black rather
 short hairs from warts
 8 to a ring.

Pupa (on "cove") cylindrical
 tapering abruptly posteriorly
 smooth closely granulated
 wing cases finely encased
 acuminate short, conical,

FRIDAY, APRIL 28, 1876.

of the same slope? as
 the last. abd. segs. color
 dark reddish brown,
 not shiny. "Cove" quite
 tough, composed of silk
 into which are interwoven
 bits of grass stems etc.

Apateles noctuigena

Described by Thaxter

Another specimen (H. H. H.)
 July 10 1895. Also about to
 "cove" in road. "Lateral line" is
 subdorsal. Fine hair mixed
 in the hairs from i and ii (scales)

SATURDAY, APRIL 29, 1876.

On poplar Aug 1888
Light green with
2 subdorsal yellowish
stripes and trace of
lateral line of fine
green segments.
Rests flat on back
of pupa. Head
extended. Rostrum
tapers each way from
middle.

Elaphoglossa trilineata

ag. hatched & laid eggs in
over the eggs of 28. & they

104 A

2 colorless transparent eggs on back of pupa.
thremuloides Jefferson Highlands June 18 1895
flattened, less than hemispherical & diam
.35 high. shiny. Prim. & lat. striae through
but magnified. ($\frac{1}{2}$ inch) reticulation not
erately broad double edged & distinct but
flat. pentagonal - hexagonal, rounded or
divergent not very regular. rounded at
micropyle but not much smaller except
flattened Hatched June 22 1st pale. thorax tinged
body greenish, no wings, flattened, anal feet slightly
normal, all used. Setae fine, pale. (tail 1/8 and .3)

104 A

2 colorless transparent eggs on back of Pip.
tremuloides Jefferson Highlands June 18 1895
Flattened, less than hemispherical .8 diam
.35 high. Shiny. Grain of leaf shows through
but magnified. ($\frac{1}{2}$ inch) Reticulation mod-
erately broad double edged & distinct but
flat. pentagonal-hexagonal, rounded or
elongate, not very regular, rounded at
micropyle but not much smaller, apex
flattened Hatched June 22 Hd pale tobacco tinged
body greenish, no oenites. flattened, anal feet sparsely
normal, as used. Setae fine, pale, stiff (1/8 hd. 3)

slightly swollen at top, normal if sty part (no
vi seen) 3 on leg plate, the middle one long
the other short. Hd cordate, mouth brown, eye
black. 10 d setae perfectly normal. 10 d short
pale; 2 off each, 3-4 with i & ii setae. present
Molt June 29 Hd. 6 Pale green, 6 d a little reddish
hairs a greenish red line. Later more distinct
anal fold spreading. Body cylindrical, venter
folded.

CPD

SATURDAY, APRIL 29, 1876.

at

On paper Aug 1888
Light green with
2 subdorsal yellowish
stripes and trace of
lateral line of first
seven segments

Rests flat on back
of leaf with head
extended. Prolegs
taper each way from
middle.

Gluphisia trilineata

ag. hatched & laid eggs all
over the cover of 28. They

SUNDAY, APRIL 30, 1876.

were like the larva of a
sphere, flat below, outline
from above circular. Color
pale yellowish green, very
minutely & closely punctured
Segments about 9 mm ^{incl. 1st}
^{abd. rather very dark green}
Pupa Pithy black, flattened
on the ventral side, dorsum
evenly rounded. Finely punctured
Segs. closely appressed, leaving
an room for pupal motion
Cremaster none, anal seg.
evenly rounded. Pupate Fall
Length 10 mm. diam 4.5 mm
when cases creased.

CPD
at

(see Dec 3)

MONDAY, MAY 1, 1876.

- Notodonts on white oak
Aug 1888. Small, pale
1 brownish yellow. Head
lump on 4th, line from
head to lump and last
seg. more distinctly brown.
Last feet ^{are apt to be} used in walking
(Egg globular & smooth,
body uniform green)
- 2 Small yellowish. Hump
on 4th & 5th brownish.
Head marked with 2
brown bands. Semi-
obscure dorsal line.
Head slightly notched
on top, last feet elevated
3 most. Sides of 1, 2, 3 and

also on white birch common.
~~Notodonts~~
TUESDAY, MAY 2, 1876.

- top of 10, 11, 12 dark green
reddish brown. Hump on
4 and 14. Black shades on
sides on 4, 6 and on back
on 7, 8, 9. Head brown with
4 confluent round whitish
spots in front. Mouth part
and notches on side also
whitish. White spot on
side of body on 10 seg.
- 4 Small larva. Green extremely
over 8 & 9 including brown space
oval ^{not on 12} black shades on sides
4, 5 & 6 and on top of 7. Semi-
white spots on sides of 10.
- 5 Last moult same [see Oct 22]
Janassa lignicola

WEDNESDAY, MAY 3, 1876.

Zolye on oak Aug 1888
with lateral projection
around with thin horns
Color brownish marked
with whitish in three
spots on the back and
a dorsal black line
whitish on sides and beneath
Head brown marked
with white at the eyes

THURSDAY, MAY 4, 1876.

FRIDAY, MAY 5, 1876.

Egg on clover Aug 1888
 Round, flattened above
 and below and smooth
 Color reddish, more so above
 diameter about .7 mm
 Hatched larva yellowish
 streaked irregularly,
 dorsal indistinctly with red
 on the sides each marked
 on 10, 11 and all around 4th
 Head yellowish marked and
 black hair thin, more
 bristly on 5, 6 & 7. Last feet
 not used. Hatched Aug 11. L. 3.5 mm
 moult Aug 21. Larva
 11th several interrupted
 lateral brownish lines

SATURDAY, MAY 6, 1876.

On 4th segment two brown
 elevated spots. Head
 orange, last feet brown
 the brown spots on 4th seg.
 2nd moult Aug 25. Larva all at 5th segment
 color violet with
 lateral and wide dorsal
 yellow stripes, the latter
 with a black dorsal line.
 the dorsal only to 10th seg.
 3rd moult Aug 25. Larva all at 5th segment
 color yellowish with black
 dorsal line and black spots on base
 of legs. 2 black spots on 4th
 and one on 11th. Last feet black
 head orange. Last seg marked
 black posteriorly 3rd moult Aug 28
 Larva, dorsal stripe in dorsal
 yellow. 4th moult Aug 31 (see Oct 20)

SUNDAY, MAY 7, 1876.

young larvae on white
 baked Aug 1888 about 5 mm
 long. Last pair not used.
 Color yellow with lateral
 dorsal black stripes.
 Head cervical shield
 abdominal legs and
 last segment shiny black.
 Color ^{thick} yellow with 4
 lateral broad ^{pale} yellow
 stripes. Abdomen as
 above. Molt same
 three stripes beneath.
 Molt same: stripes
 broad, white. Head
 cervical shield and
 anal plate black.

MONDAY, MAY 8, 1876.

Molt same: stripes
 not as wide but still
 as wide as the intervening
 spaces. Cervical shield
 and legs dull reddish
 yellow. Head and
 anal plate black.

Datana contracta

Some specimens have
 stripes narrower than
 intervening spaces, or
 even the upper ones partly
 wanting. Color pale
 yellow to almost white

109
TUESDAY, MAY 9, 1876.

Datana
Aristodonta on *Linum*
Aug 1887. Young larva
yellowish marked
with brown dorsally
and around thoracic
segments, also two reddish
brown lines. Head and
cervical shield black.
Last feet not used,
marked with black
moult same Aug 17. Reddish
brown with 4 lateral
yellowish lines on
each side, narrower
than the interstices
apart. Yellow line
below. Head cervical

110
WEDNESDAY, MAY 10, 1876.

Datana
Aristodonta on *Linum*
Aug 1887. Red more distinct
around thoracic segments
and dorsally on 6, 7, 8, 9, 10.
Moult Aug 23. Same
more even uniform reddish
Moult Aug 31. Black:
stripes yellow, fine.
Head, cervical shield
& anal plate black.
Rather long white hair
Aug 6 90 Hd 14.5 mm Black strong
punctured. 6 spots & anal plate
just outward & body black
& lateral & 3 ventral narrow
pale yellow lines, not confluent
post bases of legs & spots on legs
legs brownish red. Hair white
rather abundant. (See 08295)
Datana Argyraea

133
d/d 2/26/90 110

THURSDAY, MAY 11, 1876.

dogwood
an apple

"Double story" with hazel
brick
thick
Young larva on
any bet. Reddish mixed
white green on 1, 2, 3 segment
in a patch, a line down
back and spot on 10th
Head red. On 1, 4, 5, 6, 7, 8
9, 11, 12 legs a pair of black
horns. Those on 12th three
pronged, the others with
a knob in center and
spine on the end, each
arising from a black
shiny spot. Legs blackish
Last pair not used

d/d June 22 1890 on birch.

Hol. depressed at vertex

FRIDAY, MAY 12, 1876.

dark wine red. Body
cylindrical, smooth and
shiny not annulated
anteriorly, feet normal
the anal pair elevated
rather long. the claspers
apparently aborted. Central
spot large bearing a
pair of horns like another
three branched, diverging
with a shorter spine
near the base all dark
blackish brown. On joint
5-10, 12 & 13 from elevated
shiny bases a pair of
similar but slender
horns not branched (hor?)

reddish ^{below} cer. sh.
SATURDAY, MAY 13, 1876.

Antonia Blot. Aug 1884.
Egg round white with a
depression on top. Wide
thin, height .5 mm. on
[edge of leaf] ?

Young larva dark reddish
stripes broad and white
much broader than the
intervening spaces. Head
& cervical shield orange
thoracic feet, outside of
abdominal legs, & anal
plate black. Few white
hairs.

Before last moult body black
or reddish black, stripes

~~Antonia Blot. Aug 1884.~~

anal. black ^{red-brown}
SUNDAY, MAY 14, 1876.

wide white (in one spec.
bright yellow) Head, cervical
shield, abdominal legs
2 spots on 1, 2, 3, 4, 5, 10, 11 legs
beneath & anal plate
dark orange red. Tho. feet
black. Very little hair. ^{or patchy} ^{blackish}
intersegmental, ^{white} (or yellow)
line beneath. 2 interrupted legs.

Mature larva Body black.
stripes broken into a series
of irregularly square white
spots, the three upper stripes
on each side having the
spots ² on each segment
situated near the edges.
The lower stripes have

Young as yellow to

factory ventral

MONDAY, MAY 15, 1876.

one spot below the spiracle
on each segment and
another longer one
between the rings, there
being mainly alternate
with the spots of the
above stripes. Head, coxae
shield, anal plates
all legs (except thoracic)
with dark bases and
spots on 4, 5, 10, 11 segments
dark orange red.
Stripes below represented
by a few white dots.
Thin white hairs. Length 6 mm.
Food plant. *Andromeda ligustrina*
Saturnia major G&P

TUESDAY, MAY 16, 1876.

On poplar Aug '88. Shape
like BB114, green with
2 subdorsal yellow lines
On 2, 3, 6, 7, 8, 9, 10, 11, 12
a reddish brown patch
between the lines with
some yellow. Between
on 1 & 5 segs. 2 brown dots
2 black marks on head

= 104

Stropharia trilineata

WEDNESDAY, MAY 17, 1876.

On poplar tree 1876
 Light green with
 transverse rows of
 yellow spots
 ie. 1st row ii, 1st below 3, 1st below 11
 segments. A line of
 seg. a yellow dorsal (seta 1A)
 and on top. On 4, 8
 a 11 seg. a transverse
 curved yellow band
 or brown narrowly
 red line before
 half way down the body
 feet small and
 as a yellow line on square
 cut post edge of leg
 1 seg. has two dark
 brown spots before each
 curved band

Pupa, full. Abol. segs.

Setae simple No 23 hairs. The color
 of dorsal yellow spots are of spots
 and 2 feet smaller

transverse i-vi 52 segs
 i-vi 52 segs
 i-vi 52 segs

113A
 but 5 or 6 on leg plate. 2 ant feet small
 spots with single seta, none additional
 like 113 but no red except on feet on 3
 last July 7 Hl. 3.2 like 113

transverse

THURSDAY, MAY 18, 1876.

113A
 a few of 1 Natural
 Curved
 Color green
 Setae perfectly single
 also a curved
 2 ant pair of feet small. There is a
 yellowish brown on 12. There is a
 yellow spot on 12. There is a
 a few spurs on ant 3. There are
 but they bear no setae. (ant primary)
 setae beside primary. (ant 3 enlarged)
 narrow, notched.

contracted (not oppressed for
 other shrunken). Also a
 as very faint a paper
 rounded obtusely at
 no notch at anal end it.
 the ends about white
 Ant. portion. Body
 hind end. Body shagreened
 granulated, but seems smooth
 whole of very coarse
 tubled coarsely, color
 like brown red. Cremaster
 conical projection tipped
 at a point. Length 13 mm
 over 10 mm. rather thick
 heavy. (See Aug 24)

Raphia frater

molt June 29 Hl 2.2 no 21 hair
 ant 5 or 6 on leg plate. 2 ant feet small
 spots with single seta, none additional
 like 113 but no red except on pieces on 3
 molt July 7 Hl 3.2 like 113

Setae single. No 21 hairs. The setae
 distinct yellow spots are on spots
 ant 2 feet smaller & distinct

Rupa. Fall. abd. segs.

FRIDAY, MAY 19, 1876.

