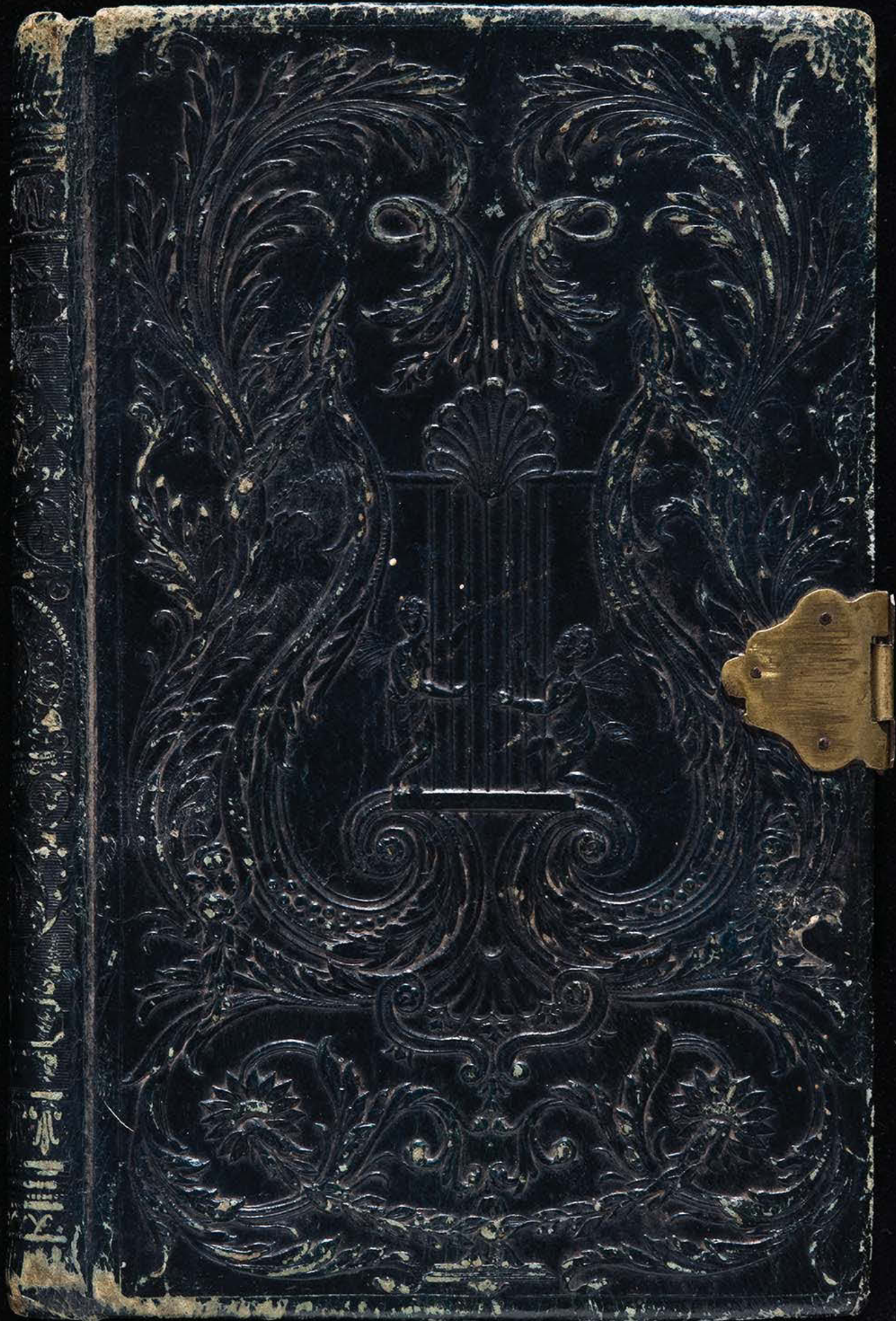




W. Scott

1.
Num. Found on the 8th Decr 1838
a pale green grub 3 line! long -
on the grape leaves - on the follow-
ing day it turned to a black brown
color, and about 2 o'clock it
began to spin, joining leaves
together strongly by threads -
the Chrysalis had no other co-
vering - On the 14 Decr I
took the Chrysalis out of its
habitation and placed it in
bran -

No 1. is the exact size and
appearance of this Chrysalis.
which on the 3rd Jan^y 1839
turned to a beautiful Sphinx Moth.

No 2 represents the exact
size and appearance of this
Moth, taken the day after
its birth - This Moth is very
brilliant with Silver & Gold
Stripes

(2) stripes and edgings, particu-
larly by candle light. Its
flight is strong, and with a
humming noise. MS

No. 3. The above Moth at rest. (F. 3) 75

16 Dec. 1838. A very hairy
caterpillar, of a brown color
about 2 in. long. Its nest
was first with leaves joined toge-
-ther, then a very soft and strong
cocoon. Cut the chrysalis out
on the 23^d and placed it in
bran.

No. 4. represents the exact size
and appearance of the chrysalis
which on the 2^d Jan. 2. 1839 turned
to a Moth. MS

No 5. is the exact size and
appearance of the Moth.

There are two roundish black
spots, with white centers, on
the under side of each wing

The general color underneath (3)
is similar to Above but darker.

The grub fed upon Dock leaves,
and invariably refused the Vine.

The body of the moth thick &
downy -

No 6. represents a grub of
the natural size and appearance
found on the leaf of the Black Grape
on the 8th Dec. 1838. on the
14 it began to spin, having
attained to the size of 4 Ines and
got much duller in color.

its nest was simply leaves
joined together by a strong
thread - On the 26 Dec. I
took the Chrysalis out and
placed it in bran. The grub
ate voraciously of the Vine leaf.

No 7. represents exact size
and

14)

and appearance of the Chrysalis
of No 6 Grub.

No 8 & 9. Moth of No 8 & 9. -
Turned to a moth 10 Jan 3/39 at
8 P.M. - Very strong on the
wing -

No 10. Chrysalis of a very hairy
brown Caterpillar with an orange
stripe down the back. Caterpillar
out of the Dock, Cabbage and
 Canterbury Bell leaves. Chrysalis
black brown & small. Turned
to the above state 24 Jan 3/1839.
I was placed in bran -

No 11 Moth of the above, on the
5th February 1839 - Drawing
wart size. Body, Saturnine
red with black spots at the
joint. white at the end -

General color of the wings. White
with a slight dash of yellow - and
spotted with dark brown - in rows.
Legs. Sat. red & black at the end.

^{wings}
underneath, white with the slightest ⁽¹⁵⁾
tuff. with a few spots of brown.

Belly the same white with black
spots at the junction with the
red —

No: 12. — Exact size. — Caught
in Sydney 8 Dec/38. — Body
lump black with 5 white spots
on each side at the joints. — Wings
like the Dragon Fly. But the fore
ones with a deep black stripe,
edged with light brown stripes
horizg. on the one side & on the
other round spots of light brown.
The after wings edged with a
broad black stripe. — and all
the wings tipped with jet black
with a yellow spot. The insect
very strong on the wing &
furnished with powerful
rippers —

(9)

agrista. Phalaenoides Glycine

Lewin

No 13.

Grass, covered with small
 thin hairs. 5 yellowish white
 streaks running from head to tail.
 the whole body ~~marked~~ ^{marked} with transverse
 black ^{lines} on a French grey ground.
 between these - Head &ippers
 gamboge, with deep black lines -
 just over the tail, a row of lake
 colored knobs ^{no posterior horn} and here and
 there lake spots over the body
^{chiefly over the legs} drawing exact size - and ^{all the feet yellow}
 turned to the Chrysalis state on
 the 24 Jan^y. 1839. Found in
 great numbers on the grape.

No 14.

Chrysalis of the above, exact
 size - w: drawing - which turned
 to a Butterfly on the 31 Jan^y. 1839
 It formed its cocoon by excavating
 a hollow in the dead ~~log~~ ^{log}, and spun
 the pieces of wood with its web
 over itself -

See No 314.

315-

2 & 316.

195.

(71)

No. 15. Butterfly of the foregoing.

Deep velvet black - with broad
~~transverse~~ stripes of yellow. smaller
stripes near the head of a greenish
color. Body black with sallowish
red stripes. The legs fringed with
the same red. and their tips
alternately black & white -
the tail a fluffy red -

Drawing exact size. the principal
stripes of yellow ought to have
been broader.

No. 16. Aphid found on the
rose tree, Sydney. 22 Feb 1839.

Drawing natural size and appearance.
General color, white & cottony, with
a pinkish streak around the body
the body flattened and the upper
raised in slight lumps. legs
underneath (8). which the insect
moves quickly when detached from
the tree - There were a great
number on the bark. When there

8
animal was squeezed it furnished
a quantity of thick gamboge colored
matter - slightly tinged with red -
the smell was disagreeable and
somewhat like the Bug -

Nos. 17 & 18. Cocoons of the green
Mantis. The one oval shaped
and attached to the branches of
trees or bushes - the other semi
oval - the flat side attached to
the trunks of trees - walls, or
sawn timber -

Sydney. 22 Feb. 1839.

No 17. exact size - No 18 a little
too large -

No 19. Spider found plentifully
in a garden Sydney. It forms
its habitation by joining ^{the edges of} a leaf
strongly together - which shortly
looks like a dead leaf hanging

accidentally on the web.

Inside of the leaf it watches for its prey. - The spider itself is prettily marked. - The drawing is exactly of the size and general appearance -

Sydney 23 Feb 1839.

No 20. - Caught in Sydney, where hundreds are attached to the Rose, Geranium, Legual &c &c. The head, shoulders & part of the body, bright orange color. Marked longitudinally and transversely with broad black stripes. The case is of a tough webby substance spun from the mouth of the animal - to which small twigs of the tree on which it feeds are firmly attached.

10
In climbing it puts its body
about $\frac{1}{2}$ way out of the case
then by suddenly contracting
brings the case nearly to its
head - proceeding slowly
as it were by jerks -

When disturbed it quickly
disappears in the case, and
shuts the mouth firmly -

When at rest, the animal
attaches the mouth of the case
to a branch by means of a
strong web, & closing itself
entirely, hangs to the wind -

The case is with difficulty
cut with scissors, which the
animal can again repair
in a few minutes -

11.
The drawing is of the exact size
but not so well represented, as
it might be. Sydney. 20 Feb 1839.

N^o 21. Insect of a light dirty
chocolate color with a reddish
yellow cross on the back.
Shoulders high & prominent
forming with the head a triangle.

The head & eyes very small.
Antennae about the length of
the insect. Six legs, the hinder
ones very strong. Under part
of the body rather lighter color
with a small red spot just
before the hind leg on each side.

The drawing is of the exact size
and general appearance.

I do not know when the insect
was caught. It was on
26 Feb 1839.

N^o 22. The Insect caught 26 Feb^y 1839. — Body & Head deep shining Black, with six small yellowish white spots at the annulations on each side of body. a few more imperceptible over the thorax.

The legs, Antennae and upper surface Saturnine red. Drawing of exact size and appearance. the projecting kind of stony divides into 3. — The insect is even restless & lively like a hornet. — Caught while sucking a grape. Sydney 26 Feb^y 1839

N^o 23. Beetle from Mrs. S. Collins (common). Case or wings yellow orange with numerous black spots having the appearance of holes, burnt in the case. — Wings ⁽²⁾ light chocolate color. Body ^{body} bright shining green. — Thorax & head Black. — Legs & body underneath

13

Light Mining Beetle, common
exact size - Sydney 27 Feb 1839.

N^o 24. Beetle from Kilda -
Case on wings, deep fawn to
the ends, deep crimson. Two
black marks. the larger one
heart shaped, on the yellow, the
smaller one on the red. There
are two other small black marks
on the sides. Thorax black
with yellow sides. Head black.
Antennae, 11 segments. Legs 1.
Body underneath, a beautiful
shining green.

Common exact size - Kappaian
Sydney. 28 Feb 1839.

N^o 25. Beetle from Kilda.
General color on the upper
side light bistre clouded

regularly with darker.
 under a wing, deep orange
 edged with dark brown.
 upper part of legs tipped
 with orange. — Under
 color, light bistre with a
 slightest yellowish tinge.
 under part of upper wing
 broad patch of yellow.

Drawing of exact size and
 appearance. — Wings
 when stretched out are 8. line.
Sydney 28 Feb'y 1839

N^o 26. *Chrysalis*, supposed
 to be that of N^o 25 *moth*.
 given by Hidd. — The insect
 was dead & therefore the *Chrysalis*;
 is probably much darker than
 when alive —
Hidd. brought it 2 Feb'y 1839

Euctheus. v. n. : 99.

15

No 27. Butterfly brought by
Kidd. 2 March 1839 —

General Color, Black & white.
Upper wings, Black near body then
white, shaded at the tips with
dirty brown, with small bright
yellowish white marks, forming
scollops. Under wings, Black
near body, then white, then to
the tips a broad mark of
deep black velvet. in this
are seven crescent shaped
bright vermilion spots. — these
wings are strongly scoloped
with light yellowish white
marks round the beads. —

Drawing is of natural size
and appearance — the extreme
breadth rather more than 1 1/2 in.
Caught in Botanical Gardens.

Drawn 2 March 1839.
Underneath, exactly the same as above

181 N. 28.

Grub from W. S. S. S.

Length when stretched $3\frac{1}{4}$.

General color, lightish green
with 7 distinct bright lines
on each side, commencing at the
under part from each annu-
lation and terminating at
the back, at the succeeding
one. These marks have a
dark purple line on the upper
side. and between these
the green is strongly tinged
by yellow. the back is light
and purplish tinge.

Prolegs in horn. Hatched and
spring. the hind most feet
red speckled.

Cocoon on the Japanese.

Laid May 3 March 1859

Museum N. 28. died before emerging
to a Chrysalis.

N^o 29. Grub from W^m Scott. (17)
Length rather more than $3\frac{1}{2}$ ins.
Similar to N^o 28. But the colors
more dead - and more purple
on the back and sides. - This grub
had only six white bands.

I should think that the difference
of color arose from this grub being
close upon changing to a chrysalis
state - and that it is probably
the same animal as N^o 29.

Caught on the Jasmine -

15 April 1839. - F.S.

N^o 30. Chrysalis of N^o 20.

General Color. Deep black-brown
and shining. Length 2 ins.

Head etc. $\frac{5}{8}$. Found in W^m Scott's
Garden. 15 April 1839. replaced
it in its case, and put it up on bran.
F.S.

18.

Apr 31. Mantis from a specimen
in a collection at Sydney.

Body of a yellowish brown tinge
head & thorax. brighter yellow.

Wings of a slight crimson tinge
and from tip to tip 2 inch and
in breadth 2. — Two small wings
rather under 2 inch and having
the appearance of clouded brown.
Length from head to end of body.
 $4\frac{1}{8}$ inch. Six legs. 2 fore
& 2 hindmost. $2\frac{1}{2}$ inch long.

Middle ones shorter.

The wings fold under the ~~two~~
somewhat like long thin leaves
ending towards the body with
crimson stripes —

Drawing exact size, and general
appearance. — 13 April 1859
mounted & returned.
A. J. J.

N.º 32

Moth caught in Government Domain
Sedney. 18 March 1889. Expanded
wings upwards of 2 in.
Upper wings. Vandyke Brown with
square & oblong spots of Gold. near
the body, yellow. 2 square spots
also. Yellow — Under wings, black
with a broad yellow mark
and scalloped with yellow.
Under side of upper wings. of
a yellowish burnt Umber. with
several square marks of Gold.
(the ones above showing through) —
Under side of under wing, yellowish
burnt Umber. with 5 distinct
round spots of white edged with
blue & black. — Body black &
yellow alternate stripes. Tail
yellow — Thorax greenish brown
& fluffy. Eyes prominent & black.
Antennae long and thickened at
the tip with a crimson hook.
Legs yellowish brown. —

20.

Drawing exact size & appearance
at rest — F.S.

No. 33. The same as the above
altho' rather smaller. — wings
expanded — F.S.

No. 34. Beetle from Mr. Scott.
Cass wings, bright light green
head & thorax, golden yellow.
Legs ~~and~~ reddish brown.
Drawing exact size & appearance.
Sedney 1 March 1839.
F.S.

No. 35.

Cass wings & thorax bright black
Black with yellow hummocks.
Antennae small, thin, & black.
Legs black. Wings light brown.
Drawing exact size — but the
yellow, not true as bright
Sedney L. Spring 2 March 1839
F.S.

No. 36. Butterfly - under side -

Tip to tip. $3\frac{1}{4}$ in. Under side of
upper wing - black. with an
irregular grey mark and
towards the tips broad yellow
spots - Under wing, black
with several grey stripes (curved),
and a continuous row of dark
red spots, meeting at the thorax.
These red spots are so prominent
- that the butterfly can easily
be distinguished -

Drawing exact size and ap-
pearance - 4 March 1889.
F. S.

No. 37. The upper side of the
above. Upper & under wings
of a dirty yellowish white. tipped
with a broad stripe of black.
In the black of the upper
wing are a row of yellow spots.
Drawing exact size & appearance
4 March 1889. F. S.

N^o 38. Grub found in Sydney on
the acacia. light green all over
length $5/8$ inc. - Mar. 1839. F.S.
drawing exact size & appearance

N^o 39. Chrysalis of the above.
brown - $3/8$ inc length.
drawing exact size & appearance.
Sydney Mar. 1839

N^o 40. Moth of the above.
General color above, light
yellow below with small
black spots all over. head
very pointed. antennae yellow.
drawing exact size & appearance.
length $1/2$ inc. - 12 March 1839
F.S.

N^o 41. Grasshopper. Flag Staff
Sydney 10 March 1839.
Upper wings speckled brown
Under wings yellow toward
the body. fringed by a broad stripe
of brown. tips white, slightly

speckled brown. Head salmon²³
color with brown marks. Antennae
small & brown. Legs, slightly
pink. Drawing exact size
& general appearance. Altho a
small specimen. F. S.

N^o 42. Butterfly from Kidd.
common in Lymington. General
color, deep black. with a
white band, above & below, up
wing. upper part of under wing
with a broad patch of greenish
white & one red spot. under
side of ab. 7 crescent shaped
crimson marks. wings
holloped & tipped at the leading
with white. Drawing exact
size & appearance.
13 March 1839 M. S.

(24)

(43). Similar to No 20. but smaller and insect of different color. Head yellowish, speckled black. at each annulation black stripes, on a whitish ground. The small wings attached to the case appear in all the specimens to be of the whole length of the case & not of different lengths as in No 20. —

Sydney 21 March 1839.

Drawing exact size & appearance
F.V.

(44). *Scutigerella Araneoides*.

Caught in Sydney 7 March 1839.

Comes out in night time and
crawls & eat flies: & runs
very swiftly.

Drawing exact size & appearance
altho a small specimen.

The insect had a very disagreeable

able small -

F.S. (25)

(45) - Locust - from Kida.
Body black with red stripe
on each side a red bladder.
Thorax black, singularly marked
with light yellow. Head black
speckled red & yellow. Wings
fibrous part yellow ochre.
Drawing exact size & appearance.
Sydney 15 March 1839. F.S.

N^o 46 Moth from Mr Scott
irregular like a shawl. Antennae
large & feathery. Colors strongly
marked & distinct. Span of
upper wing $6\frac{1}{4}$ ins. Length
from head to tail $2\frac{1}{2}$ ins.

Supposed to be male of N^o 47.
Sydney 18 April 1839. Drawing
exact size & appearance. M.S.

(20)

No. 47. Moth from Mr Scott -
of a shawl pattern but much
paler & delicate, than No 46.
and the Inset much larger.
Antennae feathery but very thin.
Span of upper wings $7\frac{1}{8}$ In.
Body from head to tail $2\frac{1}{4}$ In.
Supposed to be female of No 46.
Drawing exact size & appearance
Sydney 18 April 1839 - F.S.

No 48. Butterfly caught in
Mr Scott's Garden. Sydney 4 May
1839 - Back ^{upper wings} dull white, marked
at the end, with black, forming
oblong white marks. Under
side white, slightly tipped with
black - Underneath upper
wings - black with distinct
white marks, & near the body
bright yellow in the white.

under wings. Hornish black / dorsal,
with 6 yellow spots towards margin
& a small bright stripe of yellow
towards thorax - One white spot
near the center

N^o 49. The same Butterfly. Showing
The underneath view N^o 49
giving the upper - Drawings
of exact sized appearance

N^o 50 Butterfly caught in Sydney
16 May 1839. Upper part of upper
wings dull white tipped with black
leaving white marks. Sc of under
wings. All white, very slightly
edged with black - Under part
of upper wings black with a
broad yellow stripe towards the
top - Sc of under wings clings
black with a vermilion stain
forming on both wings a line and
the red is relieved on the inside

28) by deep black - The upper
part of the Butterfly very
similar to the upper part of
48 - Drawings exact size &
appearance. Fmt. v. no 236.

No 51. Same butterfly, giving
view of upper side - No 50 that
of underneath. F.S.

No 52. Butterfly from Mrs. Clark's
collection - Upper part of
upper wings, light bright brown
with broad bright patch of yellow
nearly center on each wing -
of 2 spots of small blue, the
one near the yellow much larger
than that near the tip. Likewise
the slope of yellow a little nearer
the tip of wing than the broad patch.
Upper part of under wings
same brown with one spot on
each wing of bright red in the

29

The Center - these wings slightly
scolloped ^{with more} ~~scolloped~~ ^{sappin} ~~sappin~~ M.S.
Specimen having been destroyed, the
under part is described & illustrated
hereafter. Having exact size
and appearance - & drawn
23 April 1839. H.B. Walker

1353 Butterfly from Mr. L. S. L.
Collection - Upper part of wings
pudic yellow marked irregular
with brown stripes. 4 spots
shot with white center, one on
each wing. Under wings slightly
scolloped. Under side of
pale color & less distinctly
marked the spots showing the
under part of under wings
in lines with brown. H.B.
Walker. Drawn 23
1839. & exact size & appearance.

30. see no. 293.

No 54. Moth from Mr. Cott's
collection - Hab. unknown -
Upper part of upper wings light
Vandyke brown (clouded) with
a large triangular patch of
darker, on each wing -
Upper part of under wings
about $\frac{1}{2}$ of dark yellow, toward
the thorax - & the remainder dark
brown - Body large & light
yellowish brown - Head & thorax
green brown & hairy -
Drawing exact size & appearance
underneath of a pale color -
Upper wings at the root
yellow - under part of body
white - F.S.

No 55. Moth similar to No 50:
but a difference in color - A great
number of small chrysalis &
Caterpillars found on different
plants, have come to these kinds.

of moths, varying only & that slightly
 in coloring & marking - the two
 nos 40 & 55 may be taken as extreme
 the Chrysalis, when newly turned
 is towards the head, green -
 from nature 30 April 1839 - Sydney.
 Drawing exact size & appearance -
 Moths readily fed on drops of
 saccharine water thrown on grass.
 Heavy & stupid during day but
 restless at night. — F.S.

No 56 Caterpillar found on
 Orange tree.

No 57 Chrysalis of do.

No 58 Caterpillar found on an
 Acacia.

No 59 Chrysalis of do.

The moths of Nos 57 & 59 resemble
 to No 40 & 55. slightly differing
 in markings & from each other
 their eggs of a green color.

These Caterpillars make their nest by a slight web. They remain only 3 or 4 days in the Chrysalis state. The Caterpillars make itself an habitation by joining the ends of green leaves together by a web from which it comes up at pleasure. When disturbed it suspended itself by a thread (like a spider).

- No 80. and . . . V
 No 81. Moth. Male & Female.
 Caught in Sydney 22 April 1839.
 Drawings of general appearance.
 The No 80 a little larger & darker colored. This generally kept its body greatly turned up. — M. & S.
 No 82. Moth very common. a light blue color. Very delicate.
 Caught in Sydney 22 April 1839.
 Drawings of adult size & (No 81).
 appearance.

No 63. Beetle

From Mr. Schott's collection
Nat. unknown. Drawing
rather large but of general ap-
pearance. Drawn 1 May
1839.

No 64. From Mr. Schott's Bay.

Drawing exact size & appearance
Drawn 8 May 1839.

No 65. Spider & its egg case.

This spider was found under
Acacia 22 May 1839. It lay
upon 3 round black colored
containing eggs. & attached to
each other & to the tree trunk
by dirty colored web. The
animal itself on the back
sides appeared crystalline
& like a crab. Drawing
exact size & appearance.

L. disturbed

As the Spider was taken in
the act of spinning it is pro-
bably that the whole process
is not completed - From
nature - Sydney - F.S.

No 66. Beetle from Mr. Cott's
collection - Vivid bluish green
with deep black alternately in
small squares - Legs & under
the body lighter green -
Drawn 24 May 1839 - From
General appearance & legs
Arculus Spectabilis - F.S.