Inkstand on white oak
Aug 188. Green with
dorsal stripe of reddish
brown edged with
yellow. Dorsal hump
on its summit, brown,
yellow at base.

Slanting lateral yellow
line and row of red
spots edged with yellow
before operacles.

Head green with two
side bands meeting on
top of snout brownish
with yellow edge outer
having a tooth internally
Tails green with

SATURDAY, MAY 20, 1876.

reddish tinged, long.
Mount same. Tails quite

Egg on white oak leaf put in
L. S. July 18 1896

do flattened, less than
hemispherical, lustrous yellow
not shiny, translucent for ex-
terior, greenish, ground glass like
height .6 mm. Reticulate
convoluted, 6-angled, narrow, and
regular space the angles seem
marked by distinct pores.
About to hatch July 21
evidently = oak fork tail
H. maritima

(See back, Ann Nat v 18 p 1044)

Egg on white oak leaf
23. July 18 1896

flattened, less than
hemispherical, lustrous yet
not shiny, translucent but
greenish, ground glass like
D 1.4 height .6 mm. Reticulate
convoluted, 6-angled, uneven,
regular dense the angles
marked by distinct pores.

About to hatch July 21
evidently = oak fork tail
H. varithesia

2 shippers
and 2 little
Halisidota tess
on black scrub oak

FRIDAY, MAY 19, 1876.

Incubated on white oak
 Aug 188. Green with
 dorsal stripe of reddish
 brown edged with
 yellow. On the hump
 a lat segment, brown,
 yellow at base.

Flantery lateral yellow
 line and row of red
 spots edged with yellow
 before spiracles.

Head green with two
 side bands meeting on
 top of mottled brownish
 with yellow edge posterior
 having a tooth internally
 Tails green with

SATURDAY, MAY 20, 1876.

Incubated Aug 18, long.
 Mount same. Tails quite
 short, hardly more than
 long hind feet. The
 dorsal stripe is not of even
 width being slightly ex-
 panded on nearly every
 segment, contracting again
 between them. Larva seen
 to eat but little and with
 effort. (Incubated 188 and walked
 all over it and it died)

Heterocampa marthesia
 (See back, Aug. Nat. v. 18 p. 1044)

115
SUNDAY, MAY 21, 1876.

Larva on black oak
and chestnut Aug 31,
1888. Look like *madata*.
Color green with
whitish bloom
subdorsal narrow
yellow lines, anal
plate with yellow
border. Head smooth
green.
= 25

41 On a woman's dress Jefferson Hybrids
N.H. Aug 7 1895 ^(2.50) Hd 3 $\pm$ Same, a
few red hairs from; whole length
especially 6 & 7. No black marks
on body except on joint 2.
A dead larva found on yellow birch

(41 cont)
MONDAY, MAY 22, 1876.

preceded by an oblique black
patch, strongly suggesting a
hatched *Tachina* egg!
Warts large, iv absent, hair
rather black, not long, not
obscuring body but quite abun-
dant, white from 2 on
a light red pencil; from
upper half of 5 and 12
a red tuft, single dorsal
warts white. a few longer
white hairs from 13.
a faint d. and lateral
dorsal stripe not formed
pigment but more trans-
parent than other parts
i, ii on 12 form a trapezoid

Shed Hd black except sutures. Peric. 3 black; tufts 5 red, 12 red & black sides of thorax (brown)

11493
Cut Wd
May 6 1895
No 2 hairs. *madata*

116
TUESDAY, MAY 23, 1876.

Don't poplar Nits to Sept 88
Shed at n. s. Last
feet small. Skin not
humped on 5 and 6 segs
holes dark purple, or
whitish line each side
of dorsal stripe, and
oblique line, white
line on each segment
white lateral line
humps shaded reddish
1006 with segs shaded
with a yellowish line
Head gray with many
dark spots, or whitish
line on each side
Not done to Strigula

117
WEDNESDAY, MAY 24, 1876.

128/90
5/22/90
vaccinium strigula
Apatela? on ~~Saxifraga~~ Sept 88
Light yellowish green, a
purple brown dorsal stripe
edged with reddish yellow
interrupted on 5th seg. and
branching on 7, 8, 9 & 10 to
include a reddish green
patch. Cervical divided
green with black line.
Head purplish, darker on
top & hind side. Body
with low thin black line
spinal black.
vaccinium strigula
In blueberry & ~~Saxifraga~~
Becomes red on preparing to
pupate. In cocoon of thread etc
Apatela tritona Hübn

THURSDAY, MAY 25, 1876.

Parorgyptis on living leaf
Body & head black.

Thin yellowish brown
hair from warts, trans-
verse to costa seg. ^{on seg 1} On
seg 2nd, two black penicils
on segs 4, & 11, one
black tuft composed
of two tufts, close together.

* should be seg 1 = joint 2

Choraden *divident* *in* *the*
silk Ballant 23 July 21 1876
not in a house but trying
to hide and spinning soon.
Hd yellow & black band
over eyes & another across
at apex of Δ , sutures γ & δ also
black, w. $1.5 \pm$ mm. Body
whitish, broadly gray & with
a central d. stripe, a narrow
sub & under lateral, all
faint. Hair from wart, short
i, ii, long here part of iii and
s-v. Don't see iv. Spine leaves together
Shed July 27 Hd $2.5 \pm$ black, a
yellow band across Δ trisected
by the black sutures, Body all
pale whitish with long white
hair from warts. In house
1 2 leaves webbed together.
Shed Aug 1 Hd $2.5 \pm$ same (sh hd
1.9 mm) Shed Dec 7 Hd 3.5 (sh hd 2.5)

Charadrius dominicus in the

sake Bellport 23 July 21 1896

not in a house but trying
to hide and springing run.

Hd yellow & black band
over eyes & another across
at apex of Δ , Antennae 4Δ also
black, w. $1.5 \pm$ mm. Body
whitish, broadly gray & with
a central d. stripe, a narrow
sub & under lateral, all
faint. Hair from warts, short
i-ii, long lower part of iii and
s-v. Dorsal acc iv. Spur leaves together

Shed July 27 Hd $2.5 \pm$ black, a
yellow band across Δ trisected
by the black sutures, Body all
pale whitish with long white
hairs from warts. In house
1 2 leaves webbed together.

Shed Aug 1 Hd $2.5 \pm$ same (sh hd
 1.9 mm) Shed Aug 7 Hd 3.5 (sh hd 2.5)

same shed dry 14 4.5 (the
 rd 3.5) same the white
 body has a faint dusky
 sd line below it.

Calc.

1.5		III	.63
1.9		IV	.83
2.5		V	1.10
3.5	3	VI	1.45
4.5	4.5	VII	1.90
			2.50
			3.42
			4.50

THURSDAY, MAY 25, 1876.

~~Parorgyia? on living leaf~~
 Body & head black.

This yellowish brown
 hair from warts, trans-
 verse ^{erect} on
 seg 2nd, two black penes
 seg 4, & 11, one
 black tuft, composed
 of two tufts, close together

* Should be seg 1 = joint 2

FRIDAY, MAY 26, 1876.

Concealed in oak leaves
 Sept 1888. Body white,
 semitransparent, the
 pulsation of blood visible
 Head black and shiny
 whitish on top and sides
 and marked with
 light yellow in a transverse
 band above the mouth
 divided into three spots
 by two narrow black lines
 following the joining of
 the head parts. The
 two outward spots are
 triangular, the central
 one crescent upwardly.
 Body covered by thin

SATURDAY, MAY 27, 1876.

long white hairs
10 mm or more, arising
in little tufts from
the apex. Four black
hairs from the sides
segmented, slightly forward

Another on Quercus macrocarpa
Plattsburgh, N.Y. Aug. 1894.
Acronycta? in house of white
silk made partly opaque
with flocculent white silk,
slightly curving over apex
of leaf on back side. Hd
rounded, shiny light yellow-
ish mottled with black
W. 3 mm. (see Aug 30)

120

SUNDAY, MAY 28, 1876.

Ceilonodora unicornis on
wild cherry, Sept. 1884.
Horn double pointed on 4th
and short on on 11th
Body reddish brown
mottled blackish on the
back and fine lateral
line. Sides on 2 & 3rd
seg. green, yellow above
On 9 & 10 a yellow V
jointed forward. Head
nearly uniform brown.

11/27/90

MONDAY, MAY 29, 1876.

Limacodes on wild cherry
over to BB 12. Body with
4 longitudinal slight
elevation or ridges ^{sd & super sd} the
ten upper a little darker
green than the ground
color, whitish ventrally.
Body terminally in a
short tail, color pale
whitish green.

Pachardina geminata
(aut. Packard)

28th = 256, = BB 12 dark?

TUESDAY, MAY 30, 1876.

Eggs supposed to be of *Arctia*
docta, var. *antholia*. ^{May 1889}
From Pasadena. Pale whitish
yellow; subconical, the
apex rounded, the base
much flattened and
the broadest part. Surface
smooth so far as could
see and shiny.

WEDNESDAY, MAY 31, 1876.

E. imperialis. Pupa.
 black, the body coarsely
 punctured, bet. segs. finely
 creased and dark brown.
 the posterior edges of the segs
 more or less furnished with
 pointed projection. Wing
 cases with rows of points
 following the principal
 veins. Back of thorax a
 large wrinkled elevation.
 cremaster a large thick
 spine, wrinkled below.
 coarsely granulated above.
 5mm long 2mm across 1.5mm
 thick only very little tapering
 ending in 2 points at the
 outer edges, the depression
 but there but slight

THURSDAY, JUNE 1, 1876.

Pupa *Batanes duxellii*
 Similar to *D. ministri*
 but larger. Black
 wing cases wrinkled
 body segments punctured
 cremaster two, very
 short & blunt, with each
 3 spines (called the crema-
 to by Mr. Bentenmiller)
 the outer ones sometimes
 very short, in a line
 in the lateral diameter
 of the body.

(In *D. ministri* the
 cremasters have only
 2 divergent spines)

FRIDAY, JUNE 2, 1876.

Lycaena? on *V. acerifolium*
 May 30, 1879. 7 mm. long
 3 mm wide, rather flattened
 segments 4-11 with black
 up dorsally. Head small
 retractile & brown shiny.
 Light green, dorsal folds
 paler, a brown dorsal
 stripe. Body closely covered
 with minute white spots
 and minute pile whitish.
 Hair longer before and
 behind. 11th seg 5 & 6
 is a darker shading
 concolorous with dorsal
 shade. D. shade not
 extending beyond the dorsal

SATURDAY, JUNE 3, 1876.

fold. Segs. also folded
 laterally below spiracles.
Pupa June 4 On back of leaf
 by tail and girdle.
 Dorsal outline flat below,
 dorsum of abdomen arched
 depressed behind thorax which
 is again arched & narrower
 than abdomen. Color brown
 with dark dorsal line
 & 4 dark subdorsal streaks
 on abdomen, 2 behind
 thorax & 2 posteriorly.

SUNDAY, JUNE 4, 1876.

Mandibles brown

On grass June 1, 1876.
 Grass green, head greenish
 testaceous with a wedge shaped
^{dark} spot on each side ~~the head~~
 extending from above the
 middle ^{upper} downward. ^{over the} eyes
 A broad white ^{stigmatal} ~~lateral~~
 line, edged above with
 green darker than ground
 color, a narrow subdorsal
 & dorsal white line the
 latter edged with
 darker green. Body smooth,
 a few whitish hairs each
 surrounded by a minute
 whitish ring. Top of joint 12
 cervical plate, concolorous

MONDAY, JUNE 5, 1876.

with the head. Legs
 green, thoracic feet
 tinged with brownish.

TUESDAY, JUNE 6, 1876.

A. octomaculata from Bush.
 Jun 12, 1889. Body cylindrical.
 When at rest hunched up.
 at 5 & 12 ^{12 permanent} eggs. Head ^{exceptional}
 orange with ^{about} 30 black
 spots with white hair
 indistinctly mottled
 with brownish. Body
 white with many fine
 transverse dark brown
 lines 5 to 8 on each
 segment. On the middle
 of each seg ^{at 2, 3, 4, 13} is a transverse
 orange band bright on
 the side & often obsolete
 dorsally. Sometimes
 reflecting 1 or more of the

WEDNESDAY, JUNE 7, 1876.

~~brown~~
 black lines in which are
 situated 2 rows of alter-
 nating black spots inter-
 rupting the brown lines
 & furnished each with a
 white hair. A ~~signate~~
 subventral row of white
 spots concolorous with the
 ground color, of varying
 size, on ~~but~~ joints 11 & 12
 much largest. Venter
 bluish white shaded
 with dark brown the nape
 bands continued, spotted
 with black. Base of legs
 orange with a black spot.
 legs black outwardly.

THURSDAY, JUNE 8, 1876.

deeper dirty brown
The larva appears
bluish instead of white
on account of the ^{appearance} of the black line
into the white.
On woodbines.