No 67. Caterpillar found on an
Acacia in Mr. L. garden. Upper
side convex. General color dirty
green with 2 raised spots to each
annulation, on each side - Hind
nippers much divided like the tail
of a fish - Under side quite
flat, so adhere strongly to the stem.

with 4 deep red circular spots between
the hind feet - several lighter red
spots towards the head. A streak
towards the tail - connected by a
lightish ^{pencil} blue streak from head to
tail - The legs & the root are
bright yellow & at the tip greenish -
this insect is strongly puffed
with hair round the body, having
the appearance of Wasp - It is
probable Plate 5 of Larva is a
similar insect - (Bombyx Navia)

This caterpillar was exceedingly
sluggish - scarcely moving for
days from the spot on which it
was placed - but when touched
withed quickly & suddenly. It
was unfortunately destroyed by
the larva No 59 - being confused
with it & found in the morning
with No 60 eating it - Drawn
of exact size & appearance

No 67 upper side & 68 under
side - Drawn Sydney 21 May 1839
A.P.

No 68. Under side of No 67.

No 69. Larva found on a geranium Botanical Garden Sydney. 20 April 1839. Drawn 7 May. * it went under ground on the 12 May/39. forming a covering with sutures matter & earth - General color green with 2 stripes of dull white edged on the upper side with dark brown - several small black spots to each annulation - 2 orange colored spots towards the head on each side - This grub destroyed No 67. by eating it - see 70 F.S.

No 70. Chrysalis of the above. was taken from the earth ~~the~~ & cut out of its Case 19 June. ¹⁸³⁹ of a clear light brown color. see 71

No 71. Moth of the above of a rich brown color with a yellowish border - & marked with dark brown upper wings, light color with

a darker edging leaving 2 ³⁷
small white spots at the tip -
The drawing is of exact size &
appearance - Represents upper
side - Eyes greenish - Antennae
long & thin - Under side of
a light dirty brown with a
few blackish marks - This
moth came from the Chrysalis
21 June 1839. & drawn 28 Sept.
The larva & chrysalis are of
exact size & appearance. F.S.

No 72. Larva found on a
granum - on the back green-
ish brown with reddish marks.
2 whitish streaks along the
sides - edged with brown -
lower part greenish spotted
white - found April 1839 -
went under ground in 10 May 39
& made its nest similar to No 69.
see No. 73. F.S.

No. 73. Chrysalis of No. 72. taken
from the earth 20 June. of a
clean brown color - see No. 74

No. 74. Moth of the above. of a
light brown color. marked
with dark lines. Eyes greenish,
drawing of 74. 73. 72 exact
size & appearance - These
are very similar to No. 69.
70. & 71. altho the caterpillar
has much more red - This
moth came from the Chrysalis
8 Augt 1839. F.S.

No. 75. Larva found on the
Trumpet Flower & Geranium
and other plants. in May/39.
General color light green striped
longitudinally. with a black spot
on each side of each annulation.
It has but 12 feet being 4 less
than No. 69. & 72 - and when
moving from place to place

39

doubled its body by bringing
the hinder parts, close to the
front & so on - It frequently
kept its body extended from
the branch as if a twig -
on the 31st May it spun a fine
white transparent web, in
which it became a Chrysalis.
The Chrysalis is seen thro' this
web - Drawing exact size
& appearance - v. no 76. F.S.

no 76. Chrysalis of the above
was of a greenish brown color.
See the drawing - A F.S.

no 77. Moth from the above
took wing on the 5 July, 1839.
This moth is of a singular
appearance - The general
color is a dark brown bronze.
with two spots of silver on each

wing - the anterior one is like a hook - on the thorax is a triangular raised rug which the insect can raise & depress at pleasure. & towards the head two circular raised pincers. on the back there is another raised rug smaller than the one on the thorax, but still very distinct. Antennae long & thin -

Drawing of exact size & appearance - M.S.

No 7 & 8. Caterpillars of nos 10 & 11. General color dark brown & hairy all over. yellow orange stripe down the back, & smaller ones on each side - Fed on the Litch Calvage. Sm. - ~~Back~~ skin

These Caterpillars came from
 the egg 26 April 1839. very
 small, whitish with black heads.
 on the 12 May it cast its skin
 & again a few days afterwards
 becoming at each change more
 hairy & darker color - it
 began to spin on the 4 June.
 lining the inside with the
 hairs from the body - The
 moth took wing on the 30
 August - v. p. 4. - awl.
Exact size

N^o 79. Under view of the
 Moth N^o 11. & of the above
 caterpillar - Male - known
 by the antennae & rather darker
 spots - Sydney 4 Sept. 1839.
 Exact size & appearance.
 F.

No 80. Larva found on the
 Dahlia - fed on other plants
 likewise - general color reddish
 brown, deeply marked on
 each side - ~~found~~ drawn
 21 May 1839. & went under
 ground 23 May - forming
 its nest by glutinous matter
 & earth - drawing exact size
 & appearance. F.S.

No 81. Chrysalis of the above
 taken on the 4 June 1839. of a
 light bright brown - exact size
 F.S.

No 82. Moth of the above
 born on the 10 July 1839.
 upper wings of a greenish
 brown hue - regularly marked
 with brown streaks - Under
 wings of a lighter color inclining

No 82. with a dark ^{broad} band 43.
toward the edge - body much
longer than the expanded wing
& of a light color. Eyes green
with long thin antennae -
drawing of exact size & appearance
F.S.

No 83. Larva found on the
Cabbage 20 April 1839 - brown
on the back & green belly divided
by a white longitudinal stripe
edged with dark brown above
drawing exact size & appearance
various under ground. v. 80. F.S.

No 84. Chrysalis of the above
of a bright glossy trans parent
brown - turned to a Chrysalis
on the 1st May 1839. F.S.

No 85. Moth of the above.
took wing 12 May 1839. - General
color yellowish brown. Speckled
2 broad transverse dark brown
bands on each wing, with 2

white spots between - antennae
long & thin - of a yellowish color
drawing exact size & appearance -

No 86. Moth from a similar
larva to the above No 83.

General color upper wings
light straw, speckled with
minute black spots - under
wings of a paler tinge -
from several of the larvae
No 83. Moths similar to
this & to No 85 appeared, so
that it is probable they
are male & female -
drawing exact size & appearance -
Sydney 24 Jan, 1839 - J.S.

No 87. *Papilio Itea*. Donor on
upper side - drawing of exact
size & appearance - caught
in Sydney 17 July 1839 -
J.S.

No 88. Papilio Itea -

45

under view - exact size & appearance - 17 July 1839 - F.S.

No 89. Under view of No 82.
light reddish brown - under
part of ~~upper~~ upper wing 3
broadish black marks - on each
side - the broad mark on under
side of under wing - as if showing
thru from upper side - body
light colored - drawn 12 Sept/39
exact size & appearance - F.S.
v: Nos 80 - 81 - 82.

No 90. Chrysalis of the Male
Diketicus. of a dark black
chocolate color. Then and
pointed at the end - turned
a Chrysalis on the 15 July/39
MS

No 91 Male Diketicus

No 92. Do -

Took wing on the 11 Sept/39
head & thorax bright yellow

46.

Body & wings jet black.
Tail yellow, annulations
tipped with jet black.
Antennae feathery & black
fore legs upper part yellow
& fluffy. remainder black.
This insect has a bluff
appearance about the head
& somewhat resembles an
owl. It has the power
of elongating its body &
tail to a considerable
length. & recurves it con-
tinually. (see 92) The
motion of the wings so
quick, as to render them
invisible. It soon destroys
its plumage by its belching
and violent motions.

(47)
See. Rev. L. Guilding's West India
Orbicular. Trans. Linn. Society
vol. 15. p. 371 - F.S.

No 93. Case of the Male
Orbicular - showing the female
affixment to a stem, previous
to changing to the Chrysalis
state, and likewise the me-
thod of its escape to the
winged state with the
remains of the shell -
the whole of the above taken
from nature & of exact size
& appearance - F.S.

No 94. The Larva of the
Female Orbicular. The
color of the insect of that part
which is seen when crawling
of a bright deep yellow with

48.

deep black longitudinal stripes
feet six & strong and of a
vermilion color. Of that
part usually within the
case. of a brown pink -
with a yellow ^{strip} on each side
& yellow spot with a black
circle. Not to each annulus
10 feet, yellowish - on the
tail part a vermilion spot.
drawing exact size & appearance
drawn. 12 Aug^t 1839. F.V.

No 95. Chrysalis of the
Female Octelocara. Head
of a Saturnia and with a
little yellow, showing the
head & front feet of the Anis.

Mal. Body of a black red.
 & much lighter red between
 Annulations. Light spots
 near the under part on
 each side & ^{on each annth} small black
 ones above — Drawing of
 exact size & appearance
 Drawn 17 Sept. 1889. F.S.

No 96 Female Sketches
 of a semi transparent
 yellowish hue — perfectly
 apterous — the lower part of
 the body continually working
 about — toward the end a
 broad ring of soft straight
 silvery brown hair —
 and one bright spot of the

same on the belly - and a
 patch of lighter do on
 each side where the front
 feet are - on the side of
 the neck, the color is of
 a lighter yellow - the
 Female is much larger
 than the male - the
 inside of this insect
 could be plainly seen
 it is so transparent -

drawing of exact size &
 appearance - became
 the perfect insect 21
 Sept. 1839. Several
 males & females came
 out about the same period.

this female kept alive
for several days, when it
deposited its egg, and
died - It has no power of
leaving its case. L.S.

No 97. Larva, ^{female} found on a rose.
Sydney. 16 Sept 1839. of a
bright gay color, on the shoulder
four hairy tufts - & one on the
tail. between these, two fleshy
red spikes - Antennae long &
hairy, ended by a black patch.
Insect hairy & with red feet.
Drawing of exact size & appearance
L.S.

No 98. Chrysalis of 97.
Short & dumpy, yellowish color
tinged with brown, & covered with
short yellow hairs - black
spot on each annulation.
Turned to a chrysalis 18 Sept 39.

52

No. 99 Nest of the foregoing.
of a light brownish silky white
thru which the Cocoon & yellow
chrysalis could be seen.

18 Sept. 1839. J.S.

No. 100. Female insect.
Apterous - of a round thick
cyl form - covered with light
brown hairs all over. tail
sharp & pointed & moves
continually. Six feet in
the front. Antennae very
small. Insect crawls
very slowly. It changed
from the Chrysalis 23 Sep/39.
Drawing of exact size &
appearance. J.S.

No 101. Moth found at
 Newcastle. 5 Oct 1889
 Upper wings general color
 of a purply brown. a
 peacock eye on each wing
 (upper) & 2 small cobalt blue
 spots on under-wings ~~with~~
 pointed scollops all round.
 marked with dark purple stripes
 purple stripes on each under
 wings about the middle -
 general colour under neck
 dark brown, clouded & dirty
 looking - on the whole a
 handsome Moth. Antennae
 long & thin - Drawing exact
 size & appearance F.S.

54

No 102. Moth caught in
Sydney. 6 Decr 1839.

Upper view - Upper wings
of a brown ground, much
spotted with silver hairs -
two silver patches on each
wing - & tips banded with
silver - under part of
under wings, of a lightish
purple ground, much
darker toward the edges
fringed at the edge with
a yellow stripe - ~~Antennae~~
long & thin - Drawing of
exact size & appearance.
J.S.

No 103. Under view of
the above - similar to the

55

Above but of a duller color.
F.S.

No 104. Butterfly caught in
Sydney 23 Sept. 1839. Upper
side of a brownish yellow -
tips of under wing yellow with
2 black spots on each. Antennae
black & white - exact size &
appearance. M.S.

No 105. Under view of above.
Duller color - with a silver
vein round under wing with
four spots on each - & with
two semicircular stripes of
brown - This Butterfly is
peculiar in the shape of its
under wings - M.S.

56

No 106. Moth Caught in Sydney
14 Sept. 1839. Upper part of
upper wings orange with black
bands, ^{transversely} Under wings light orange
tipped with black - black fringe
round the edges - body upper
part black. Lower orange. head
orange - Drawing of exact size &
appearance. M. S. (Day)

No 107. Same setting - showing
the eggs. Laid on the 14 Sept.
and Larvae were born 16 Oct. 39.
M. S.

No 108. Moth caught in Sydney
17 Sept. 1839. Yellow with
brown bands running parallel
to the edges - head & legs large
& fringed - Antennae clothed
& hooked. Under view.
Size & appearance. M. S.

No 109. Upper view of No 108. *M.S.*

No 110. Green Larva found in
Sydney & drawn 27 Oct 1839.
General color, bright green with
yellowish bands & black spots
between the annulations. fed on
the flower of the Thistle (Son) - and
eat by day. Went underground
28 Oct. and the Chrysalis was
hatched on the 11 Nov. - Drawing
of exact size & general appearance
M.S.

No 111. Chrysalis of the above -
shining brown. Drawing of
exact size & appearance.
M.S.

No 112. Moth of the above
took wing 24 Nov. 1839. Upper
side of upper wing dull lamp
black irregularly marked with
a deeper black. with a very
small white spot on each wing.

58
Upper side of under wing, light
buff with a dark band parallel
to the edge. Under side of
upper wings light dull black
darker towards the edges. Under
side of under wings - band of
dull black of half the wing,
the remainder towards the tip
whitish yellow with a brown
spot in the center. Head,
thorax & body dull black.
Antennae & legs the same
with the exception of hinder
legs, which are spotted with
white. Drawing of exact
size & appearance. Painted
on the 27. Nov. - M.S.

No. 118. Larva of a brown
pink, yellowish underneath.
The brown spotted with white
and the yellow with black.

89

fed on the Convolvulus. drawing
of waist size & appearance. M.S.
found in Sydney. 4 Nov. 39.
made its nest under ground on
the 5 Nov.

N^o 114 Chrysalis of the above
hatched on the 25 Nov.
took wing on the 27. M.S.

N^o 115. Yellowish Brown Larva
yellowish underneath. spotted
above with white & below
with black. fed on the Con-
volvulus. found in Sydney
11 Nov. & hatched same day.
M.S.

N^o 116. Chrysalis of above.
hatched on the 25 Nov. 39 -
took wing on the 30.

The 3 Larvae N^os 113, 114, 115.
altho differing completely in
color & food all turned to the
same moth (N^o 114) which all.

No. 117. Chrysalis of the Sepam in
 Larva No 28. 29. of a reddish
 brown color. The annulations
 decided - with black spots fringed
 with white. Antennae ~~cuticular~~
 in a trunk, outside. & curved under
 neath. & club shaped.
 Drawing of waist size & appearance.

The Larva No 29. went under
 ground 17 April. forming an
 egg shape hollow. & having
 previously smeared itself with
 a glutinous substance.

Chrysalis hatched on the 10 Apr.
 1839.

No 118. Moth of the above.
 took wing on the 20 Oct. 1839
 having laid in the Chrysalis state
 6 months. Upper side of the
 wings white minutely speckled
 with black & clouded with
 light & dark brown. tips white
 with black spots. Head, body
 & legs the same. with 2 distinct

white spots on the back. The general appearance of the moth is as if it had been powdered. Under ^{wings} ~~view~~ darker than upper. Drawing of exact size & appearance painted on the 21 Oct. 1839. M.S.

N^o 119. Under view of the above of a lightish brown dotted over with white - with darker brown stripes parallel to the edges.

Body underneath white. Towards the sides dotted with brown. Altogether a very handsome moth. M.S.

N^o 120. Larva hatched from the egg 23 May 1839 - during the course of its growth it changed its skin 3rd times. - General color dirty brown with black horizontal stripes & one on each side of a lighter

Brown. Arrow shaped black marks along the back, blurred in the angle with white. the head a shining black.

It was reared on the lettuce.

It lived under ground, coming up to feed. On the 6 July it remained under ground altogether hatched on the 3 July 1839. of exact size & general appearance. M.S.

No. 121. Cocoon of the above.
formed with earth agglutinated.
20 Sept. M.S.

No. 122. Chrysalis of the above.
of a light brown color. Hatched
on the 25 Sept. 39 - exact size
and appearance. M.S.

No. 123. Moth of the above
took wing 18 Oct. 39 - Upper
side of upper wings of a shining
black brown - a light band
running parallel, & at a little
distance from the edge. No

light spots in the middle of each wing - the larger ones comma shaped - upper side of under wings of a delicate creamy white darker towards the edges - fringed at the tips - under side of wings bright light brown - This moth has a peculiar ruff over the head. Male & female the same except the ~~abundance~~ ^{marked} of exact size & appearance. F. M. S.

No 124. Larva inhabiting the inside of the branches of the Banksia. having an opening into which it passes to feed, chiefly in the night time - this opening is covered by a cottony substance to which is attached the - forming a bulky appearance on the outside -

Crypsid. Immaculata.

General color of a creamy white with two black transverse stripes on each side & between each annulation. Head of a light shining brown.

This Larva comes entirely at & crawls about the branches. But on the least alarm quickly ~~re-enters~~ enters its abode. The puppers are of considerable strength. Drawing is of exact size & appearance & represents the animal in the groove. Painted on the 19 Oct. 1839. Found at New South. M.S.

No 125. Represents the exterior covering of the abode of No 124. J. M. S.

No 126. Chrysalis: of the above of a light shining brown. Being cases large in proportion to the rest of the body. Painted on the 23 Oct. 1839. J. M. S.

No 127. Moth of the above
 of a delicate silvery white
 above & below. Upper wings
 edged with a slight stripe of
 yellow. Antennae yellowish.
 hatched on the 24 Oct. 1839.
 which day it took wing.
 F. M. S.

No 128. Larva found on the
 , general color light
 brown. 3 white bands at each
 annulation. and a row to each
 of spines, feathered; a white
 streak on each side above the
 legs. Drawing of exact size &
 general appearance. When
 about turning to the Chrysalis
 it attached itself by the tail to
 a branch by a slight web, &
 thrust its head towards the tail
 underneath. hatched 9 Nov 39.
 F. M. S.

No 129. Chrysalis of the foregoing -
 on the morning of the 10th Nov. 39,
 the larva attached itself to the
 branch & in a few hours the
 Chrysalis was complete - green
 color light brown, dotted with gold.
 Chrysalis naked & angular -
 hatched on the 19 Nov. of waxy size
 & appearance — F.M.S.

No 130. Butterfly of the above -
 (Papilio) / took wing on the
 24 Nov. 1839. - Upper wings
 brown towards the tips, colored by
 white spot - towards the base, brown
 with deep yellow band (transverse)
 Under wings, deep yellow towards
 the edges with a row in the middle
 of this yellow of black spots, black
 centers - the yellow zig zags
 towards the body on the brown ground.
 Lower wings scalloped. body
 covered with brown hairs.
~~Painted on the~~ drawing of next

57

Leg. & appearance. M.S.

✓ No. 131. Under view of above.
much clouded by various colors.
very delicate & pretty. M.S.

✓ No. 132. Larva of *Papilio Stea.*
found on the kettle. of a dark
brown color. banded with annu-
lations - & between each a row
of green spikes, feathers, -
much longer & than the head,
hairy - Drawing of exact size
& appearance. drawn on the
17 Nov. 1839. (for Nat. v. 120)
F.M.S.

✓ No. 133. Chrysalis of the above.
very light brown - with gold spots.
similar to 129. but lighter in color.
Larva became a Chrysalis 17 Nov.
hatched 14 Nov. 39. F.M.S.

Mon. Chrysalis No. 133. took wing
on the 1 Dec. 39. (see No. 88.)
No. 45.

68

N^o 134. Larva found on the
Mimosa, Sydney.

General color, speckled brown.
Black & striped longitudinally.
4 or 5 red spots toward the tail
which is ^{some} what like a fish's -

It lies quite flat on the lower
part of the trunk of the tree
during the day. sluggish.

& eats during the night, when
it becomes very lively & active.
with the motions very similar

to the Leech. Underneath
is marked prettily with purple
red spots. upper part of legs
bright yellow. Reared on
the 2 Nov. 39. of exact size
& general appearance. J. W.

N^o 135. Chrysorhis of the above
~~Larva~~
~~the same as above~~

No 135 Chrysalis of No 134 -

Larva made its nest of dried leaves of the Mimosa, joining them together by a slight web - slightly in the form of a cocoon - on the 4 Nov 39 - Chrysalis

hatched on the 14 Nov. general color reddish brown - drawing of exact size - F. M. S.

No 136. Moth of the above, Took wing 13 Decr 1839. general color dark brown - one Peacock's eyes on the middle of each upper wing - A light blue scollop running parallel to the edges of upper & under wings - 4 bright spots in the scollops of the edges of the wings fly by night - Under side of dark light brown - A handsome moth - Drawing of exact size & general appearance - F. M. S.

70

No 137 - Sketch showing the
very hairy legs & thorax & the
foregoing - of a lightish dun color
darker towards the ends. F.M.S.

No 138. Larva found on the
Cabbage - general color bistre
striated longitudinally - head
reddish brown. numerous black
spots between annulations -
Lived under ground, drawing the
Cabbage there to eat during the
day - This Larva had a very
disagreeable odour - hatched
on the 4 Nov: 1839. exact size
& general appearance - F.M.S.

No 139. Chrysalis of the above
turned from the Larva on the
10 Nov: 39 - forming a cell of
agglutinated earth underground
general color bright reddish

71

yellowish brown - painted on the 23rd
exact size - F. M. S.

~~No 140~~ Moth took wing on the
1st Decr/39 - was exactly similar
to No 102. p. 54. which see -

No 140. Larva found on the grass ^{young}
painted on the 2 Nov. 1839.
general color a light bluish black
with a yellow^{ish} longitudinal stripe
above the feet. a whitish line
with black specks running
longitudinally on the middle of each side.
head reddish, spotted black.

Larva smooth & plump. annu-
lations indistinct - fed on grass
went under ground forming
an extremely slight hollow
on the 5 Nov. Larva ^{grew} ^{earlier}
than the painting -

No 141. Chrysalis of the above
painted 16 Nov. 39. of a reddish
brown - exact size. M. S.

72

No 142. Moth of the foregoing -
upper side of upper wing - light
yellow, spotted black, body
same - Under wing much
lighter with a ^{blackish} band - Took
wing on the 7th Dec/39.
Drawing of exact size & appearance
M.S.

No 143. Larva found in the
pod of the Pea. General color
brown - with a dark stripe
along the back & one on each
side nearer the feet. a yellowish
band under this - hatched
on the 2nd Nov/39. - exact size
& appearance - Went under
ground 5 Nov. forming its
nest similar to No 140. M.S.

No 144. Chrysalis hatched on
the 16 Nov/39. Wing cases

lightest - yellowish red - body
brown - Chrysalis remarkable
for its size - being considerably
larger than those of larvae of
equal size - drawing of exact
size & appearance - (see same
specimens) M.S.

✓ No 145. Moth of the above took
wing on the 8 Dec/39. Upper
wings dark yellowish brown
speckled brown - Under wing
same, but much lighter with
a dark band - (similar to No 142)
drawing exact size & appearance M.S.

No 146. Larva found on the
grass. general color brown pink
with a yellowish longitud^l stripe
towards the lower part.
very hairy all over - whitish
hair tufts on each side from
the middle of each annulation

74 painted
~~made its nest~~ on the 17th Sept.
made its nest on the 4 Oct/39.
drawing exact size. M.S.

N^o 147. Cocoon of the above.
thick silky web. like felt -
attached to the leaves or branches.
4 Oct. 1839. — M.S.

N^o 148. Chrysalis of the above
general color brown. tail part
yellowish, thickly spotted with
brown. with a reddish streak
down the belly - drawing exact
size. Chrysalis very inanimate -
painted 8 Oct. 1839. — M.S.

N^o 149. Moth of the above,
took wing 28th Oct/39 - general
color. nankeen. — with two
largeish elongated black marks
in the middle of each of the
upper wings. small black

dots running parallel to the
edges, but at some distance -
antennae very feathery -

Black marks likewise on
the lower wings similar to
the ones on the upper. frequently
these marks are divided, forming
two roundish spots on each wing.

Under sides very similar,
but the spots rounder, & sometimes
with a white center -

Drawing exact size & general
appearance - painted 29 Oct. /39.
m.s.

No 150. Chrysalis of the male
larva of which ^{sp} 97. p. 51. is the
female - Chrysalis very small
in comparison with that of the female
general color brown with yellow
wing cases. the whole fringed
with yellow hairs. Drawing is of
exact size - the larva was similar
to the female but much smaller.
made its nest 17 Oct. then & transpa

76

showing the chrysalis thro'—

Chrysalis painted 23 Oct/39
L.M.S.