128
FRIDAY, JUNE 9, 1876.

Fortified(?) on the plum
seeds of parent at
Plattsburgh & Rhinebeck
call over June 20, 1889
Head a dark circular
spot shining black.
Body citrine yellow
with a row of black
filipinos dots per seg.
doubled dorsally by
2 more spots per seg.
(Don't not very careful)

SATURDAY, JUNE 10, 1876

Apuleia? m. elen. June 29, '89
 Head dark markings and
 with blackish shading
 on large pale mark A
 above the mouth. Body
 pale violet with a
 broad black dorsal
 stripe undulating towards
 the head and ending
 on joint 12 in a large
 elevated circular
 black spot bearing
 black warts furnished
 a few tiny hairs.
 On each joint a row of
 cream colored warts
 furnished a few tiny

SUNDAY, JUNE 11, 1876.

hairs. Two of them are
 situated in the black
 dorsal band & the band
 throws out a spine on each
 side half encircling &
 more (on joint 3-11)
 A dorsal row of red
 spots, 2 per seg! A faint
 yellowish subdorsal
 line. Separated & ant-
 ventral spaces & venter
 duller colored than
 subdorsal space. Sides
 of the body furnished with
 white hairs. Spiculae
 black. Length 25 mm
 (See No 389 for more)

MONDAY, JUNE 12, 1876.

Hudson? larva found
 R. found in the cellar
 July 7, 1889. Head pale
 brown with black
 reticulation most
 distinct in the middle
 of the lobes. Body
 pale livid with a
 pinkish tinge, im-
 maculate beneath.
 Dorsum & sides covered
 irregularly with dirty
 brown marks & ^{diffuse} retic-
 ulation most distinct
 centrally on the segments.
 Cervical spot on a
 brown square.

TUESDAY, JUNE 13, 1876.

found but posteriorly
 it is angularly excavate
 & from the middle
 starts an indistinct
 the obsolete dorsal line
 Spinach black, the
 feet short pale brown

BB6 cont.

WEDNESDAY, JUNE 14, 1876.

On V. Stettinensis at
Water Co. July 30, 1890.
Hd dull whitish, ~~mouth~~
white, jaws & eyes black.
W 1.3 Body without with
black dorsal line
somewhat interrupted
in seg. sutures. Long
glabrous light yellow
hair from skin, rather
thinner centrally.
W 1.3 H 3 Hd rounded
dull white W 1.6 mm
Jaws & eyes black. Body
white & interrupted
black dorsal line
Long abundant white

C. 57 7 .8 1.0 1.3 1.6 2.1 2.6 3.2
7 - - - 1.3 1.6 2.1 2.6 3.2

THURSDAY, JUNE 15, 1876.

fluffy hair like cotton
& a thin pencil of black
hair from 12 dorsal.
Ventr. somewhat greenish
W 1.3 H 7 Hd same W 2.1 mm
Body white, dorsal line
more continuous. Hair
dull white, a few black
hairs represent pencil
on 12. Length 20 mm
W 1.3 H 13 Hd W 2.6 mm Body
same Pencil on 12 thin, black
tipped with white. A large
black ~~spot~~ ^{large round} on ventr. of
5, 6 & 11 (none on 12). D. line
black, 6-12 broken at seg
sutures. Hair very fluffy white
the feet blackish.

FRIDAY, JUNE 16, 1876. *Wed 3.2m*

2. Molt 4-8-25 - red white & tan.
 2. Black band over the
below eyes. the anterior ^{3. ONE}
black & the black
black white, a dorsal & lateral
series of black spots. Hair flying
white, black dorsal pencil
from 3, 4 & 12, shorter ones
not reaching above other band
on 6-11. The feet black
and blackish, the claspings
red, the lateral spots are
inverted cordate, the dorsal
almost a band. Ears shed
skin from mid all. Vents
entirely black.
 (Some come yellow with yellow
 from. Perit pale brown
 tipped with black.)

Diary of Lepidoptera 1882

SATURDAY, JUNE 17, 1876. 1542

Cynobasis adalenta
maede chrysalis

{ June 17 - October 6 }
1882

Super cylindrical, the apex flanges
than abdomen even. Abdomen
abd gently tapering. 3 anten. just
to apex capable of motion. At
each abd seg (not just to the very end
of the ant. but ^{on} ^{edge} ^{are} ^{to} ^{clear}
the last just to last ^{movable} seg)
contain a row of punctation
depressions which recalls the ant. 1
retrosculpture. Cereata
short, thick, conical with very many
short bristles or aborted spines.
Paper very shiny, malagony red, the
cassid. dorsal of abd. ^{thick}
Ant very slightly L. 20, W 6.7 greater

SUNDAY, JUNE 18, 1876.

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MONDAY, JUNE 19, 1876.

3 more C. Mahanta
made chrysalia.

[Faint, illegible handwriting throughout the page]

TUESDAY, JUNE 20, 1876.

Cynthia Atalanta
made chrysalis.
It was grey with
white spines, instead
of black. (fly in lin Aug. 4)

WEDNESDAY, JUNE 21, 1876.

THURSDAY, JUNE 22, 1876.

Cynthera stalaris m. f.
made his chrysalis
in the night.

FRIDAY, JUNE 23, 1876.

The chrysalis of Cynthera stalaris m. f.
was found in the night.
The chrysalis was found in the night.
The chrysalis was found in the night.
The chrysalis was found in the night.

153
SATURDAY, JUNE 24, 1876. 82

1 *Cynthia atalanta* chry.
Got lot of little cater-
pillars on elm leaf
Actia Texensis I think.
Actia virginica laid
140 eggs in *Actia* box.

154
SUNDAY, JUNE 25, 1876. 82

1 *Cynthia atalanta* chry.
Got 3 chrysalids of
Vanessa antiopa.
1 cat. off *poplar*.

MONDAY, JUNE 26, 1876. 82

Got 2 chrysallides & 1
cat. of *V. antipa*.
Strophodryocampa
came out. (*Pezomachus*)

TUESDAY, JUNE 27, 1876.

Cynthia afalamba
came out, no 1.
Bryocampa senaria
came out.
Got bunch caterpillars

133
WEDNESDAY, JUNE 28, 1876. 82

Eggs of *Arctia Virginia*
hatched.

One *Arctia* *laesopis* out
Cynthia abscissa no 2
out, $9\frac{1}{2}$ days.

Ed. caterpillars on
wild morning glory,
described in other books.

134
THURSDAY, JUNE 29, 1876.

FRIDAY, JUNE 30, 1876.

[Faint, illegible handwriting in cursive script, likely bleed-through from the reverse side.]

SATURDAY, JULY 1, 1876.

[Faint, illegible handwriting in cursive script, likely bleed-through from the reverse side.]

SUNDAY, JULY 2, 1876.

Got little failed
caterpillar on poplar.
Got also a number
of eggs on the back
of a poplar leaf.
Babe (*Lynethia atalanti*)
prepared a house
for transformations.

MONDAY, JULY 3, 1876.

^{was}
Babe, ^{him} of ^{gr} 6 a. m.

192

TUESDAY, JULY 4, 1876. 82

Babe chrysalis.
 Cyrtus abalanda
 no 7 out. Let go.

WEDNESDAY, JULY 5, 1876.

Tanessa Antiope out

THURSDAY, JULY 6, 1876.

Vanessa Antiope out.
Got Endorhina Zilyra
caterpillars at Will's.
Got some eggs on
a locust leaf.

FRIDAY, JULY 7, 1876.

Vanessa Antiope out
Deilephila lineata out.
Got 2 Banania Archippus
caterpillars across
the river.

196.
SATURDAY, JULY 8, 1876.

Locust leaf (July 6)
eggs hatched, little bug.
Got some eggs on
ash at black fence.
Got more Eudamus
Lityrus caterpillars.
Got Brown, speckled
with blackish cater-
pillar on Strawberry (box 26)

197.
SUNDAY, JULY 9, 1876.

Got elm caterpillars
and eggs.
Got Polyzommatus
Comyntas w tails.

198

MONDAY, JULY 10, 1876

Egg on milkweed
(Euchaetes Egle) hatched

199

TUESDAY, JULY 11, 1876.

Got *Polyommatus cornutus*
male & female H. Senatoria.
Hawaii *Archippus* shed
their skins for the 2nd
time since we got them.
The 6-legged yellow cat.
are nearly all chrysalids.
Got some small cats
on elm and ash.
Let most of the *A. texensis*⁹⁰

WEDNESDAY, JULY 12, 1876. 82

(BB77 cat) On elder Aug 37 87
 Hd beloved, black, a few
 hairs w. 1.8 mm body white
 with maculae. Hair thick
 but short, obscuring body
 turning brown tipped with
 black & white, scant
 subventrally. On 5, 7 & 12
 a black dorsal tuft
 higher than the rest of
 hair & in 8th space on
 dorsal from 5-13 there
 band in white. Molt Aug 7
 Hd beloved, smooth black
 with a few white hairs
 tubercles white w 2.4 mm

THURSDAY, JULY 13, 1876. 82

Got 2nd Papilio

Troilus on Sassafras.
 (A. A. A. A.)
 Larva cat on fern.

2 arches of figweed
 (not virginica morning)

Lysaceae, Miss Brown

1st woodbine cat. 3rd

[Alfya 8-maculata 38+]

Body black, spiracles white
 sup. stig, stig just a row
 stig. row of white orange
 Hair as before, the dorsal
 strongly tipped with
 white. Molt Aug 13 Hd as
 before, slightly curved

FRIDAY, JULY 14, 1876.

2 Feather winged
moths came out
Narcissus ochripennis
hanging up.

Lysacuse - Mrs. Liggins
and Woodbine cat. Epom.
(Shed hd 3.5)

W 3.2 mm Body black as
before, warts & hairs same
but tufts not little higher
than other hair which
is all tipped with white
molt July 20. Hd black &
shiny. Labium pale. A
V-shaped pale line on
suture of 10-segment. W 4.6

SATURDAY, JULY 15, 1876.

Feather winged moths
came out.

Furry yellow cat. came
out. Red bug with black spots

Body black, spinacles white
with black, hair shiny, of
uniform length & erect, a
white ridge on dorsal
line, no tufts, all long and
tipped with black & white.
A few long black ones from
each extremity.
Coco Sept 1

SUNDAY, JULY 16, 1876. 82

Both Hancin's *Precliffus*
 caterpillars are chrysalis.
 Both were as yesterday.

MONDAY, JULY 17, 1876. 82

TUESDAY, JULY 18, 1876. *82*

(*Capitula Arctia*
are elongated)

207

WEDNESDAY, JULY 19, 1876. *82*

Arctia Virginica 2 spec

THURSDAY, JULY 20, 1876. ~~12~~

~~Some~~
Papilio Asterias are
chrysalids)

FRIDAY, JULY 21, 1876. ~~52~~

~~Arctia Texor~~ spm.
~~A. caecata~~ spm.
(July 23)

SATURDAY, JULY 22, 1876.

Got 20 *Eudamus litigiosus*
caterpillars on vine.
Got 10 *Papilio pavonis*.
Got 1 *Papilio asterias*.
Got egg on *Sassafras*.

SUNDAY, JULY 23, 1876.

Met Mr. Lector and Mr.
Isabella Shum.
Several *P. asterias*
are chrysalids.
(Got 2 cats on woodbine,
Eudamus brata.
Got some *Euchaetes egle*.

210
MONDAY, JULY 24, 1876. 82

Opis Asterias chrysalis
Orgyia leucostigma
made cocoon.
He was from Niagara
falls.

211
TUESDAY, JULY 25, 1876. 82

Hamax Brechippus
came out.
O. leucostigma is a
chrysalis.

Black Spring Hunt
Lucy got is a chrysalis.
2 *A. Virginia* ^{made} cocoons.
Eggs on poplar ^(July 2) hatched
Got 1 pale green spring
striped obliquely with
white on the sides.
Got 1 like it yesterday
Henis brought 1 like it
damaged, the day before.
Got female *lesbia*
Philodice while laying
eggs. Brought home

212
WEDNESDAY, JULY 26, 1876.

Put 6 little caterpillars
of *Papilio Troilus*
back on the sunflower
and got 1 larger one.

Papilio Asterias

213
THURSDAY, JULY 27, 1876. 82

Lamachus Achilippus No 2
came out. Kid's spread out
green spring (2nd good 1)
entered the ground
I got him today on
the sand hill.
Got 1 *Papilio Troilus*.

made chrysalide.

214
FRIDAY, JULY 28, 1876. 82

Got 3rd good Green
Spring at Mrs. Asher's.
Butterfly net made.
Caught *Papilio Zurnus*
and ^{male} *Melitaea Pharo*

215
SATURDAY, JULY 29, 1876. 82

Went out for butterflies
with net made yesterday.
Caught several, among
which were *Argynnis*
Aphrodites, *Eudamus*
Cathylus and *Hippar-*
chia *Alpe*.

216
SUNDAY, JULY 30, 1876. 12

5 *Papilio Asterias* came
out.

6 caught 1 good *P. Turnus*.

(3:15 p.m. Let 2 male

P. Asterias (clipped). go.

(3:40 p.m. Let 1 male

P. Asterias (clipped). go.

Last *Asterias* became *Chrysalis*.

217
MONDAY, JULY 31, 1876. 12

Papilio Troilus chrysalis.

6 *P. Asterias* out (not good)

(6:30 p.m. Let 4 *P. Act. go*
(clipped) 3 male 1 female.

TUESDAY, AUGUST 1, 1876. 52

Got 1 *Eudamus Zityra* cat.
 " 1 *Green sphinx* grape
 3:20 p.m. 1 male PA (clipped)
Arctia Seabella (spun
 this year / came out
 6:45 p.m. 2 male PA (clipped)
 3 *Papilio Petrias* came out
 caught at the black
 fence 4 *P. Zeryne*, 2
Agrymnus Aphrodite &
 2 *Polychromatus banytas*
 Little got out 1 *Lumina* 4 *Aphro*
 Got 1 *Lophocampa caryae*
 Got green cat, spotted
 with black, large head
 holds up his hind
 feet, eats dietry

WEDNESDAY, AUGUST 2, 1876. 52

Got 2 par

8:30 a.m. 3 female PA (clipped)
 8:45 a.m. 1 male PA (clipped)
 9 a.m. 1 female PA (clipped)
 4 p.m. 2 male PA (clipped)
 Got 1 red *Phylampelus*
Belinon in the kitchen
 Got at the track *Arctia* Arge
 Got 1 cat. *Eudamus* *Exater*.
 2 cats like *Col. Pamphratix*
 without red spots on back
 Some eggs on woodline.
 7 *Papilio Petrias* came out

THURSDAY, AUGUST 3, 1876. 82

6 a.m. 2 male & 2 female
P. Asterias let go (clipped)
Got 1 *Orgyia Lineatigera*^{at}
2 p.m. 2 male P.A. (clipped)
Got across the river
1 *Lycaena Pennsylvanica*
with notch on wings
1 *Papilio* of a new kind
2 cats *Orgyia Lineatigera*
1 little green sphinx
10 *Papilio Asterias* came out
7:10 p.m. 1 female P.A. ^(with wings) clipped
Mother found a caterpillar
of a looper moth which
I think is *Caetropacha*
Americana

FRIDAY, AUGUST 4, 1876. 82

^(Yesterday)
8 a.m. 4 female P.A. clipped / let go
Orgyia Lineatigera out
2 *Chococampa pampinatus*^{sp}
2 *Archia Virginia* out
12 m. 2 female P.A. (1 clipped,
2 cats. of *Chococampa Pellucida*
p.m. 1 female P.A. (clipped)
6 female *Papilio Asterias*
came out. 1 not spread.

SATURDAY, AUGUST 5, 1876. 82

(yesterday)
 8:15 a.m. 2 female PA (clipped)
 Papilio Lreclus 2, chrysalised
 Lappet Caterpillar spun.
 1:30 p.m. let go 3 female
 & 1 male Papilio Pteris (clipped)
 Got 3 more cats. Papilio Lreclus
 4:15 p.m. 1 female PA (clipped)
 5 Papilio Asterias came out.
 Got 1 Vanessa Antiope cat

SUNDAY, AUGUST 6, 1876. 82

9:15 a.m. 1 female PA (clipped)
 Vanessa Antiope male clipped
 Orgyia Leucostigma 2 spun
 3:30 p.m. let go 1 female PA
 (clipped) not well spread out. ^(could not see)
 Got 1 chrysalis of female
 Orgyia Leucostigma ^(3rd)
 Got 1 cat. of Vanessa Antiope

MONDAY, AUGUST 7, 1896. 52

1 female P.A. (clipped)
 2 blue-crowned Parrots
 principally chrysoceros
 2 Actinidextora carried
 out, male & female
 Vanessa Antiocha m2, clipped

TUESDAY, AUGUST 8, 1876. 82

WEDNESDAY, AUGUST 9, 1876. 82.

8:15 a.m. 1 male *P. about*
 hatched from brown egg
 with green neck arising
 1st leg is out.

Set across the river
 Lanius Brechius,
 Nymphalis Brechius,
 Heteropterus marginatus.
 Set Nymphalis Eplustion
 but he escaped.

THURSDAY, AUGUST 10, 1876. 82

Perle caught a slightly
 battered Nymphalis Eplustion
 1 female *Orygia leucostigma*

FRIDAY, AUGUST 11, 1876

Oryza Leucostigma
no 3 chrysalised. female.
Arctia Isabella out.
(See Aug 3) S. Americana
is a chrysalis. ^{Some time} has been so
I have a cat, looking
like an arctian. He is
brown with a black head.
Light stripes on his side.
Brown hair blacker
on his head & tail spread-
ing from wart. Top
of 10th segment ² pink

SATURDAY, AUGUST 12, 1876.

Got 2 Papilio Troilus cats.
Saw a Papilio Troilus.
Found a cat. on locust.
Got 1 Saturnia do.
Got black & red arctian B
Got 1 Papilio Troilus, green

SUNDAY, AUGUST 13, 1876. ~~1876~~

Got *Daturia* 20 (no 2)
Inch for caught
Papilio Thoas 1 tail gone
Got 2nd *Apotele Americana*
Got 4 *Ceratocampa Regalis*
Got 3 *Ceratonia* 4-cornis.
2 other small cats. at W.

MONDAY, AUGUST 14, 1876. ~~1876~~

Got, in Boston, an
awful lot of cocoons
& batches of eggs of *Orgyia*
Leucostigma.

TUESDAY, AUGUST 15, 1876.

[Faint, illegible handwriting in cursive script, likely bleed-through from the reverse side.]

WEDNESDAY, AUGUST 16, 1876.

[Faint, illegible handwriting in cursive script, likely bleed-through from the reverse side.]

THURSDAY, AUGUST 17, 1876. 82

Got, in Boston several
little brown & yellow cats.

FRIDAY, AUGUST 18, 1876. 82

Got a Vanessa Butia
Got

SATURDAY, AUGUST 19, 1876. 82

Got 2 cats *Attacus Luna*.
 Got about 8 cats. at
 Wicks. They were bluish
 white. Head, legs, & tail
 yellow, 6 black warts
 on each ring, on 2nd
 & 3rd rings 2 long red
 warts, on 11th ring 1
 long yellow wart. (yes)
 Are they *Attacus Prometha*?

SUNDAY, AUGUST 20, 1876. 82

Got 9 *Attacus Polyphemus*.
 3 cats of *Papilio*^{*Lunus*} on ash

MONDAY, AUGUST 21, 1876

Got, in Webster co. 5 h.
 Krieffe, 3 Argynnis
 Idalia, 3 4 Bellona,
 1 N. Euphrosion.

Got 2 cats. Color grey,
 on 5, 6, 7, 8, & 10th rings
 black tuft of hairs
 outtop, Hairs on side
 of body & neck, ^{brown velvet} red, on
 neck, 4 green spots
 on each ring, striped
 with black lines,
 Head & feet orange,
 black stripe beneath,
 1 1/2 inches in length.
 Found on an ash tree
 on the mountain.

Spalotus angelica

TUESDAY, AUGUST 22, 1876

Got 4 Spring Linn -
 quennaculatus 2 with
 cocoons of parasite on.

WEDNESDAY, AUGUST 23, 1876. 82

Got 3 *L. Luringue maculata*
 1 with cocoons on him.
 Got 1 *Attacus Blyphemus*
Saturnia cl. cat.

THURSDAY, AUGUST 24, 1876. 82

(B B 113 cont) In paper over
 into Aug 8, 1890. Hd wider
 than high, W 3.4 mm, round
 greenish white, smooth &
 antennae white, eyes black.
 Body thick, flattened a
 little ventrally, joint 13
 oblong, spiracles. Trans-
 lucent clear green with
 2 transverse per seg of
 small round slightly
 elevated yellow spots ^{absent} on venter. Dorsal
 on 3 are 2 fleshy tubercles
 close together, colored red.
 On 5, 7 & 12 over the dorsum
 from just above spiracle

FRIDAY, AUGUST 25, 1876. 82

Got Vanessa leonina
 " Pinks head wings with
 " large ^{cat} ~~Attacus~~ ^{Pornetina}

is a curved slight fold
 to come out toward the
 rest of body colored
 light yellow & bordered
 in front by a thin black
 line. The sides of head
 feet have a red band
 bordered above with
 yellow. Spiracles small
 whitish, preceded above
 by a small black spot

SATURDAY, AUGUST 26, 1876. 83

Got ^{cat} 1. *Geratocampa Regalis*
 " 1. *Amesinus* *Englandis*

(BB2) On with hazel, Plattsburgh
 N.Y., Sept. 15, 1894. Hd slight
 below, bilobed, dull white
 covered with rounded obscure
 brown patches composed of
 closely separated dots, these
 separated by irregular line
 of the ground color. W. 3.7 ±
 Head a little enlarged at
 icu in a square, bristles small
 with 1 large and a few
 small radiate hairs.
 Olive green, pale s-v
 a broad creamy white

SUNDAY, AUGUST 27, 1876. 82.

(1 mountain cut. became
Chrysalis without cocoon.
 2 *Pygmaea ministra* chry.
Chrysalis of mountain
 cut. smooth & shining
 $\frac{7}{8}$ inch long. row
 of elevated dots on
 each ring 3 of them ^(the row)
 going all around,
 between which 3 are
 2 larger elevated dots.

dorsal band (near to iii)
 but retracted up on 12
 C-sh olivaceous as also
 front part of 3 & 4 dorsally
 On 5, 8, 9 & 12 a

MONDAY, AUGUST 28, 1876. 82

Got some *Glosteria inclusa*
 rounded velvety dark
 brown patch slightly
 olivaceous, covering i & ii ex-
 cept on 5 where it only
 covers i; similar pale
 olivaceous patch covering i on
 6, 7, 10, 11 and 13, the latter
 darker & elongate; a
 faint V-shade, apex
 thickened, extends forward
 from the spot on 12. Feet
 all pale. Hair black
 spiracles white, black ringed

TUESDAY, AUGUST 29, 1876. 82

Got some *Saturia* *locata*" 11 *S. Maia* cats. on
wild cherry. "black co."Got 11 *Cerura borealis* cats.*Pygmaea** black long-
itudinally striped with
yellow, a few long
white hairs, Top of
head red; rest, and
feet & tail, black.

Black also on 11th segment

Got 1 *Emerythra* *myops* ^{cast}

Got some other cats.

**Acronycta radcliffei* 10/2/88

WEDNESDAY, AUGUST 30, 1876. 82

Got some *S. locata*.And *A. Luna* chrysalized

(BO119) Body faintly greenish,
neely white with obscure
d. & s. d. & lat. white lines,
the s. d. space considerably
overwashed with white. Vent
large (except in very small)
with considerable long pale
white hairs. Spiracles faintly ochre
molt Aug 14 No rounded shining
black & yellow spot in
clippers and one like it each
side next clippal suture.
A few white hairs 10.4.5±
Rd black, a little grayish

THURSDAY, AUGUST 31, 1876. 82

509 ~~after~~ 2 *C. Boealis*.
Attacus Promethes spum

a series of 4 white spots
 between i and i on 7-11.
 Feet and venter pale, anal
 plate white. Hairs large,
 pale gray; hair very long,
 abundant, white. No
 secondary hair. Spiracles
 white.

Charadrius deridens
 (See Parkland Forest In.)

FRIDAY, SEPTEMBER 1, 1876. 82

509 2 *Saturmia lo cato*.
Attacus Polyphemus spum

SATURDAY, SEPTEMBER 2, 1876. 82

The first *P. Troilus* came out today.

287 a *Liliopsis* on ash

A decorative horizontal border featuring a central floral motif with leaves and berries, flanked by symmetrical, flowing scrollwork and leaf patterns.

SUNDAY, SEPTEMBER 3, 1876. 82

2nd Mountain cat
made a chrysalis
without a cocoon as
did the first

MONDAY, SEPTEMBER 4, 1896. 82

Some *Loe* spun.
Chrysalis, found in
 cocoon on poplar a
 few days ago, is
 white with some black
 on it.

TUESDAY, SEPTEMBER 5, 1896. 82

Found a *Lunacode*, ^{21 of them} on
 Wild cherry (No. 1) Description -
 4/5 in long, yellow, color
 red, with brown markings.
 2 Short *Abbas* on 3rd, 5th
 3 11th seg. covered with
 prickles, 8 row of prickles
 on each side. Thickest
 near the head & tapers
 to a tail. Head is brown.
 Got 3 cats, 2 got before 1 is
 spun. For description
 see Jan. 15, page 33 (No. 2)
 but some other cats.
 Got *Pyraea* black
 spotted with white. Head
 & feet red. (*P. maculata* (H))

Datura major (90)

WEDNESDAY, SEPTEMBER 6, 1876. 82

Got some cats.

(B15104) Molt. Hd 3.6^m As before. Body as before, the dorsal green patch covers the back from 5 post to 13 and extends irregularly to the end line but to space 10, containing 2 dorsal patches of green. Color mottled with brown on 5-7 & a little on 8 the other on 10. The green patch is a little irregular anteriorly as described by the spec. with an irregular blackish line

THURSDAY, SEPTEMBER 7, 1876. 82

Got some ⁽³⁾ flat cocoons on 2 vials well No 3. Two had come out.

on 5-7 & by a brown shade on 8-10, diffuse black line from central line. 230 bump on 12 is slight.

FRIDAY, SEPTEMBER 8, 1876.

Got some *Attacus Polyphemus* caterpillars.

Got a large green *Ceratomia quadricornis*

(Got 3 more cocoons of poplar cat, on ash.

SATURDAY, SEPTEMBER 9, 1876.

Got some *Dryocampa rubicunda* cats. at W.

Got 2 *Ceratomia quadricornis*

SUNDAY, SEPTEMBER 10, 1876. 82

No. 4. Green Limacode
eats wild cherry.
.6 in. long .3 wide.
It has a tail & a point
on each side in the
middle of the back.
White lined along the
back, 2 white spots near
the tail. A few white &
brown markings on the
sides. Found sometimes.
No 5. Rusty Limacode.
Eats wild cherry. Color
blackish yellow. 2 yellow
spots along back. 4
longitudinal rows of
warts covered with prickles.