157. Moth of the above. male of
no 100 (apterous) — general color
of upper side of upper wings brown,
banded transversely with darker
& relieved with delicate white
spots — Upper part of under
wings, bright yellow, with a
broad black band running paral-
~~lel~~ el with the edge, & leaving a
yellow fringe — legs feathery.
Antennae brown & feathery, like
a reversed cup — This moth
is small but very showy —
Drawing of waist size & general
appearance — took wing on the
29. Oct. 1839. — L.M.S.

No 152. Larva found on the
Marsh Mallow. (native). 9 Nov. 1839
general color. Cream - thickly
dotted brown - drawing of exact size
but ^{rather} too dark - made its nest
under ground. (strongish agglu-
tinated case + 12 Nov 39 - M.S.

No 153. Chrysalis of the above -
lightish brown - painted 25 Nov. 39
exact size - M.S.

No 154. Moth of the above -
took wing 19 Decr 1839. general
color. Bronze - much variegated.
very pretty - exact size & general
appearance drawn 22 Decr 39.
M.S.

No 155. Larva ^{bred} from the
egg & fed in Lettuce - born 1st Oct.
139. general color. Light red, &
black longitudinal stripes. alternately
whitish specks in the black -
tufts of black hair all over -
Antennae of number of black hair

78

a pretty larva - painted 8 Nov^r
1839 - made its nest 1^o Dec^r/39
(exactly 2 months old) a thin
transparent web, showing the
Chrysalis thro' - drawing exact
size & general appearance. F.M.S.

156. Chrysalis of the above, painted
16 Dec^r. 1839. General color
yellow with dark brown marks,
drawing of exact size - M.S.

157. Moth of the above.
Took wing 20 Dec^r/1839 -
General color, deep neutral
tint - with ^a light straw color
patch on each wing - Body,
black with yellow bands.
Antennae very feathery - two
flaps, ^{one} on each side of the shoulder
which can be raised at pleasure.
Wings fringed with yellow -

Drawing of exact size & appearance,
 painted on the 22^d Decr 1839 F.M.S.

No 158. Butterfly found in Sydney
 28 Novr 1839 Indian (common chrysothrix)
 General color, Yellow, tipped
 with black. but more so on the
 upper wings - having yellow
 patches in the black - A round
 black spot, center blue, in one
 of the yellow patches near the
 tip on upper wings - & a
 similar one on each lower
 wing - ~~Under side~~ very
 handsome - Drawing of exact
 size & general appearance -
 F.M.S.

No 159. Under view of above -
 under side of upper wing similar
 to above - Under side of under
 wings - of a delicate reticulation
 burnt under, shaded & clouded
 very pretty - Drawing of exact size

and general appearance. F.M.S.

No 160. Moth found in Sydney
 31 Oct. 1839. Upper wings of
 a yellowish brown, much speckled
 in the center of each an irregular
 black circle. The tips yellow
 scalloped with black. & then with
 white scallops. Lower wings
 black fringed with yellow &
 scalloped with black. Body
 black with yellow bands -
 tail with yellow hairs.
 shoulders with yellow hairs -
 Antennae very feathery -
 Altogether showy & handsome.
 Drawing exact size & general
 appearance - F.M.S.

No 161. Larva of Bombyx haustoria?
 Linn. - found on the Acacia 28
 Dec. /39 - & painted same day -
 This Larva is very common.

and easily found on the shady ⁸¹
side of the trunk of the tree: it has
a flatish appearance and some-
what resembles the bark. Length
 $2\frac{1}{4}$ to $2\frac{1}{2}$ in. - very sluggish during
the day, but extremely active
during the night, when it feeds
on the leaves. General color
pinkish brown, delicately dotted
all over, with brown - an ear-
shaped appendage on each side
of the head with a white spot
on each - a fringe of hair
all round the insect but none
on the upper part of the body,
the ²hinder feet shaped like
the tail of a fish - under
part marked like no 68.

¹³⁴
No ~~64~~ 67. & this larva, are
of similar general appearance
and habits. Altho the insects
produced are very different

82

with the exception of the leaf
 appearance of ¹³⁴ the drawing of the size of the leaf

162. Cocoon of 161. - from
 the larva state 29 Dec 1839 -
 hatched on the 4 Jan 1840 -
 Cocoon of a thick whitish
 substance [like cloth] and
 placed amongst the smaller
 twigs & leaves. Many hundreds
 of these may be seen on the
 trees (Acacia). The ^{larva} ~~larva~~ is
 is very partial to these cocoons
 as a receptacle for their larvae.
 drawing of part size - 1 inch
 in length & oval. - M.S.

163. Chrysalis ^{of 161} painted on
 the 4 Jan 1840. - of a brown color
 (rich) - rather thick for its length

and oral. legs inactive in the
 cocoon. drawing of exact size.
 rather better than 514, see Anyth
 M.S.

No 164. Moth of the foregoing.
 Light salmon color. upper
 wings more yellowish tinge.
 body fat & heavy in proportion
 to the wings. Upper wings
 5 small spots near the extremities
 on each - and two transverse
 brown stripes, dividing each
 wing into 3 parts. Antennae
 small, fringed in the male -
 eyes purple. Nose long & projecting
 in proportion to other parts. &
 which forms a distinguishing
 feature. When specimen becomes
 dry the appearance is much
 altered. Painted on the 14 Jan
 22 took wing on the 10 Jan 1866

Drawing of exact size. I had large
 (rather more) expanse of wings
 $1\frac{3}{4}$ — M.S.

No 165. ~~There is~~ another specimen
 at use — M.S.

No 166. Larva found on the
~~acacia~~ 5 Dec 1839. general
 color of a reddish brown. on
 the shoulders deep orange.
 A light blue stripe from the
 top of the posterior horn to the
 abdomen. between the hinder
 & middle legs. 2 oval blue
 spots black centers, on each side
 which open & shut.
 5 yellow spots on each of the middle
 annulations. & one on the remaining
 on the annulation immediately
 before the 1st of the middle legs
 there are 3 or 4 larger cream

colored spots & one or two smaller
 ones interspersed - a dark
 navy stripe runs longitudinally
 on the middle of each side - &
 gradually approaching each
 other towards the head - on each
 of the middle legs are 3 or 4 yellow
 spots. & on the extremity of each
 a blue fringe like fingers -
 on the upper side of the longitudinal
 stripe & on each annulation
 are two leafy or feathery projections
 somewhat like the antennae of a
 butterfly - but of a blue metallic
 luster - club shaped at top
 & hollow - a similar one on
 each annulation below the stripe
 & arising from the 5 yellow spots.
 & from the top of posterior horn -
 head covered similarly - A light
 stripe runs from the head to the

86

tail. Underneath much darker red. & fleshy. This insect is very showy. & when once seen cannot be mistaken, not only from its colors, but from its singular appearance when at rest. and when it feeds it frequently puts up the hinder part, similar to the attitude of the larva of the sphinx when at rest. Drawing of waist size & general appearance. $2\frac{1}{2}$ to 3 ins. in length. & bulky - painted 5 Dec. Made its nest on the 6th day a whitish brown cocoon amongst the leaves of a slip texture.

No 167. Chrysalis of above - of a oval shape. ^{very} shining black all over. $1\frac{3}{8}$ in length.

87
Painted on the 20 Decr 1839.
of exact size — I M.S.

no 168. Moth of the foregoing
look wing 11 Jan'y 1840. Upper
wings of a black brown —
much relieved by whitish
spots & brown pink & purple
interspersed. in the center of
each wing are 2 larger white
spots — and an irregular trans-
verse white streak towards
the tips — Under wings of
a yellow straw color and slightly
edged by brown — body darker
yellow. — Thorax & head colored
like upper wings — Antennae
long & thin. Front view of
face has a singular appear-
ance, a kind of feathery hood

88
surrounding it. Under
view of upper wings, a pale
brown. & of under wings -
a paler yellow with scarcely
any markings. Length of
expanded wings 3 ins
of body & head $1\frac{3}{8}$. - Altogether
rich & handsome. Painted
on the 12 Jan/60. of exact
size & appearance. F.M.S.
I believe a female.

no 169. Larva (similar to 168)
found on acacia, ^{March} 2 ~~Jan~~ 4/54
General color on the sides, brown
pink, orange patch on the
shoulder. & from this to the tail
a light blue - a bright blue
stripe from the tip of the horn
to abdomen. 2 oval bright blue

Spots with black centers between
 the hind & middle legs - The
 horn of the ^{an} reddish tinge.
 Similar yellow & white spots
 with annulations. & similar
 leafy projections over the body
 & head, as number 186. (which
 see) legs & underneath, dark
 fleshy black blue. & tips of
 legs fringed with purple -
 In habits and appearance
 this larva very similar to 186.
 only very much duller &
 less showy. & much thinner.
 altho nearly of the length.
 fed with plant represented.
 parent on the 4 & soon after
 made its nest exactly similar
 to No 186. Drawing of exact size
 & appearance. - M.S.

90

170. Chrysalis of above,
elongated oval, of a very shining
black color - $1\frac{1}{8}$ inch length,
hatched on the 10 March 1840
of exact size - M.S.

no 171. Moth of the foregoing -
upper wings similar to 168
only with less distinct markings
& more delicate throats.
Under wings, yellow, straw color
but the edging much deeper
& broader than 168. Body
yellow. Thorax & head, similar
to upper wings, with a tuft of
black hair over the body from
the thorax - Antennae light
brown & feathery - legs, front
of face & underneath hairy
& dark speckled -

91

This moth very similar in appearance to 168. with the exception of feathery antennae, & being very much smaller. The larvae were obtained at different times & different places, so that I cannot say with accuracy whether this is the male of 168, altho I decidedly think so. Drawing of exact size. $2\frac{1}{4}$ ins. expanse of wings. Moth took wing on the 4 Apr. 1860. M.B.

No 172. ^{Saturnia} Larva found on the Gum tree, near Sydney, 12 Dec 63. General color light shining green with 6 red colored spikes, blue tops with yellow star-shaped frings on each annulation. These are paler ^{& yellower} towards the head. Posterior horn yellow, blue

top & yellow fringe - a red oblong
spot between the two lower
spikes on each annulation
immediately above a pale
colored longitudinal stripe.

The middle legs green, tipped
by brown, over which is a white
delicate fringe - The last
annulation a tail brown dis-
tinctly spotted with white -

Head shining brownish green,
with red nippers - Along the
~~head~~ back is a light blue
stripe, on each side of which
the lighter blue gradually verges
into the green - Painted on
the 12 Dec. & ~~the~~ Larva very
large the length being at
least 5 in. & fat.

93

when at rest, it assumes the
appearance of a Spider - eat
the Green leaf. & active during
day & night - Previous to
turning to the chrysalis state -
it suspended itself by the ~~2~~
~~front~~ feet & hung in that way
during the whole day, ^{as 13th} & emitted
~~from the mouth~~ a considerable
quantity of thick white watery
fluid - & during the night
it made its nest ^{with} on the
branches, a strong brown
coraceous cocoon, of a
roundish oval shape -
The larva ~~was~~ painted is a
female - Drawing of exact
size - The Male larva much
smaller - scarcely $\frac{1}{2}$ size -

But similar in other respects
 a row of strong white hairs
 round the body, in the center
 of each annulation. F.M.S.
rears a great number. Being common.

173. Cocoon of the above
 showing the size, position on
 the branches, & color -

Length $1\frac{3}{4}$ inc. breadth $1\frac{1}{16}$ -
 painted on 23 Jan'y. 1840 -
 F.M.S.

174. Chrysalis of above -
 length $1\frac{3}{8}$ breadth $\frac{5}{8}$ -
 head & wing case shining black -
 head & eyes a dirty yellowish white -
 remainder of Chrysalis red. brown.
 Chrysalis of a short thick form
 & a few days previous to moulting.
 taking wing, it becomes soft

so that it is with difficulty
taken up without injury -

In every instance where the
chrysalis was taken out of the
cocoon & put in bran, the moth
was born deformed - painted
on the 23 laws. This is a
female chrysalis - the male
being smaller - drawing of
exact size - JMS.

175. & 176. Saturnia. Two
females, showing variety of
color. Took wing on the 4th
Feb'y. & later. About an
hour before being born, the
insect makes a gnawing noise
like a rat, & equally loud.
The feet are armed with small
claws & the mouth made
purposely for gnawing. The

96

Insect, with the wings folded
up in a small compass,
kept turning in the Cocoon,
gnawing with its mouth &
scratching with its feet.