[No 6 See pg 34 Jan. 16]

MONDAY, SEPTEMBER 11, 1876. 82

Got yesterday, L. learyae,
eats. L. 363, & L. 4. cornie.
1 cocoon of poplar cat.
on ash (Sept. 8.) with
cat. not chrysalis. It
is a larva 1 1/4 in. long,
green, 10 legs, larger
in that part of his
body that is without legs.
Today - 2 Attains & clypeus
eats. began to spin
1 A. Promethia spun.
Smerinthus myops 1st chry.
Got 1 cocoon of poplar cat
on ash (See today & Sept 4)

TUESDAY, SEPTEMBER 12, 1876. 82

Got a lot of cats —
Lophocampa 363,
C. 4 cornis, *lemina* *Bur-*
alis, *A. Polyphema*,
L. leanae, *bebe* etc.

Got a yellow moth
 spotted with brown.
 The shape of a *Imbricaria*

WEDNESDAY, SEPTEMBER 13, 1876. 82

Got cat. on lilac about
 2 in. long. Ground
 color brown with white
 on the sides meeting
 over the back. Covered
 with a few hairs, and
 the former skins shed off
 its head sticking to the
 hairs on its neck. The
 11th segment is bumpy.
 It has 16 legs. No. 7. {*lebe* etc.
 Got 3 *Sphinx lemina*
 2 had flies. There were
 208 cocoons on one!

THURSDAY, SEPTEMBER 14, 1876. 82

Got 1 Spring Cinnabar
 Got 5 Mountain cat.
 1 Dryocampa dominicalis
 2 ash tree sphinx
 Took 1 cocoon of *Arctia*
Promethia on sasaparilla

(BB105) on black oak, Aug 2
 1896. Hd. light brown with
 only a little narrow at
 top brown collar, flat
 front and at sides, dorsal
 slightly in reddish brown
 smooth shiny white
 with 2 vertical dark brown
 bands mottled with
 yellowish, one on each L

FRIDAY, SEPTEMBER 15, 1876. 82

Got 1 large larva *Borealis*.
 Got a sphinx on ash
 and 1 (different) on maple.

Larva on front & side, dorsal
 unmarked, joined by a small
 Δ patch just vertex, then
 hindling the ground color
 between them into 5 whit
 spots viz 2 sub-d alar &
 round centrally and a
 large spot covering and
 extending a little beyond
 a plate. Larva, antennae
 & antennae white, with
 sides some faint brown

BB 105 5th collected ^{marked} ^{very high}

SATURDAY, SEPTEMBER 16, 1876. 82

First *Linaea* "Rosa"
spun.

moth, irregularly dis-
coloring the ground color into
spots. W 2.6 mm Body
shaped as in *Cocloches*
but not lumped as it is
in it a dorsal process
long, pointed forward
surmounted by 2 tubercles
on 12 a slight broad
conical lump bearing
2 tubercles. These are
present the ^{corresponding} tubercles of
Cocloches and are all
present but minute at

SUNDAY, SEPTEMBER 17, 1876. 82

One of the cocoons of
pale cat came
out, male, moth same
as Sept 12 (See Sept 11 ke)
Gastropacha Americana
came out. It is ♂.
Velleda & a female.
2 *P. Lurina* suspended.
lost some *H. Sena* trid.

dorsal ones rather more
distinct, each with a hair
feet normal, the last
pair not stretched as in
Cocloches. On the bottom
row of 2-4 except at
base of 2 and a narrow

MONDAY, SEPTEMBER 18, 1876. 82

[Polyte laricis 8.5.1876]
 male *Ectropascha*
bellida (No 3, found on
 Wild's well Sept 7) came
 out last night.

Got a full grown *P.*
Lurinus cat.

1 *P. Lurinus* chrysalised

Anal band on 2-4
 narrow post almost to
 obsolescence on 4, is a
 dark green patch,
 another in the dorsal
 of 6-13 (2d sp) on 5-7 ^{especially} ^{anteriorly}
 partly replaced and
 mixed with brown
 and whitish markings.

TUESDAY, SEPTEMBER 19, 1876.

Another female
hoplon cocoon came
 out.

I got 2 green springs
 spotted with red,
 on elm.

1 *P. Lurinus* chrysalised

gradually coming down
 on the sides post to the
 spiracle on 10, passing again
 a little and becoming
 bluish at the anal feet
 the rest of the body in the
 dorsal & lateral regions
 is whitish irregularly
 mottled with dark

WEDNESDAY, SEPTEMBER 20, 1876.

got some anthers
& spread them out

horn which predom-
inates on 1 shot dorsal
in an involute s-d band
on 2-4 ³ curved ¹ in a ² band
2-4 line looking the ant
green patch below &
sandy branch on
the spiracle on 2, on
anal plate, substr.
on 10 and ^{5,6} ² ¹² A dorsal patch
of green color on 10, the
dorsal processes are
tipped with brown but
the tubercles whitish.

THURSDAY, SEPTEMBER 21, 1876.

packed all the cats.
& chrys. for Boston.

lost 1 ant to spruce on 11
as a round white spot
succeeded above & below
by other smaller ones
base of 12 & ventr 2-4
feet on 7-9 waxy white
venter 5-6 & ventral
band 11-13 opaque white
the feet finely marked
with brown, abd with
2 curved brown lines,
on 10 obscured by the
heavy brown shading
anal feet pointed

(See Sept 6)

FRIDAY, SEPTEMBER 22, 1876.

On chestnut & white oak
July 15, 1890.

Stage 2. 2 mm hd. slight
bilobed, yellowish green
not shiny. Mouth &
palps pale, eyes black.
Body greenish frosted
with white, a faint
yellowish 2-d line.
Cobalt color also border
anal plate. A few ab-
sides. Length 16 mm.

Stage 3. 3 mm hd. as
next stage, molt July 15.
Hd 5.5 mm whitish green
minutely elongated
no depression at summit

SATURDAY, SEPTEMBER 23, 1876.

eyes black on white ground
^{antennae} palps & labrum pale, jaws
yellow outwardly, black
inwardly. Body same
whitish green, somewhat
faint on dorsum with
narrow elliptical area
elevated yellow spot on
the side, ^{like very small quinine spots} & also dors-
um. A yellow 2-d band
not reaching either ex-
tremity, anal plate
bordered with yellow.
Spiracles pale reddish
with red brown narrow
border. [Another hd.
found as in 11.5 stage
dead]

SUNDAY, SEPTEMBER 24, 1876.

* Larva on most July 18
 Hd pale dorsal yellowish
 green. Eyes black. W 2.7 (2.5-3)
 Body whitish green
 with yellow s.d. line
 & band to anal plate
 Molt July 27 Hd 3.6 (3.5+4)
 most Aug 3 Hd 5.5 (5+5.5±)
 Pupa a little flattened below
 Robust thorax at prob of
 cases, rounded ^{marked} rapidly
 both ways, cases not
 prominent. Carinae a
 single spine with 2 tips
 pointing nearly outward
 Body punctured. Cases creased
 Color dark mahogany red
 Cases almost black L 20 W 6 1/2

MONDAY, SEPTEMBER 25, 1876.

Coon of silk in rolled leaf
 close fitting to branch
 some cylindrical, type of
 using cases prominent.
 Blunt at both ends, the
 head square, and a seg.
 not tapering but the last
 segment blunt. The mouth
 a short thick downward
 pointing process, smooth.
 Body pointed toward
 wing cases, finely creased
 Pupa brownish yellow
 the head & ^{thorax} ^{legs} ^{hairs} ^{hairs} ^{hairs}
 shaded with blackish
 brown ~~on the last seg.~~
 and the back light
~~shaded~~ dark brown
 L 11 mm W 4,

TUESDAY, SEPTEMBER 26, 1876.

July 29 Hd. round, flat in front
 mouthparts protruded down
 dirty orange, shiny eye black
 mouth brownish W 2.2 mm
 Thorax well developed with
 claws, pal. orange, abd. about
 then 4 places represented by black
 tubercles on abd. segs, and the
 first 4. Body with dilated
 s-v. sp. dirty yellowish the
 anal plate & many spots
 black, the latter in 4 rows
 rows 3 per seg. (imaginal) the
 s-v ones large & shining,
 Length 22 mm. Color of entire
 brown, elliptical opaque

WEDNESDAY, SEPTEMBER 27, 1876.

with 2 rows of spined short
 tubercles in s-d sp. cant
 5-12 (2) 2nd row 2 small
 lateral small, B is also
 present in 2 small, row
 C is there triple, 2 top
 another pair, and small
 ones on anal plate; each
 bears a line white hair
 polyphagous whitish, food
 shiny green. An water
 up to s-d white line.
 Tubercles yellowish.
 Next July 30 Hd. as before,
 pale whitish, slightly
 mottled with brown in
 head. W 2.2 mm. Head brown

12.2.25 - (unidentified)

THURSDAY, SEPTEMBER 28, 1876.

labrum white. Dorsal
row of tubercles smooth
conical, those on the sides
very small, each with
a hair. Sid band
much interrupted, as
dorsal & lateral rows
of yellow spots base on
interrupted line. Head
with 10-12 annular and
by brown rings which
shade together and
obtain evenness along
dorsal line.

Molt Aug 16 Hd 3.2 mm

Feet dull purplish red
pale whitish. Over 10 ft

FRIDAY, SEPTEMBER 29, 1876.

lower parts evened out
the upper 2/3 mottled with
spots composed of aggregation
of light white spots in
clusters. Ground parts white
over black. Feet dark
brown, pale whitish ventrally
with yellow, each with a
hair. In 5 d space a row
of large rounded oblique
pale yellow patches tinged
with brown, each on 1 seg.
and extend a little onto
the next. 2 lateral rows
of annular spots but small
& interrupted, not distinct
of line. Spots white

over 10 ft

SATURDAY, SEPTEMBER 30, 1876.

with narrow black border
the spots become wholly
suppressed with red appearing
orange colored

For pupation Aug 28

Bred by J. H. H. winter
of 1893-4
Acronycta sp.

SUNDAY, OCTOBER 1, 1876.

On little poplar at Linington
simply but several in some
places in house of leaves
& others. Ichthyura [Eggs
shells 2-7 on upper side
leaf, not touching. Horns
plumbeous, base of horn color
? (shells are dead & white)
Diameter 9 mm. Hatchling in
hole in the top [Hd 2.2
round, flattened in front,
depressed at the anterior
black shading into horn
centrally, bases of antennae
pale. Shiny, a few hairs.
Body somewhat flat,
a tubercle short thick

MONDAY, OCTOBER 2, 1876.

on 5 & 12 nearly black
 dorsal hump, each sub-
 mounted by a pair of pil-
 iferous tubercles. Dark
 wine red, the 2 d space
 except 5 & 12 yellow &
 containing 3 wine red
 lines. Tubercles ^{small} of tubercles
 each with a hair, those in
 subventral space larger
 some yellow the lower 2 pe-
 cial on 7 & 8 more yellow
 anal plate, the feet & and
 blackish brown paler - pink-
 ish, tho. feet brownish.
 Feet normal, hair whitish.
 Molt Aug 2 (4 d 3.7 ⁴⁻⁵ +
 4 d black, punctured, with
 some hair, broadly

TUESDAY, OCTOBER 3, 1876.

from under the anten-
 nae & mouth shiny black
 skin & underneath white
 dorsal process on 5 anten-
 nae long on 12 shorter. Black
 Body deep ^{or purple brown} vinous, appressed
 black. Body as before.
 Ant. stayed above the
 yellow tubercles become gray
 and the purple brown stayed
 mottled with white and
 fading to blue. The seg-
 ments on the sides be-
 come diffuse & larger
 surrounding the spiracles
 in a large cloud and ex-
 tended on 5 & 12 dorsal
 except where the processes
 are. Coon feet, leaves

WEDNESDAY, OCTOBER 4, 1876.

of little but web-like,
rather strong but thin.
Pupa Aug 10 Cylindrical, a
little depressed basally,
dorsal, very even prominent
dorsum gently arched;
abd segs. black, tapering
Circumstances consist of a
slender spine, curved
downward & a little
thickened at the end;
it is well furnished
in the side of cocoon.
Dark blackish brown,
the body finely mottled
with reddish brown
and the wing cases along

THURSDAY, OCTOBER 5, 1876.

the veins streaked fine
with same color. Shiny.
Body sparsely punctured,
more but segs. Cases almost
Image Aug 17

shd hd. 8

or 6 9 10
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Platynura albipennis Ma
In woods, Aug 27 spin top of cocoon like
mice. Hd black, small, with pale
9.6 mm. Body yellow, purple along
the sides, small, large, small, small
wings on 2-4, 6, 7-12, the color extends
across the back on 2, 5, 7, 8, 12 & part
on 13, not completely, especially the
yellow on 7 & 8. An indistinct, irregular
dorsal line purple brown, dorsal line
brownish, 5 & 12 a little enlarged
dorsally. A few white dots, dorsal
margin, linear, black. Tent. with 4 or
5 small, 14 black, 15 black, 16 black, 17 black,
18 black, 19 black, 20 black, 21 black, 22 black,
23 black, 24 black, 25 black, 26 black, 27 black,
 

FRIDAY, OCTOBER 6, 1876

cleaned out Lophocampa
box. They have all
opened. We put the
Cocoons in the box.