Gradually forming at one
end, a hole sufficiently
large for its egress. This part
of the case becoming thinner &
thinner, until the insect
bursts thru at once. When
this is effected, the insect
pushes ^{half its} its body thru, as if
surveying, & the front legs
hanging loosely. It then
returns to the case, where it
remains quiet for a
minute or two. & then

Finally emerges, running
very quickly up any stem or
branch, & then suspends
itself by the front legs.

The wings much crumpled
& hanging loosely down together.

The 6 large circular spots are
at first very small but
as the wings expand &
become more perfect, these

spots very increase
greatly, ^{early} with a center speck
as if a pin had been stuck
thru — The whole forming a

very interesting sight — particularly
the handsome & delicate coloring
of the living insect, & which
it loses in a few hours
after death. The Eggs

98

an of a light-drab color
oval, large & in great
numbers & very hard.
Color of 175 - a rich beetle
-pink, a large circular
spot on each wing, like the
eye on the peacock's tail
the tips of upper wings ^{upper} have
delicate pink. Around
which & nearer the body. ^{the} wings
have a crumpled ap-
pearance - which appears un-
natural but that every spec-
imen had it - Altogether a
very large & handsome insect.
No 176. is similar but of a
lighter & yellower tinge. Scarcely
any were alike but differ in
in coloring. The two 175. 176

are fair specimens - I drawn
 of exact size. Length of
 expanded wing $6\frac{1}{4}$ in.
 Body 1 7/8 - Preserved speci-
 men become much shrivelled
 & discolored - Antenna thin
 & feathery (slightly) - FMS

177 - 178. *Saturnia*, Males
 much smaller than the
 females. Antenna very
 feathery. General color
 of a lighter & brighter tinge
 than the female - upper
 wings much more pointed.
 markings similar to the
 female. The moth flies
 more swiftly & is more
 active in every respect.
 The legs in both are very

fluffy - the Eyes of the
insect are much depressed
& cannot be seen, unless
you look right in front.

Length of expanded wing
 $5\frac{1}{4}$. Body $1\frac{1}{4}$. -

These moths are very
showy & beautiful -
drawings of exact size -
M.S.

No 179. Larva found on the
(supposed) Gum. General color
coarsely spotted brown, of different
shades, with occasionally light
yellow patches - The spots forming
irregular longitudinal lines -
a fringe of hair all round the
body, tail & head - none on the
sides or back - underneath
a pale fleshy color & appearance.

Thinner feet, formed like the
tail of a fish — Two peculiar
fleshy spikes, one on each
shoulder — Middle legs, large
& strong — & the movements of
the insect sluggish — a very
handsome Larva — Female.
Length — ~~two~~ $4\frac{7}{8}$ in.

Two black oval shaped spots
one on each side of the spikes
and edged with yellow — ~~closet~~ ~~quar~~
Painted 9 Nov. & made its
nest same day — J. M. S.

No 180. Cocoon of the above
of a slight pinkish tinge, very
strong & corrugated — inside
beautifully white — attached to
the twigs & leaves. Drawing
of exact size — Painted 8 Dec. 29
Length $2\frac{1}{4}$ by $1\frac{1}{8}$ — J. M. S.

No 181. Chrysalis of the foregoing
 shining black, of an oval
 form - nose of a dirty white.
 Eyes, very large & distinct. Antennae
 going round like a hood -
 a handsome chrysalis -
 drawing exact size & appearance -
 painted 6 Dec 1839.
 Length - 2 in + $\frac{3}{4}$ — F.M.S.

No 182. Moth of the above.
 Took wing on the 25 Feb 1840
 the insect having gnawed a
 round hole thro the cocoon -
 expanded wings $4\frac{1}{2}$ in.
 Body 2 in, without snout.
 Upper wings yellowish ochre
 with purplish hairs - giving
 the whole a rough coarse
 appearance - parallel to

the outer edge & at a little
 distance are 5 or 6 spots - ending
 in a irregular line - about
 the middle of each wing is
 a brownish transverse line -
 and in the middle of the space
 between this & the shoulders
 a black spot on each wing -
 Under wings, light orange
 coarse hair - Body very
 thick & heavy - ^{shaggy} Antennae
 fusiform, & ~~lower~~ part
 cobalt blue, tipped with
 orange - snout very prominent
 & cobalt blue, edged with
 brown. Eyes brown, very
 lively at night time - feet
 armed with claws - In the
 box at night time made a
 noise like that of gnawing

the Antennae at night time
 very beautiful - Antennae
 puffed from the tip to the
 middle - drawing wait
 size & appearance. Painted
 with 26th a Female -
 Eggs, white & oval - F. M. S.
 Dr. Nicholson

No 183. Larva found on the
^{feeding, dark green}
 Lupine - 3 Jan 1840. - General
 color, light green spotted with
 black - a few long black hairs
 over the body. a bright white
 longitudinal stripe just above the
 legs - head black - legs very
 long & thin & dark colored.
 inactive during day & hangs
 in clusters - very lively at
 night time. Drawing of
 wait size. 1 1/4 long - M. S.

105.

No 184. I believe this to be the same, but in a younger state. the difference in color arising from the change of skin - these larvae spin a web & hang occasionally by it -
F. M. S.

No 185. Chrysalis of 183. -
general color reddish yellow.
of a flat depressed form -
body & wing case occupying
nearly the whole length.
Drawn 10 Jan^y 1840 - exact size
5/8 length -
MS.

No 186. Moth of the Above
~~upper~~ ^{took} took sing 22 Jan^y 1840
^{Larva} having made its nest, on the 4.th
spanning a delicate white cocoon
& many of them together -
Upper wings, about one half

from the body, dark reddish brown - the remainder much lighter - & tipped with dark. Under wings bright yellow, edged with the dark red brown, & delicately fringed - body light yellow. Thorax dark brown - antennae long & thin, snout long & pointed -

This moth, altho small is showy - expanded wings $1\frac{1}{2}$ in. - Some were darker colored than others - drawing of each size & appearance. M.S. painted 22 Jan'y.

No 187. Male *Oiketicus* painted
on the 22nd Decr 1839. fed on grass.
but like the tribe would eat
many things - case covered
with dried grass - Male
like the female only smaller
which see - Length of case
1 7/8 in - Drawing ex. size. M.S.

No 188. Chrysalis of the above
(Male) of a light reddish
color - the wing case much
darker - a kind of nose sticking
out - very lively in the case.
painted on the 27. Decr. having
turned between the 22 & 27.
Length 7/8 in - M.S.

No 189. Imoth of the above
took wing on the 19 Jan 1840
General color dirty brown -
all over, except the lower

part of the body, slightly
 yellow - Antennae very feathery
 Insect very lively & flew
 violently about, soon destroy-
 ing its plumage - It had
 the power of elongation to a
 considerable extent its body
 similar to No 92.

Drawing exact size & appearance,
 length $5/8$. body - expanded
 wings $1/8$ - M.S.

No 190 - View of the head - of
 above - a ^{brown} band over the eyes
 and the nose projecting -
 giving the insect a peculiar
 look - M.S.

No 191. Female of the foregoing
drawn out of the case.

The upper annulations on
which are the feet of a very
light yellow brown, with
distinct black marks.
head same color, spotted with
black - The remainder,
which is usually in the case,
is of a light buff - but
much darker than the
upper part - A broad band
of lighter color, being as it were
a mass of folds, & dotted with
red, runs longitudinally from
the feet to the tail -
Drawing of exact size, & all
appearance - length $1\frac{3}{8}$.

These larvae like very hard.
Painted on 21 Dec 1839.
MS

No 192. Chrysalis (Female) of
 191. of rich golden brown -
 & of a slight texture - no appear-
 -ance of antennae, or wings -
 of a round & plump form -
 4 dark spots on each annul^u
 Drawing of exact size, (1/2 in)
 became a chrysalis between
 the 21 & 27. Dec. 1839. MS

No 193. Perfect insect. per-
 fectly apterous - & otherwise
 incapable of leaving the case.
 Length when stretched 1. in.
 Of a delicate cream color
 all over - & very soft - On the
 head part, golden brown very
 shiny - a ring of golden brown
 hair round the last annul^u
 This insect for several days,
 merely thrust its head out of

the Chrysalis case, which is
downy within. I pulled it in
soft at pleasure - prior
to leaving it finally -

Became a perfect insect on
the 29 Dec - on which day
it was painted. Drawing
exact size & appearance -
M.S.

No 194. Larva found on
the a creeper from Norfolk Island
14 Jan 1840. I painted same
day. General ^{color} ~~brown~~ reddish
brown. A reddish longitudinal
streak along each side near
the back - (Geometry) -
Length 1 inch. drawing exact
size - F.M.S.

195. Chrysalis of the foregoing
 yellow & brown - Larva made
 a very slight ^{nest.} cocoon under
 the leaves - brownish color - Chrysalis
 length nearly $\frac{1}{2}$ inch, thin
 & slight - I became a Chrysalis
 on the 14 Inst. 1840. Drawing
 exact size - F.M.S.

No 196. Moth of the foregoing
 took wing on the 28 Inst. 1840.
 General color, light bistre
 the upper wings spotted brown
 with 3 or 4 transverse & distinct
 brown stripes, dividing the wing
 into equal partitions. Lower
 wings finely streaked trans-
 -versely between the larger &
 more distinct brown stripes

Edge of wings fringed & lower
 ones slightly scalloped - Antennae
 longish & fringed - The whole
 very pretty altho not showy.
 Length of expanded wings $1\frac{1}{8}$.
 Drawing exact size & appearance
 F. M. S.

No 197 & 198 - Larva found
 on the Sydney. 29 Decr
 1839 - No 197 is the last change
 of the insect, altho it grew
 much larger than represented.
 No 198 is the same in a younger
 state - General color
 deep velvety black, with
 8 bright yellow & red spots
 on each side from the
 front feet to the posterior horn.

from the head to the spots.
 several small bright yellow
^{enlarged} spots, continuing & connecting
 the larger ones — the whole
 length from the head to the
 tail — and again from
 spot to spot across the
 back — forming square
 like velvet patches, fringed
 by bright yellow. At
 every motion of the larva
 the posterior horn, moved
 violently up & down —
 touching the back & nearly
 describing a semi-circle.
 The younger is similar to
 the above, but of a duller

165

color, & without any other
smaller yellow marks
which connect the large
bright spots. The larva under-
went 3 changes, becoming
brighter at each. When
full grown was exceedingly
beautiful & showy. It
eat the leaves & flowers of
the — Full length
was nearly 4 inch. painted
29 Dec but drawing too
small, as the insect grew
afterwards — Made it
next the 5 Jan'y. 1840.

The Larva nearly invariably
eat its own cast off skins.
The nest was simply leaves
strongly woven together, but

Cousely -

F. M. S.

No. 199: Chrysalis of the above
 of a light yellowish brown
 dotted with black. ^{very} black
 spot on each annulation on
 each side — length 2 in.
 $\frac{1}{2}$ in. broad — painted on
 the 20 Jan'y 1840 — F. M. S.

No. 200. Sphinx moth of the
 foregoing — Upper wing
 general ^{color} vandyke brown — with
 a broad longitudinal stripe of
 silver in the middle of each
 wing, ending at the tips —
 a dark brown one immediately
 above & attached — a silver
 tinge towards the shoulders.
 Underwings, brown with a

117

stripe of dull vermilion,
& edged by a thin stripe of
silver - round the thorax
a bright & broad fringe of
silver & close to this but
higher a stripe of gold.
The whole on a ground of brown
pink - Along the body a
chain of silver - and on
each side a longitudinal
stripe of bright yellow brown
General color of the body
brown pink - Antennae
straight, silvery & recurved
at the tips - Eye large &
prominent, & plum colored -
expanded wings $3\frac{1}{2}$ ins -
body . 2 ins - Drawing of
exarborescence & appearance, look

being on the 4 Febr'y 1840.
 This species is similar in
 appearance to no 2 / *Sphinx*
Celerio, — F. M. L.

no 201. & 202. Larva ^{Female} found
 on the Tea tree — 18 Jan'y 1840.

No 201 is full grown, & general
 color blackish but so
 covered with large tufts of
 white hair, that it gives
 it a light appearance.
 Along the back numerous
 upright leafy projections —
 spotted on the shoulders with
 red — No 202 is a younger
 larva of the same. but darker
 in appearance & less hairy.

19

2 red spots on each annulation
2 white stripes along the
back, from which arise
the leafy projections—

Length full grown $2\frac{1}{4}$ in.