(End of diary of
Lepidoptera 1882)

SATURDAY, OCTOBER 7, 1876.

Gnaptus rufus (cont.) Fully
grown caterpillar. Body
black, speckled with
whitish or with yellow
orange markings which
at the sides form a more
or less distinct light
range longitudinal
stripe. The spines are
orange red, or partly
yellow, except those on
the 2nd and last
segments which are
black. The feet and
head are dark red
the latter with 2 black
spines. Elm & nettle.

a yellow dorsal line from head to 4th seg

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(BB 12 inst)

SUNDAY, OCTOBER 8, 1876.

BB 12 (light). Shape oblong with back elevated rounded by 2 yellow lines. Color green (light on yellowish green) slightly spotted with yellow.

Limnecora parvula & BB 12 (tail) shape same as above but furnished with a tail slightly reddish. This yellow is less distinct than in the preceding insect.

BB 12 black

There are probably 14 other mussel more character

Alder sawfly.

284

MONDAY, OCTOBER 9, 1876.

Sawfly on alder (*Alnus serrulata*) June 16, 1890
 13 segs, ^{counting head} thoracic feet 3, long & strong, held by these and curls by body & thorax - it is disturbed! abd feet on joints 3, 6, 7, 8, 9, 10 & 13 small used in walking. Head round flat before, sharp black, a little pale at mouth. ^{minutely but sparsely pilose}
 No. 17 mm. Body with 2 rows of small elevations per seg and one larger one above base of each foot. ^{in which is one} a black dot on dorsal line not extending on joint 2 and a germinable row of linear black spots above bases of the legs. Thoracic feet marked with black. Length 14 mm
 (See No. 9)

TUESDAY, OCTOBER 10, 1876.

A hymenopterous insect
on currant, shiny bluish
green with yellow on
segs 1, 11, 12. Head
black, 6 prolegs. black
and 3 transverse rows
of elevated black spots
to each segment, coal-
escing at the sides
to three larger spots.

Immaculate beneath.
When about to enter
the earth, it sheds to
clear yellowish green
marked with yellow
as before. No black except
the eyes.

WEDNESDAY, OCTOBER 11, 1876.

1. Black. yellow stripes
Collar spot yellow.
Heart & tail black.

Datanas ministra

2. BB52. all black
little stripes white

Datanas integerrima

3. BB54 More distinct
Hair shorter line yellow
Datanas argus

4. BB84 Line yellow
Spot, heart, tail black
Datanas perspicua

5. BB81 Black, some square
white spots. Head, tail
& spot dark neck
Datanas major

THURSDAY, OCTOBER 12, 1876.

6. BB76 Stripes yellow
Head spot & band
light orange red.
Datana palmarum

- 1 Dorsal line, top of back
- 2 Stigmatal line, on spiracles
- 3 Subdorsal, $\frac{1}{2}$ between above
- Subdorsal space. Bet 1 & 3
- Stigmatal space. bet 2 & 3
- Venter, much part of body
- Subventer, bet. spiracles
- & base of legs.

(G. M. Cogswell, Com Ent
XII 108)

FRIDAY, OCTOBER 13, 1876.

Larvae of *Datana*

*Stripes narrower than inter-
segmental spaces.

Body black, stripes yellow.

" " ^(constant pattern) *palmarum*

" " *pinus*, pale yellow, *pinus*

" " *subdorsal* *pinus*

** *pinus* in *pinus* *pinus*

pinus *pinus* *pinus*

pinus *pinus* *pinus*

pinus *pinus* *pinus*

" " *pinus* *pinus* *pinus*

" " *pinus* *pinus* *pinus*

" " *pinus* *pinus* *pinus*

" " *pinus* *pinus* *pinus*

" " *pinus* *pinus* *pinus*

" " *pinus* *pinus* *pinus*

SATURDAY, OCTOBER 14, 1876.

Coleoptera on elm trees
in Poughkeepsie July 30, 1888
Larva with 6 legs, yellow
with lateral black stripes
and black points on back
Head & feet black
Body yellow, not fast
In anal extremity
linings color yellow
with black stripes

Salicivora

xanthomelaena

SUNDAY, OCTOBER 15, 1876.

"Curtailed foretail" Aug 27, 1888

Egg elliptical .8 x .4 mm
flattened on either side
^{minute punctured &}
~~surrounded~~ with little rounded
elevations, white. Laid
singly on in twos or threes
on either surface of the leaf.
Hatched larva Body somewhat
wrinkled, swelled at first 2
segment which bears two
short conical processes. A
single one on 3rd ^{ring} segment.
Last segment terminating in
a single short ^{which represent anal feet} prolongation.
Color brown, blackish at
the sides. Head ^{rounded} black. Head
& body with the very short
whitish hairs. (over)

1888
Aug 27
1888

389 Aug 25 1890 2nd stage 4 chor. pres

MONDAY, OCTOBER 16, 1876.

rest near the edge of
the leaf on the upper surface
eating the upper leaf.

1 inst (Aug 31) whitish &
to each segment: rough

with numerous yellowish
gran. a transverse line on each seg.
yellowish on back
brownish on sides: 2

conical processes on front
segment and 1 on 2nd & 3rd

(head brown, notched and
rough) Last seg. terminating
in a single prolongation.
Feeds on half the leaf.

2 inst (Sept 3) Same. Feeds
on the whole leaf. Hd. 6?

3 inst (Sept 11) Color more

4 stage obtained Sept 3 1890 1890

TUESDAY, OCTOBER 17, 1876.

even uniform brown but
lighter on the back. the later
color of end of head on 187
granulation

4 inst (Sept 11) (See Sec 21)
brown but head a little
lighter and a narrow
black line dorsal line

Head with 2 conical processes
the process on 3rd seg. rather
short but prolongation
last segment $\frac{1}{3}$ as long
as the body. Body wrinkled
as before and roughened
with numerous points
The larvae begin to eat
the mouth, eating on

WEDNESDAY OCTOBER 18, 1876.

the stems of the plants
which they resemble in
color.

July 2, 1887. *Viburnum acerifolium*

Head bilobed, lobes pointed,
brown pale laterally &
between the lobes, slightly
granulated, the granulations
white. Body purplish
brown. On joint 4 a
dorsal rounded process
pale brown with white
granulations; a darker
dorsal line. ^{a white} ~~On the~~
stigmatal band on
joints 2-5 and on 11 & 12
faint; on side 7 to

THURSDAY, OCTOBER 19, 1876.

10 is a dark velvety
brown patch, rising
with curved outline nearly
meeting on the dorsum
on joint 8; the rest of the
body with white granules.
Two faint white subdorsal
line on anterior segments.
Last seg. prolonged in a
single tail, brown ringed
with whitish and densely
covered with black spines.

Another specimen nearly
uniform grayish, top of lateral
patch only brown, hump
red brown, granulations
only slightly paler than body.

TUESDAY, OCTOBER 24, 1876.

and mouth parts and
a space above white.
Also some brownish
mottlings on each side
of head. On day the
ground color into about 6
white spots, partly
confluent. 8 feet white
with a brown line above
the dorsal. Thorax on 9th
more brownish brown.
The spiracles on 11
black.

Pupa 7th 89 Shiny light
brown, darker in places.
Set. Sep (See Sept 14)

Coon Trough but very similar to
C. clodius, a *Heteropoda*, in leaves etc.

WEDNESDAY, OCTOBER 25, 1876.

C. clodius? Mature larva
Hump on 4th, long 2 pointed.
On 8, 2 humps bases joining.
On 11 two short & narrow light
2 white elevated spots on
4, 5, 6, 7 & 9. Thorax on 7 hump
color reddish brown. 10 11 12
are on back, yellow
each side of 23 except at the
right side. White on
11 to 15. 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
long, white, red & black
spot in spiracle on 6. White
above on 9 & 10 forming a
V pointed forward, marked
with a red line and a
small white spot on 10.

Phryganidia *argentea* *hymenoptera*
~~Phryganidia argentea~~
 1879

THURSDAY, OCTOBER 26, 1876.

dark brown mottled

hump, tipped reddish
 Beneath a yellowish
 band. Sparsely clothed with
 black hair. Head
 light brown with 5
 black lines alternating
 with 4 brownish ones.
 The middle three being
 half way from the top
 down the third

on the web under ground
 till Feb. 1879. Pupa long &
 skin brown. Malpogian and
 dorsal blackish but, legs
 at base of thorax. 2 cerata
 tips divergent thorn like
 branch pointing inward
 Thoracic granular elevations

dark brown mottled but less distinct

(BB115 cont)

300

FRIDAY, OCTOBER 27, 1876.

6 mm. 24. 175. Head rounded
 smooth, partly beneath
 shining feet etc: pale
 whitish, mouth parts dusky.
 Body acinaciform, white
 green: a lateral white
 line edged blackish
 above: on each segment an
 oblique blackish shade
 running back from base of
 and terminating in a white
 spot on the next segment
 these spots forming the
 dorsal row, there are
 11 being nearer together
 and larger than the others.
 The 12 segment is rather

SATURDAY, OCTOBER 28, 1876.

larger than the other segs.
An interrupted ^{dorsal} blackish
space; with white points
nearly with them fine
short whitish hairs.

7 Wormlet 22 Same. Head
slightly shaded blackish
above. The dorsal line
is really trace of a
white dorsal stripe edged
with blackish on both
sides. Only trace of it
occurs, then being between
the segments. The color of
the body is a dulled
more velvety green,
less transparent than A.

SUNDAY, OCTOBER 29, 1876.

whitish below. There
is a row of small whitish
dots one per seg. above the
spiracles, and another
similar one between the
dorsal & sub-dorsal.
Each dot of all the rows
furnishes a short whitish
hair. The 2 spots on 11th
seg. are quite unapicuous
spiracles black. It rests
with its body bent round
the under body a loop,
its head touching the last
seg. on one straight if on
a stable. Larva feeds
on moth oil night 23 mm
Entered ground Oct 3

MONDAY, OCTOBER 30, 1876.

Pupa (May 89) Similar to *minista*, punctured, wing cases wrinkled. Crenaster double, very short, the spines arising almost immediately from the body, 3 to each part, the middle one much the shorter, almost obsolete making the spines divergent. Same color as *D. minista*.

Datana galvii

TUESDAY, OCTOBER 31, 1876.

D. pudens. June 14, 1889.
On corn Florida
Head white mottled with ^{fine} brown with 4 black spots, two covering the eyes and the other two the summit of the head. Joint white. Hair. Body semi-transparent whitish flecked with opaque white spots on the dorsum & more thick on the venter. Stigmatal space covered by a blackish shading more distinct anteriorly and a denser

WEDNESDAY, NOVEMBER 1, 1876.

dorsal line. Spinous pale brown. cervical spot whitish. concealed with body on which are a few short pale hairs. Folds up a leaf (see in next) the dorsal a lobe, springing the edges together. In this way remains when not feeding but does not eat it. Head at night.

Single brood. Same color Chrysalis in winter.

THURSDAY, NOVEMBER 2, 1876.

Hickory June 14, 1876. Orange
Body pale yellowish variegated with black & a black dorsal line interrupted on the summit of the posterior segs. 4 longitudinal rows of warts, subventral, supra-stigmatal, 2 ant-dorsal, the subventral furnishing long silky white hairs, ^{14 a few black} except on the last segment which bears 2 long thin black pencils of hair mixed with a few feathers & bristled hairs. The supra-stigmatal row furnishes short bristly yellowish hair but on joint 2

FRIDAY, NOVEMBER 3, 1876.

2 13

gives a long pencil of black hairs. A few black hairs also overhang the head & extend from joint 13.

Subdorsal row of warts on joints ²⁻⁴ 2, 3, 4, ⁸⁻¹¹ 8, 9, 10, 11 & 13 furnished warts of plumbed white hairs, appearing as if the ends were mounded; intermixed with bristly yellow hairs. & the upper subdorsal row the same on joints 2, 3, 4 & 8 but with less hairs. The upper subdorsal row very obsolete on the posterior segments. On joints 5, 6, 7 & 12 the two

SATURDAY, NOVEMBER 4, 1876.

subdorsal row of warts gives large square black tufts of plumbed hairs, mixed with white plumbed hairs most at the sides when also a few of the bristly yellow hairs occur. Tuft on 7 has much less black than the others. Dorsally on joints 10 & 11 are a pair of whitish ^{reticulate} warts with flattened tops corresponding to the red ends of *Corymbus leucostigma*. (Died June 30) Head to the front short above the mouth. Body pale whitish with a tinge of yellow, she died 2 (Nov 5)

B630B / 11330 cont

SUNDAY, NOVEMBER 5, 1876.

with a semi-obsolete white
dorsal line & broader
subdorsal band,
variegated by white
spots & streaks in the
subventral space. On
each seg. a broad trans-
verse bright red band
certainly similarly colored
warts, forming trans-
verse. The bands
begin above the spiracles
but there is a row of warts
below the spiracles & warts
just at bases of legs. A
broad row of large
yellow spots in the

MONDAY, NOVEMBER 6, 1876.

subventral space &
between the spiracles
separated by red warts
Spiracles white, ventral
feet black, venter,
& bases of legs reddish

30B Another flat fly, 1/2 inch
1874 on willow. ^{black} a red
mark and many confluent white
spots. ^{on sides of legs, brown white} Black, warts light orange red
obsolete connected, spiracles black
and tarsus mixed. Head & d,
dist. 8d on s-v (v) white
pale. the latter straight not
broad, containing orange warts v
but not confluent. White space
between 8d & s-v streaked
with white, also venter and
a few lines in anal space
Indigo May 11 95 H. albocincta

TUESDAY, NOVEMBER 7, 1876.

marked diffusely with black, a dorsal ~~band~~ and stigmatal band indicated. Ten black joints of hairs on joints 2 and 13 as in previous stage from the supra stigmatal row of warts. Lateral hairs ^{dist} long, whitish mixed with a few black ones under a glass seems to be shagreened. Other trifo same as in previous moult except that the joints 5, 6, 7, 8 are now large square brown ^{oval} tufts mixed at the sides with white plumbed hairs.