Made its nest on the 20 Jan.
underneath the leaves - of
an oval shape, whitish color
& thinish - ~~Painted~~

Mr. 201. Ml.
202. 7 Ml.

No 203. Chrysalis of the above
General color reddish brown
of a plump oval shape. &
The whole chrysalis except the
wing case. covered with stout
yellowish hairs, making
it thus, peculiar - painted
on the 29 Jan 1860. F. M.
length. 1 in + $2\frac{1}{8}$.

120

No 204. Moth of the foregoing
took wing on the 9 Febr^y 1840
upper wings, beautifully variegated
under wings blackish. Body
blackish. ^{shaggy} Thorax blackish
with a triangular patch
of white on each side -

Head white - Antennae black
slightly feathery - This

Moth is exceedingly pretty.

Length of wings 2 ins.

Body 1. inch. & stout.

This moth is a female and
laid Eggs of a dirty white
brown - — hatched on the
10 Febr. of exact size & appearance
JMS

No 205. Female Larva
 found near Sydney on the
 White Gum. Along the back
 a regular variegated series
 of bright red yellow, black,
 & brown, like ~~variegated~~ mosaic
 work. Head red - long
 thin brown hairs from the
 sides - Altogether a very
 handsome larva. It rested
 during the day, with its head
 down, & numbers together in
 thick clusters - towards evening
 they went to feed in regular
 rows, commencing with the
 youngest leaves. - 3 changes
 and each time more brilliant.
 if disturbed during the change
 which lasts 3 days. the larva
 frequently dies - They feed on
 other plants, Tea tree &c.

122 The males larva same
lar but smaller - Got on
the 1st Jan 1840 & painted
on the 19. Jan. it made
its nest on the same day,
these larva go ~~under~~, for
that purpose, under the
dead leaves, & branches, ~~and~~
and make them whitish oval
cocoon, close to each other,
in numbers. - Drawing a
exact size & appearance.
Length 2 in. J. M. S.

no. 206. Chrysalis (Female)
of the above. of a plump oval
form. & of a bright yellow
all over, towards the tail
a black spot. Length $\frac{3}{4} + \frac{1}{8}$.
Drawn 30 Jan 1840 - of exact

size - The morning before the
moth burst thro' its case, the
chrysalis was beautifully transpa-
rent, showing the colour of the
moth distinctly - F. M. S.

207. Female moth of the
above - ^{took} ~~upper~~ wing 15 Feby
1840 - upper wing all silvery
white with the exception of
a round black spot on each,
and round the edges yellow.
black spotted - Under wings
yellowish black with a fringe
of yellow & a patch of the same
on the upper part of each -
body large & plump. black with
a semi circular yellow mark
on each annulation - tail
yellow & fluffy - thorax very
hairy, with a bald patch on

the top of a fleshy red -
 Antennae long & slightly feathered
 The underneath colors of
 blackish yellow & fringed with
 bright yellow. Expanded
 wings $1\frac{1}{8}$ in - body $\frac{3}{4}$ -
 drawing exact size. F. M.S.

208. Male Moth of the
 above - of a lighter form
 throughout ^{which is thin} particularly
 in the body. Coloring thro-
 similar, with the exception
 of a bright black transverse
 band on the upper wings near
 the spots - which are smaller
 & duller than in the female.
 Antennae very large & feathered
 the thorax entirely covered

with hair - and a tuft of long
brownish hairs on the tail.

The male is very vigorous
and active during the night
& the long hair on the head
by the Antenna sticks up
giving it a fierce look.

When at rest the wings hang
down like the roof of a house.

The female is much more
heavy & slow in her flight.

These moths are exceedingly
showy & brilliant - & they
soon by their restlessness

destroy the plumage.

Length of expanded wing $1\frac{3}{4}$.

Male Chrysalis, like the female, but thinner & smaller.

J. M. S.

N^o 209

Larva found near Sydney in
middle of a branch of the
Banksia. Dec. 8. 1839.

The annulations light fawnish
gray with black stripes - between
each a reddish band - having
the appearance of gray & red
alternately - neck & shoulder
reddish - head black - spotted
with white - & hairy - 4 bristles
on each annulation -

Length $1\frac{3}{4}$ in. full grown -

It fed on the leaves of the Banksia
both day & night - coming out
of its habitation in the wood
for that purpose, dragging
it under or close to the
debris, placed in about an

over the entrance (see no 125).

Its motions were quick & active and if disturbed would run to its hole directly -

~~made~~ it fastened up its entrance on the 2^d Jan for the Chrysalis change, and then enclosed itself in a slight skinning matter - painted on the 1st Jan 7/10. Drawing of exuviae & appearance. F.M.S.

No 210 Chrysalis of the above, of a reddish brown, & of an elongated form - on the head numerous black spines.

The entrance having been opened, the chrysalis used

to work itself up, & show
 its head, & on any alarm
 would immediately & quickly
 descend - & this was done
 repeatedly - showing that
 it possessed locomotive power.
 In this state it never eat.
 On the head were two bright
 black spots, like eyes, &
 by this it seemed to distin-
 guish objects - painted
 on the 28 Jan 1860. Egg
 size $\frac{7}{8}$ in. F.M.S.

No 211. Moth of the foregoing
 took wing on the 1 Feb 1860
 upper wings dirty white, slightly
 clouded - a black semi circular

mark in center of each wing
 and edged by yellow & fringed.
 Under wings a whitish black
 much darker than the upper.
 & fringed ^{light} by black - body
 & thorax same, & hairy.
 Antennae very long & slightly
 fringed - Eyes black -
 expanded wings. $1\frac{1}{2}$ in.
 body $\frac{3}{4}$ - painted on
 the 2^d Feby 1846. F.M.S.

No. 212. Chrysalis of the
 Male Ocketeus No. 43.
 turned to the Chrysalis state
 31 Decr 1839. - of a reddish
 brown. & of an elongated form
 gradually decreasing from
 the head to the tail & terminating
 in a point - very case

very small in comparison
 to the rest of the Chrysalis -
 Chrysalis restless & active
 continually turning round.
 Length $1\frac{1}{16}$ in. - Scarcely of
 exact size - The larva
 no 43 is drawn rather too
 small, as it increased by
 age - it fed on the Green leaf
 in addition to that of the caterpillar
 F M S

no 213 Moth of the foregoing
 of a darkish black brown
 & dull in color - Head &
 Antennae like the others -
 its coat elongated & body
 to a considerable extent
 bearing of a size &

appearance - length of body
 17/8 in. { habits as } F. M.S.
 { unusual }

no 214. Female Ophioceras
 of the above. Hatched on
 the 20th Decr 1839. Fed on
 blue Gum, leaves of which
 were attached to the case.
 for description see no 15.
 Drawing by artist & appearance
 M.S.

no 215. The above out of its
 case. Upper annulations,
 (the part out of the case when
 eating or moving) of a
 yellowish cream color, with
 decided black markings -
 head the same - The remainder
 is of a dark plum color, lighter

132

towards the upper part.

the back & half of the sides
is hardened like the shell
of a Chrysalis; the under
part very soft, & in folds.
which contract & open at
pleasure. on this a bright
red spot on each annul^{us}.

This larva can bite & sting.
Drawing of exact size &
appearance. Length $2\frac{3}{8}$
Inch. ^{fastened to twine} the chrysalis. 20 Jan. M.S.

no 216 Chrysalis of the
 foregoing painted 30 Jan. 1840
a bright black plum color.
no appearance of wings or antennae
of a plump form - & resting

in the case - a row of black
spots on each side - drawing
of exact size - length $1\frac{1}{4}$ in
M.S.

no 217. Perfect insect (Female)
^{anthers} of the above - taken 20 Feb 1860
of a light straw color, very
transparent, so that the
inside could be seen.
head pointed, with very small
feet & antennae, scarcely per-
ceptible. on the face a pro-
-jection like a nose, with two
small black eyes - one on each
side - a slight downy golden
brown hair on lower annula-
tion - It put its head out
of the Chrysalis case, similar
to no 193. (which see)

It lays a great number of
 eggs. light straw color, containing
 a quantity of down. The
 case of the larva of the
 octitens, was lined with
 a beautiful soft white down-
 like cotton, and unlike the
 lining of no 43. & 93.

Painted of exact size & appa-
 ran 20 Feb 1860.

Length $1\frac{1}{4}$ breadth $\frac{1}{2}$ in.
 M.S.

no 218. Larva found on the
 grape. Sydney. 3^d Jan 1860.
 General color light green,
 lighter towards the back -
 a pink stripe, on the middle
 of each side commencing
 from the middle feet and

terminating at the root of the
 Posterior horn - in this are
 2 circular white spots, edged
 with dark green - one just
 before the other the first behind
 the middle leg. 2 other smaller
 spots, nearer the head, but
 not connected by the ^{right} line
 Posterior horn of a light
 brown, tipped by black.
 Drawing of exact size &
 appearance. Length $4\frac{1}{4}$ lines.
 Made its nest on the 18 Jan.
 by joining together by a
 strong thread, dead leaves, very
 closely - and turned to the
 chrysalis - F. M. S.

No 219. Chrysalis of the
 above, reddish yellow & some
 much spotted with black.

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On each annulation a round black mark, like an  much larger towards the head wing case, with dotted paravul longitudinal lines - on the eye a distinct black mark like the young moth -

Chrysalis lively - length $2\frac{3}{4}$ in. $\times$ $\frac{5}{8}$ - drawing of exact size - painted on the 29 Jan'y 1840. F.M.S.

220. Spring of the above upper wings of a rich vandyke brown, with the small black spot on each wing - Under wings, bright yellow, edged with brown - Head, body & thorax, vandyke

brown. round the shoulders
a band of light buff silky
hairs — beginning from
the Antennae — Antennae
straight & strong — recurved
at the tips — Eyes purple
large & prominent — a
black ~~mark~~ ^{dot} on the shoulder
a small streak of red
between the annulations
~~only~~ on the sides and
underneath, but none on
the back. When flying
makes a humming noise.
This species is a male —
length of expanded wings
4 in — body 2 1/4 —
Drawing of eye &
appearance — ~~pattern~~

138

Look wing on the 16 Feby
& painted on the 17 - F.M.S.

221 - Under view of the above
showing the insect at rest
and the manner of hanging
by the 2 front feet -

Under part of wings of a
lightish yellowish red -
delicately marked with slight
short transverse lines of brown.
Abdomen with red stripes between
the annulations & between
each of these a white spot
with black centers. Legs
4 under ones a dirty white
and fluffs. Front ones brown.
Drawing exactly the appearance
Painted 18 Feby 1860. F.M.S.

139
No. 222. Larva found on the
grass, many, on the
17 Sept. 1839. Fed on grass.

This insect has every appearance
of an orketicus. Inhabits a

case encased with sand &
earth & the inside of which
is beautifully lined with a silken
buff colored coating. The

case is of a flattened log-like
shape. The animal draws

this after him in exactly
a similar manner to the
orketicus. The insect

represented is a female the
male being similar but

smaller. Its motions are
active & restless, & when placed
in the hand would bite severely.

For a further description see

No. 223. Drawing representing

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the insect with its case -
it is of exact size - Length
of case $1\frac{1}{8}$ in. Painted
28 Dec 1889. F. M. S.

no 223. Same insect out
of the case - head & upper
part, which is usually seen
out of the case, of a beautiful
brassy gold - the remainder
of a dull white with faint
black short lines - with
feet, then make 4 numbers
& in every other respect, like
the *Chalcid*es - Length of insect
nearly $1\frac{1}{8}$ in. Drawing of exact
size & represents the female -
fastened up to entrance. F. M. S.
for the change. 18 Dec 1889
very similar to the *Chalcid*es

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No 224. Chrysalis of the
above female - of a dull
brown, annulations distinct.
the case containing Antennae
very s. head, legs, & legs distinctly
marked, very unlike the Chrysa-
lis of the female Orctes.
Drawing of exact size & appearance
length $\frac{4\frac{1}{2}}{8}$ in - painted 3 Jan/40
MS

No 225. & 226. The perfect
female insect of the above
giving different views - took
wing on 14th March 1840.
General color of a deep shining
blue with a metallic lustre.
which pervaded the whole
insect, with the exception of
bright yellow at the tips of the
wings, & on some with one or
two yellow spots higher up.

Antennae fusiform and white
at the tip - The front legs are
very long - So is likewise
the ovipositor - which the
insect continually thrust
out; the wings frequently
droop, & the body bends up,
the ovipositor recurring down.