WEDNESDAY, NOVEMBER 8, 1876.

the apt on joint 12 still ~~remains~~ black as previously & ~~contrary~~ with the others. ✓
Cover of hair & thread July 6

311

Chd 116 curst

THURSDAY, NOVEMBER 9, 1876.

(when taken July 1, 1887) Head flattened at the sides, a little depressed at vertex, pale green with black line on the angle between front & sides, shaded with white posteriorly & some irregular whitish ^{mark} in front & at the end. Body not reaching out of head for joints 2, 3, 4. Joints 5-13 inc. have each a dorsal process but somewhat modified in shape on the several joints. There are joints 6 & 12 are ^{the longest} ~~similar in structure~~.

green about 300

mouth & palpi pale, eyes black

312

FRIDAY, NOVEMBER 10, 1876.

They rise abruptly in front from the anterior before the segment, terminate at the top in 2 rounded points of a yellowish color tipped with brown of which the anterior one is the larger & longer, & slope obliquely to the posterior edge of the segment. The other processes are similar of structure & color ^(the 2 tips are closer together) are short but ~~ends~~ ^{become} cleft on the dorsal line. This is first distinctly seen on joint 9. What the process on joint 13 ~~is~~

312

2 SATURDAY, NOVEMBER 11, 1876.

green beards under

SUNDAY, NOVEMBER 12, 1876.

On joints 2, 3, 4, 5, 6 & 13 are
indications of a depressed
subventral line. ^{absc.} Feet
pale reddish, marked
with 2 black lines.
Thoracic green with black
line. Ford elm.
(This spec. did not moult
but went in the ground
small) Body soon
shiny as in any red
punchard. Cicada after
1 tapering spine with a
pair of little ^{curved points} ~~hooks~~ at the
end. Very almost identical
with this July 13 '90. Width
head 2.6 mm. July 13 finished for
proportion with July 13 and 13.

MONDAY, NOVEMBER 13, 1876.

In water nearly drowned
 white legs. July 7th 1889.
 Head ^{aggregated} green white
 2 pale green stripes
 edged posteriorly with
 a darker shade. Body
 pale green on joint 3 &
 4 sparsely distributed
 white dots, each sur-
 rounded by a fine black
 ring. These spots are
 also found on the ventral
 a subventral space
 Seven oblique lateral
 lines on joints 7-12
 the last one extending
 from the base of joint

TUESDAY, NOVEMBER 14, 1876

on joint 12 to the
 caudal horn. Three
 stripes are buff white
 & half violet shaded
 anteriorly with ^{dull crimson}
 caudal horn green
 with a black stripe on
 each side this being the
 continuation of the pos-
 terior oblique lateral
 line. Thoracic feet
 pale yellowish, tipped
 with ^{pinkish} ~~black~~. Spiracles reddish
 foot willow (?)

Length about
 60 mm

FRIDAY, NOVEMBER 17, 1876.

June 19. Head dark blue
 gray minutely sprinkled
 with black spots, jaws
 palpi & eyes black, the
 bases of palpi & line above
 mouth whitish, a number
 of black hairs. W 3 mm.
 Body, 12 slightly enlarged
 black a dorsal row of
 oval white spots with
 smaller ones below
 them and a few small
 red spots. A narrow
 orange s.d. line, preceded
 by a narrow & followed
 by a broad
 powdery blue band

SATURDAY, NOVEMBER 18, 1876.

A slender, pale orange
 narrow hind, and 5-8 ft.
 blue. Venter a little blue.
 Thoracic parts black,
 edged with whitish
 abd. bluish or toward
 pale inwardly. Brown
 hair from stem much
 more numerous
 from subventral space,
 cervical spots blue with
 a few black spots below
 it on the side a black
 wart. A very black
 hair.

SUNDAY, NOVEMBER 19, 1876.

The eggs are laid in slits
 on the basal half of the
 leaf stem on under side
 generally in a double row.
 Larva head .8 mm Head
 shiny yellowish black
 Body dull ochre yellow
 marked as in mature larva
 but less distinct .26 mm
 Larva head .4 mm Head brown
 eyes black. Body yellow
 with faint blackish spots
 Head brownish .25 mm
 Hd. .6 mm Hd blackish
 yellow eyes black. Faint
 black spot above bases

MONDAY, NOVEMBER 20, 1876.

of thoracic part which are
 blackish. Length 3 mm
 Hd .3 mm Hd black. Body
 as in mature. L. 7 mm
 mature Hd 1.7 See Oct 9
 after hatching cut larva
 slit in center of leaf.
 Larva and cut larva
 hole finally cut in
 the middle & around
 the outside

TUESDAY, NOVEMBER 21, 1876.

Interhazel Nov 22 1890
 Head round, pedicel, with
 in joint 2, pale yellowish
 marked with black as
 as marks to appear black
 from brown 2 large vertical
 black spots separated
 by the central suture;
 a large spot on side of
 head (along & behind)
 eyes; a smaller one
 before it narrowly
 separated from it, &
 from the vertical patch
 and by the pale suture
 from the black plate
 width of head 1 mm

very nearly

WEDNESDAY, NOVEMBER 22, 1876.

Body somewhat flattened
 robust, 9 nearly uniform
 width ^{joint 3 small} 2 small
 rather slender, abd. ped.
 only on joints 8, 9, 10 & 11
 Cervical spots black
 directed, curved behind
 with faint coloring in
 from a yellow wash.
 Three rows of warts, one per
 seg except ^{joint 2 has 2 small} ~~joint 2 has 2 small~~
 tubercles. Below 3rd line
 below it 3 sub-stig and
 a fourth small conical
 ring with body below
 subventral fold above
 bases of legs. All bear

THURSDAY, NOVEMBER 23, 1876.

a few fine white hairs
 those at the extremities
 very long. Body pale
 yellow a black dorsal
 shade band and a
 fainter S-d one the
 latter seen by a lens
 to be broken into obli-
 que somewhat oblique portion
 neither reaching the
 extremities. Rostr. ① ② ③
 ④ wants partly black
 partly pale brown,
 row ⑤ ochre. L. 12mm
 younger as mature
 but black patch on
 eyes is absent, only a

FRIDAY, NOVEMBER 24, 1876.

small spot in D plate
 and the 2 other marks
 are absent. Mouths brown
 eyes black. W. .7 mm
 Body ^{pale} greenish yellow
 ① ② ③ wants black, the
 rest concolorous with body
 L. 8 mm S-d line absent
 mature 1 mm head brown
 June 24 building up
 walls each side of its
 ④ bank.
 younger built from ④
 as mature but more
 colorless. In a few
 days as mature.
 Hd 1 mm.

SATURDAY, NOVEMBER 25, 1876.

With a small June 22 890
 of the head subquadrate
 notched, with all lobes
 lobes pointed, alternating;
 pale whitish with 8
 pale brown spots, one on
 eye, one on the side of the
 & 2 small above the
 above & below the eye.
 Body deeply veined, but
 segs., feet normal.
 Warts, arranged much
 as in the Antidias ①
 on 5/12. in sd sp. ant. ② sd
 ③ super stig ④ ant stig
 and ⑤ ant vent and
 small & difficult to

SUNDAY, NOVEMBER 26, 1876.

distinguish, all concolorous
 as white markings.
 Body pale translucent
 yellowish, a white sd
 line below row ②
 Rows ②, ③ on 2 and ③ on
 2 & brown. Brown dorsal
 patches on joints 5, 8, 9
 and irregular on 11 & 12
 A transverse of fine
 blackish dots (small)
 warts. Length 7 down
 width of head 7 nearly
 height 4 as high
 into the lobes less pointed
 marked as before the
 upper margin (see spec)

MONDAY, NOVEMBER 27, 1876.

had a little beyond the
 middle (knobbed) and
 bent, knobbed again
 at the end and the

terminating with a hair
 rather shorter in length

the
 feet are dark blackish
 brown. Body dorsal

wine red, fine streaks
 (longitudinal) on the
 sides with a brown &

pale ventrally. On 3 & 4
 the streaks continue over
 the dorsum, confluent

in a dorsal band; on
 8, 9 & 10 is a narrow yellow

TUESDAY, NOVEMBER 28, 1876.

line between the bases
 of the horns and on
 11 a large bright yellow
 dorsal patch. Length
 7 mm. ~~With head brown~~

Molt 12/24 Head sub-
 triangular, notched on top
 dark wine red, mouth and
 spots yellowish pale. Horns
 1.1 (1 1/4 -) mm. From cervical

spot a pair of branching horns
 with small spurs all
 relatively smaller than

before the branching, but
 more than large spurs
 minutely transversely

creased, dark wine red

WEDNESDAY, NOVEMBER 29, 1876.

Body lacks all other home &
 dorsal foot long & dark.
 Body wine red, finely
 streaked with yellow
 on sides and also on the
 back on j 3, 4 & 13. Silver
 interrupted dorsal stripe
 widening on j 10 & 11
 and ending abruptly
 at end of 11, absent on
 2, 5 & 27. Anal plate
 dark & all set by 1 mm
 as stage progresses.
 joints 2, 3 & 4 become pale
 green except a narrow
 dorsal wine red line
 under the lateral region

Dark ventral

THURSDAY, NOVEMBER 30, 1876.

on 5, 6, 8 & 9 & a broad
 area on 11, 12 & 13 is pale
 greenish. Small marks
 on 12, 8 mm
 most j 28 Hd ^{parabolic}
 is outline but flat in front
 & notched a little at vertex
 wine red closely covered
 with little round pale
 yellowish spots a little
 confluent just in front
 a broad pale yellow white
 band widening anteriorly
 the width of base of 5 ph
 its sides once indented by
 the red & mixed color
 above the middle (S & Dec)

FRIDAY, DECEMBER 1, 1876.

1.5 mm
 more indented. Body
 elevated somewhat
 dorsally at j12. increased vel.
 segs. Warts ① each side
 full line out on joints 2,
 5-12. ② above 5d line ③
 below it ④ ⑤ n.s.w
 space. Body pale green
 marked as before
 in short blackish
 fine: scar. L. 9 mm
 Molt June 29 Hd much
 as before the marks over
 eyes connected with the
 one above it. All somewhat
 enlarged and with
 mottling between. Jaws

SATURDAY, DECEMBER 2, 1876.

brown. Body green, marked
 as before the base of
 cervical spot continued in
 brown. 5d line wanting
 but a trace of it forms
 a border to the patch
 on 8c9. Patch on 11.5d
 larger. furcate in front
 narrowly separated from
 brown spot over 3d wart.
 W. Hd. 1.5 mm (should be
 larger as contrasted by
 old head shed late)

335 (BB104 cont)

SUNDAY, DECEMBER 3, 1876.

On poplar (big leaf) June 27
1896. Sit on dirty web by
fence on under side. &
head pale greenish yellow
eyes black. M. 1.1 mm.
Body pale green above
darker on dorsum with
a broad greenish yellow
s-d line. Feet tipped
faintly brownish.

Molt June 29. As before
head dull, perhaps
minutely punctured. M.
pale W. 1.2 mm. Body
as before Length 7 mm
Molt July 3. Hd. much
dpl & smooth. Feet

336 5-52 long short 336

MONDAY, DECEMBER 4, 1876.

Shiny, fair, pale, eyes black
as 1st inst. Body ~~white~~
green with broad s-d
yellow line. L 12 mm.
Molt July 7. Hd. round,
cuticles deep, pale green
above, greenish minutely
punctured. Mouth & palpi pale W. 2.7
Body leaf green a broad
2-d yellow band, on
a spot & anal plate
with a little flat, exposed
so it anal segs. when
distended turn black
sideways to touch j 10
thinks that j 9 & 10 each
way, hd held flat. white
band - 3rd. band on 2-4

338

(BB110000) fd

TUESDAY, DECEMBER 5, 1876.

the sutures in ^{also} red
 labrum & palpi pale
 eyes black. W 1.7 mm
 2nd ^{are} on joint 2. These
 spread, wide, punc-
 tured. Markings much
 as in last stage. A fine
 a dorsal yellow band
 forming a patch on
 joint 2, narrowing to
 a point on 3 & 4,
 widening again on 5, 6, 7 &
 on 8 ending triangularly
 begins again in the
 middle of 9 & widening
 on 10 & 11 where it
 ends abruptly.

Another of Cornus ³³⁹
 June 9. Hd 1.5 mm (as this)

WEDNESDAY, DECEMBER 6, 1876.

excavated as that the
 branches in 2 points. It is
 very narrowly & faintly
 continued on joint 12 & 13
 and is broader on both
 sides to a broad white
 and broad which contains
 fine yellow streaks and
 is continued ^{twice} down
 to the feet on joints 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

Another 4 on hickory, 2 on
 Co June 29, Head 2.6 mm
 *guate 2.5, less 3. **3.5+, 4-

THURSDAY, DECEMBER 7, 1876.

Head shaped as before
^{dark} brown the indented
 band in front. ^{pinkish}
 D plate white. Palpi yellow
 the hd. shows a darker
 band posteriorly to the ^{an}
 as before. ^{W 2.1-2.6 Body} ³⁻
 spurred cervical horns
 red horn, punctured
 & tipped with a hair
 only about $1\frac{1}{2}$ mm long
 Body leaf green, the
 dorsal band yellow
 between the horns, elsewhere
 white, distinct. It widens
 posteriorly to joint 7, narrows
 abruptly to a point on 8.

FRIDAY, DECEMBER 8, 1876.

Nearly cylindrical, enlarged
^{arched} dorsally at joints 8 & 9
 & tapering thence to j 13
 Anal feet long, not
 used usually in walking
 begin again on 9, widening
 to 11 where it divides
 into 2 parts which meet
 at ^{the} anal plate, enclosing
 an elongated oval of the
 ground color. Anal feet
 white above, ^{spots} brown below
 Three lateral ^{spots} horns
 mottled with yellow
 first oblique on joint
 4 & 5, narrow; second
 on 7 & partly on 8 & large

SATURDAY, DECEMBER 9, 1876.

extending from dorsal
band onto foot & 7
darken substantially;
third smaller on 10,
a little oblique, not
reaching with foot or
dorsal band. Some
minute black ^{spots} ~~speckles~~
over the lateral region
which is reddish
thruout. feet brown
abd with a fine brown
band. Length 22 mm
[most juv 5, 2 ^{hd} higher
than wide, not flat at
vertex, flattened in
front and at sides]

maxillary much to vertex
apex of lobes pointed

Purplish brown, shagreened, the apex of
lobes black. In front
is a broad pink vertical
stripe a little irregular
in outline very narrowly
divided by the darker
central suture. A plate
white, labium pinkish
jaws black ^{antenn} ~~antennae~~
then conical bases yellow
eyes black. W. 3.3 mm
conical horns absent
their places represented
by a pair of ^{of} minute tubercles
bearing a single hair
Body is small at

343 furnished with fimbriae at the end
 but there can be with drawn
 within the ends of the legs
 MONDAY, DECEMBER 11, 1876.

joint 5 & 6 enlarged
 especially at 8 & 9 and
 slopes again to 13
 anal feet held out
 straight, rather long.
 a white dorsal stripe
 finely margined with
 dark brown and
 containing in its widest
 places a fine double
 line, it is yellowish
 ant. on 12, wider on
 4, 5 & 6 and wide on
 8, begins on 9 yellowish
 widens, forks on 11
 the parts converging on
 13 and passing over

especially the upper part 344
 or the 2 last patches
 TUESDAY, DECEMBER 12, 1876.

anal feet but not 3
 meeting. Body legs grey
 with many small black
 dots and 3 purple brown
 lateral patches mottled
 with crimson or pale
 crimson, ^{which later becomes} ^{or cream} ^{4 & 5}
 upwardly oblique, covering
 spiracle on 5; second
 large on 7 & 8, ^{reaching} ^{attaining} covering
 feet on 7, not below
 spiracle on 8. ^{reaching} ^{attaining}
 dorsal band; third
 on 10, covering spiracle
 downwardly ^{passing} ^{the} oblique
 feet purplish, ^{the} ^{passing} ^{the}

X 30 pt 20 Hel 3.8 Patch on 6

WEDNESDAY, DECEMBER 13, 1876.

~~hollow~~ brown ringed
with black, and tipped
with brown. Spracles
yellowish centrally,
broadly brown outwardly,
~~disappearing~~ yellowish.
As the stage advances a
diffuse white sd band
appears on joints 8, 9 & 10
tapering at each end,
forming a continuation
of the widest places of the
dorsal band but narrowly
separated from it ^{or only partly confluent}. Also
a narrow white dorsal
line encroaches on the
anterior part of the green

THURSDAY, DECEMBER 14, 1876.

patch formed by the fru-
cation of the dorsal
band on joints 11 & 12
while the anal plate
between the humerus is
brown. The fine line is
the white dorsal band
become pulverulent,
approaching in appearance
the membrane black spot
of the body. In the upper
of third lateral patch a
clean colored round spot
is formed ^{by} ^{confluence} from the meeting
The white dorsal marks
leave on joints 8 & 9 a
green ~~X~~ and on 11, 12 & 13

347 Fine very short hair from
minute warts seeds with

FRIDAY, DECEMBER 15, 1876.

a green ~~which appears~~
rather darker than the
rest of the ground color
2.30 mm. When ready
for pupation the color
faded to dull purplish
in the back. July 7.
(the pale lateral marks
almost all yellow or cream
color) Coon under subbr.
at ex. just under surface
germinia of silk and
green of eggs, thin.
Pupa of cylindrical and
slightly tapering. Cremaster
is two thirds arising from
an elevated base.

a lens

348

SATURDAY, DECEMBER 16, 1876.

Hd scale 7 1.1 1.7 2.6 (3.9)
do for rest (.5) (.8) (1.3) 2.1 3.3
curving sharply outward
and beset with several
thorn like branches
Hd. punctured, coarse
smooth, color dark
red brown, shiny.
Length about 20 mm
width 6 mm
Snaps July 26, 8
Cat. no. 5166

cpd

Heterocampa
richotula Hagen
no - biundata! (1895)

359 (BB 52 cont)

SUNDAY, DECEMBER 17, 1876.

Egg laid in batch 9360
on under side leaf which is
cylindrical, the base a
little hollowed, the top
rounded. Pale gray, the
top white with a round
black spot in the center
diam. 6 mm, Height 7 mm
2nd stage 1st. Hd, c-spot,
anal plate & thorax, feet
black & shiny. W. 1.6 mm.
Body pale whitish, with
red brown lines, dorsal
broad, 3 lateral & ventral
the venter on 2-4 all
red brown, leaving 4
lateral & 3 ventral lines

5.9 1.6 2.7 4.3

360

MONDAY, DECEMBER 18, 1876.

9 ground color, pale and
hardly well separated
3rd July 17. Hd black &
shiny, a few long white
hairs. W. 1.6 mm. Body
purple and with 4 narrow
obscure pale lateral
lines. Feet, c-spot & anal
plate black. Some long
white hairs, especially
from joint 2.
W. 2.7 mm. Hd high
than wide, the antenae
deep, black shiny, apically
punctured sparsely (3-2.7)
a few long white hairs
Body livid, purplish

222 departed at 2.15 am above

TUESDAY, DECEMBER 19, 1876.

red, with 4 lateral
faint interrupted narrow
white lines. Many
long white hair
C-spot, anal plate &
leg shining black.
Hd. black, palpi
shiny, punctured, (4+, 4½)
labrum pale W. 4.3 mm
Body black, stripes much
narrower than white
very sparse, ~~absent~~
except ^{traces of} sub-stig. white
hair abundant, white
growing from many very
minute tubercles.
C-spot, anal plate, feet

continues 4-12

302

WEDNESDAY, DECEMBER 20, 1876.

spiracles black the
latter with a pale
central line. anal feet
represented by short
blunt elevations. abd
feet reddish & centrally
extended ground. Aug 5
some of them, others later
Pupa cylindrical, abd more
slender than body, gently
lumpy. a large hairy area
manifest between the legs
Cremaster 2 short conical
elevations each with 2 sharp
diverging spines. color
dark red brown almost first
black on head. Shiny
body heavily punctured, case
closely but finely wrinkled
L. 12 W. 6.5 mm.

352 in 10 (BB 72 cont) (1.5-1.5-1.5)

THURSDAY, DECEMBER 21, 1876.

[Hatched 55 days] Spiny wood 1896
 July 17 deffer from above. Hd
 blotched, plates faint, lobes
 conical, pointed. Scamulata
 dark brown granular, pale
 pale streak above a plate.
 Body brown, wrinkled & gran-
 ulated dark brown, gran-
 ular (S. d. s. p.) 5-13 is yellowish
 brown, the process on 4 and
 a space on 8 & d dark velvety
 blackish brown. Tail with
 granulate with pale
 spinose as is process on 4-
 3. Hatched July 22 Hd, velvety
 the tips conical, spinose.
 Scamulated, the granular
 Hel 2.2 (See hr 16)

name of described 354

FRIDAY, DECEMBER 22, 1876.

Contents of caterpillar
 description.

- BB1 Parasa paterina
 2 Acronycta impeta
 3 Lolyte daricis
 4 Lirucodes scapha
 5 Eulea querceti
 6 Apateles torrefacta
 7 = 86
 7 Dasylolpha anguina
 8 Acronycta lobeliae
 9 Adoneta spinuloides
 10, 13 Heterocampa manto
 11 Tortricidea testacea
 12 Lirucodes fasciola
 Pectanodes albipunctata
 14 Synchlora rubivora

SATURDAY, DECEMBER 23, 1876.

- 15 *Acronycta*
- 16 *Meris bidentata*
- 17 *Hemaris*
- 18 *Endropia hypochlaria*
- 19
- 20 *Ademania basia*
- 21
- 22 *Sphinx halimae*
- 23 = 17
- 24
- 25 *Nadata gibbosa*
- 26
- 27 *Argyria nova*
- 28 = 29
- 29 *Grapha interrogatoris*
- 30 *Apotele oblinita*
- 31 *Anisota pellucida*

SUNDAY, DECEMBER 24, 1876.

- 32
- 33 *Melitaea chaeton*
- 34 *Parorgyia clintonii?*
- 35 *Scopelogona moffattiana*
- 36
- 37 *Chrysomela discolor*
- 38 *Zhyatris prudens*
- 39 *Viola sexmaculata*
- 40 *Heterocampa guttivitta*
- 41 *Demas propinqua?*
- 42 *Euphonia rufescens*
- 43 *Melitaea chaeton?*
- 44 *Crococia ferridana*
- 45 *Grapha var umbrosa*
- 46 *Ademania concinna*
- 47 *Spilosoma nana*
- 48 *Sphinx luscitiosa*

MONDAY, DECEMBER 25, 1876.

49 = 59

50 *Pyrausta* Do51 *Thyrens Abbottii*52 *Datana entylocerina*

53

54 *Datana Augustin*55 *Epilwoma acerata* (?)56 *Platyparnia promethia*57 *Oxygia definita*58 *Limacodes indurata*59 *Mamestra confusa*

60

61 *Pyrausta atalanta*

62 = 8

63

64 = 110

65

TUESDAY, DECEMBER 26, 1876.

66

67 *Hydra undulata*

68

69

70 *Datana floridana* ^{palmii} ?71 *Eupta communis*72 *Dryopteris rosea*73 *Meditaea Pleuron* ?74 *Eugonia alpinaria*

75

76 *Edema*

77

78 *Mamestra adjuncta*79 *Telema pulcherrima*

80

81 *Datana anaxos*82 *Harpypia multiscipula* ?83 *Harpypia occidentalis*

WEDNESDAY, DECEMBER 27, 1876.

- 83 *Limerithus geminatus*
 84 *Datana perapicua*
 85
 86 *Harmocidus sexguttatus*
 87
 88 *Schizodonta bilineata*
 89 *Hymen undulosa*
 90 *Endrobia stercoraria*?
 91 *Ichthyura albosigma*
 92 = 91
 93
 94
 95 *Schizana ipomoeae*
 96 *Centoclea cerogama*
 97 *Pyroplisa popillivora*
 98 *Epantia sericea*
 99 *Edema*

THURSDAY, DECEMBER 28, 1876.

- 100 *Euplexia lucifera*
 101 *Tarache exastroides*
 102 *Angerona crocota*
 103 *Apatela noctivaga*
 104 *Euplexia trilineata*
 105 *Ganassa lignicolor*
 106
 107 *Dasytrophia cingula*
 108 *Datana contracta*
 109 *Datana Augusti*
 110 *Heterocampa bimaculata*
 111 *Datana major*
 112 = 104
 113 *Raphia frater*
 114 *Heterocampa marshalli*
 115 *Madeta gibbosa*
 116 *Notodontia stragula*

FRIDAY, DECEMBER 29, 1876.

- 117 *Apateles tritona*
 118
 119 *Cheraden deridans*
 120 *Colletes unicornis*
 121 *Colletes geminata*
 122 *Arctia anthracina*?
 123 *Caesia imperialis*
 124 *Dactynotus dreyeri*
 125
 126
 127 *Alysiid octonacutata*
 128
 129
 130
 131 *Sphinx calumina*
 132 *Agraulis vanillae*
 133

SATURDAY, DECEMBER 30, 1876.

- 134 *Zeilephila lineata*
 135 *Limnitis loganiana*
 136
 137
 138
 139 *Arctia docta*
 140 *Pyrausta caryae*
 141
 142 *Plusia californica*
 143 *Cerura cinereoides*
 144 *Anachis picta*
 145 *Triptogon imperator*
 146
 147
 148 *Hyphantria annexa*
 149 *Nola lyemalis*
 150

SUNDAY, DECEMBER 31, 1876.

- 151
- 152 *Caecilia imperialis*
- 153 *Edema*
- 154 *Exanthema Scribneri*
- 155 *Elaphonota* ellis
- 156 *Eudamus pecten*
- 157 *Meris monniste*

(For *Apatelide angelica*
see Aug 21.)

3

Peter, Dyer, 1812