This insect altho' possessing
tolerable sized wings, is nevertheless
totally unable to fly - Numerous
specimens were not only reared
but collected at doors and every
one agreed in this particular -
Its motions were very quick
with a kind of running sort &
occasionally a hop - It need
scarcely be added that the
whole appearance of this little

insect is brilliant and elegant.
Length of expanded wings $\frac{3}{8}$ in.
Body rather more than $\frac{1}{2}$ in.
Prothorax $\frac{1}{4}$ in. Length of
front legs $\frac{1}{2}$ in. - painted
on the 16 March 1840. with
eye & antennae. Two different
specimens - M.S.

No 227. Chrysalis of the
Male of the above. of a
light brown, smaller &
thinner than the female.
Painted on the 3 Jan 1840.
The male ^{perfectly} insect will be
described hereafter. F. M.S.

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No 228. Larva found in the
center of the root of the Acacia
at Newcastle. 18 Decr 1839 -

It fed entirely on the wood
continually increasing the length
& size of its habitation - &
lining it with a kind of soft
matter. The debris was
thrown out of the original
entrance - & by means of
which the insect is discovered.

Length of the specimen
was $3\frac{1}{4}$ ins & throughout of
a pinkish salmon color.

The annulations very distinct
& projecting - the head ^{& slender} has
a kind of hard shilly matter
over them of a light brown color,
much spotted with black, on
the hinder part, by the head.

There are even markings of dark brown - equally alternating with the light brown - The rippers are very strong & powerful so that if a thin piece of wood were introduced between it would be severed instantaneously -

There are 7 red spots on each side, & on each annulate,

towards the tail. When placed on the table, its powers of locomotion were very imperfect, but in the wood, it could move with agility - The larva represented is a female, but grew larger. The young are of a lighter color than when full grown.

The natives are very fond of their taste and eat them as they draw them from the

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wood - painted on the 27
Dec 1839 - drawing of exact
appearance, but small -
M.S.

Mar 29 - Chrysalis of the above
Feb. 25. 1840 - of a beautiful
bright reddish brown - wing
case short; a black streak
half way round between the
annulations - This chrysalis
is of a peculiar form - easily
distinguishing the pupa from
the other Lepidoptera.

Chrysalis very large in
comparison with the Larva -
2 1/2 lines. $\times \frac{5}{8}$ - Drawing
of exact size - F. M.S.

previous to turning to the Chrysalis,
the Larva shut the entrance, by
means of a web & glutinous matter
making the place compact -

No 230. Moth (Female ^{Open})
of the above. took wing March
1840. Upper wings of a mottled
black brown & white. very rich.
like the plumage of the ^{Fern}
Owl. ^{a white spot on center of wing} Under wings light
brown, mottled with black,
partially — Body large &
heavy, & hairy, of a light
color. with wings of darker
brown — Thorax light hairy
grey, with a bright ^{blue} ~~purple~~
edging on the top, forming
a half square. Antennae
short & thick — Altogether
a very handsome moth.
Length of expanded wings
5 3/4 in body 2 1/2 —

This moth, is exceedingly

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large, when compared with
its chrysalis & larva -
when first born, the wings
are much crumpled, & very
diminutive - In a short
time they expand & it may
be said visibly - painted.
3^d March 1840. of exact
size & appearance F. M.S.

No 231. Larva found on the
plant (v. no 197) 3^d Dec 1839
of a yellowish green, & red
head - It doubled the leaf
in two, joining the edges neatly
together, which edges were
downwards - in this it lived
and eat the inside of the leaf -
if disturbed it would run out
and suspend itself by a thread.

it turned to the Chrysalis, by
forming a cocoon of a silken
& slight texture, still inside
of the doubled leaf - which
is an admirable protection
against the weather -
Length $\frac{1}{2}$ in. - Drawing exact
size - M.S.

No 232. Chrysalis of the above
of a light red - very small &
delicate - length $\frac{3}{8}$ in.
Drawing exact size - 5 Jan'y 1840
M.S.

No 233. Moth of the above.
took wing 20 Jan'y 1840.
of a plum color, spotted with
white - a white band runs
transversely - body slightly yellow.
Antennae long & thin - When
at rest the wings.

Drawing of exact size & appearance
MS.

234. Chrysalis of Spiny
Triangularis. (Don). Brought from
Senpe. Corks River - painted 29
July 1840 - of a shining black.
Length, 3 ins - breadth $7/8$ -
Drawing exact size & appearance ^{rep} MS.

235. Spiny Triangularis -
from the above, took wing
16 Feby. 1840. - Upper wings
delicately & richly spotted with
different shades of brown, pink,
& green - a rich clouded appearance.
Two yellow spots of hair, close
to the thorax, one on each wing -
Lower wings a bright yellow
edged by brown-red - body minutely
speckled all over by reddish brown
^{dot} spots, & the division of the segments

by yellowish ones - from the head to the tail, a streak along the back of a red. brown.

Thorax covered by minute dots of a greenish tinge - Antennae long & thin - Eyes round & prominent & of a reddish color -

Underneath of a lightish yellowish brown. Vespers near thorax of upper wings

of a bright yellow - of body a female - Length 3 in ² - Breadth $\frac{3}{4}$ - Length of expanded wings $6\frac{1}{2}$ in ² - drawing of exact size & general appearance painted on the 17 Feb. MS.

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No 236.

Chrysalis of *Papilio Nyrina*.
(no 50) Length 1. inc. of yellow
yellow. with strongish shining
black spines - found in Domain
on a ~~Sum~~^{For anything} leaf, on which the
Larva feeds - 15 March 1840.
Had a larva but lost it -
this Chrysalis turned to the
Pap. Nyrina - J. M. S.

No 237 Chrysalis found in
the branch of the Banksia
at Newcastle 19 Oct 1839 -

Length 1. inc. - of a yellowish
color, wing cases reddish brown.
Head covered with black spines.
This Chrysalis had the power
of locomotion in the hollow
of the wood. Drawing exact
size & appearance - Habit

of the larva same as No 209.
F. M. S.

No 238. moth of the Above,
took wing 24 Nov 1839 -
length of expanded wings
1 $\frac{3}{4}$ ins. Body 1 inc. - general
color of a silvery white. upper
wings minutely dotted with black
body silver, white - at division
of segments yellowish - a yellow
streak running parallel & close
to the edges of lower wings -
Antennae long & thin - Head
& eyes small - Drawing exact
size & appearance. 25 Nov 1839
F. M. S.

No 239 - ^{Aganippe} Papilio ~~lylee~~ (Don)
from Ash Island Hunter's River.
Larva found on the Caper
exactly similar to the larva

of *Papilio Chytice*. was found
at the same time, & turned
to a similar chrysalis -

These larvae & chrysalis, turned
about equally to the *Ayanippe*
& *Chytice* - But no observations
were taken whether they are
Male & female. Or of different
Species - Length of expanded
wings $3\frac{7}{8}$ ins. - On the
upper side, wings are white
with transverse black patches
borders black with ^{white} ~~black~~
^{oval} spots. - Those on the posterior
wing lined with red - posterior
wings scalloped - Underneath
of the upper wings similar
to the upper part, but the
3 first spots yellow on each.
Posterior wings beneath.

of a general black color.
 relieved by ~~a~~ broadish semi-
 circular patches of white &
 yellow about the middle -
 bright red spot on each side
 near the thorax - a band
 of red oblong spots, on the
 white border spots, leaving
 white lunules - Altogether
 very showy. - This specimen
 much larger than that figured
 in Donovan. whose drawing
 in some respects is not
 correct. - Mon. Lucas is
 more like but from a
 bad specimen - This
 butterfly is very common -
 drawing exact size & appearing
 30 May. L. M. S.

240. Chrysalis of *Papilio*
Clytie - Larva found on the
 Caper & exactly similar to the
 foregoing - where there were
 hundreds - M.S.

241. *Papilio Clytie* ^{Donovan} -
 slightly bluish
 upper surface white, with
 a deep black marginal
 border, making nearly equal
 parts of each - 3 oblong white
 spots on each upper wing - &
 one on each lower in this border.
 Underneath upper pair
 yellow bordered deeply with
 black in which are yellow
 spots - posterior pair, 3
 oblong longitudinal, ^{long} oval
 spots of whitish yellow, ^{on each} the
 remainder black, with 2 rows

of yellow spots. parallel to
 edges. I have before observed
 that the Barva of this Butterfly
 was found on the same leaf
 of the same tree, and at the
 same time, & of the same ap-
 pearance, as that of *Aganippe*.
 Length of expanded wings
 3 ins. Drawing exact
 eye & appearance showing
 upper & lower surfaces -
 Donovan inaccurate. M.S.

No 242.

243. Chrysalis of the above,
brown pink with a row of dots
on each side - segments distinct.
Length $3\frac{1}{4}$ line. of an elegant
form - painted 5 Jan 7 1840.
exact size & appearance. M.S.

no 244. Moth of the above.
Length $1\frac{3}{4}$ line. of wings, body
 $\frac{3}{4}$ - wings of a light brown black
with ~~some~~ white spot in the
middle of each upper wing -
body, thick & heavy. one of
the lower segments white with
yellow hairs. Thorax naked,
a yellowish white mark down
the body - head yellow. Antennae
long & thick, but slightly feathered.

This is a female. The eggs were round, white spotted black, drawing of exact size & appearance. Took wing 19 Feby 1840. M.S.

No. 245. Larva found in the Domain. 7 Dec 1839. very hairy all over, with plum colored dots & white spots from which the hairs grow. - 3 bright vermillion spots on each side just above the front legs.

Head brown. - A very pretty larva. Fed on the Casuarina. Length $1\frac{3}{4}$ in. This was very difficult to rear, being very delicate & tender. - Spun on the 12 Dec. a complete Cocoon of a brown color, drawing of exact size - full size. F.M.S.

No. 246. Chrysalis of the fore
 - going - painted on the 20 Decr -
 of a lightest red color. Length
 rather more than $\frac{3}{4}$ in.
 Drawing of eye & eye - F.M.S.

No. 247. Moth of the above,
 took wing 12 Febr 1840.
 Length 2 in. of wings -
 general color, straw - Two
 white spots on each upper wing
 a brown slight line running
 all round parallel to the margin
 & between a row of dots -
 a blotch of blood red on the
 lower margin of posterior wing -
 the wings of a peculiar shape
 Antennae feathery. Drawing
 of each eye & appearance.

F.M.S.

No 248. Larva found
 in the South Head road 1/2 feet
 on the Blue gum leaf $\frac{1}{2}$
 on the 17 Dec. 1839.
 Length from 5 to 6 inches
 head $\frac{3}{4}$ inch. general
 color of a rich satiny brown.
 made up by small strong hairs
 laying quite smooth & shiny.
 & when touched. causes extreme
 pain & itching. on each
 segment. are 8 yellow spots
 much raised & from which
 proceed bunches of strong
 & long bristles. the ones
 nearest the legs, quite white.
 like, hog's bristles. Head &
 shoulders thickly covered
 by these bristles. the tail
 yellow, & likewise covered

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between the legs, two rough
yellow bands, the whole length
of the insect. It undergoes
3^{or 4} changes. When young
it is of light red color, with
greyish patches all over,
not of that rich dark
color which it afterwards
attains. Made its nest
22 Dec, adhering a
strong Cocoon to the branch
of the tree, covered all over
with the hair of the larva,
so that the least touch or
handling produces considera-
ble pain. The female is
much larger than the male,
& the Cocoon of the former.

much more covered with the
hairs, & giving it to brownish
appearance — indeed the
cocoon of the male is of a
white satiny color —
Drawing of exact size of
the male — F. M. S.

249. Cocoons of the male
& female of the above
F. M. S.

250 — Chrysalis of the
female of the above —
Length $3\frac{1}{2}$ lines of a
rich reddish brown —
Drawing of exact size & appearance
painted 6 Jan 7 1840. F. M. S.

164 (see No 46)

251. Moth, male, of the foregoing, took wing 5 May. Length of expanded wings $6\frac{1}{4}$ Inc:— of Body. $2\frac{1}{2}$.

general color is of a dark rich shawl pattern—particularly the upper wings—colors being strongly marked—red, brown, black, & grey—hinder wings much more dark, with a transverse band of pinkish white about the middle of the wings & parallel to the border—between this & the margin a scalloped band of dull yellow. Antenna dark & feathery. Legs strong & dark, underneath.

front ones, yellow.

Near the tip of each upper wing are two oval spots, slightly yellow, & transparent. Underneath view much duller & lighter inclining to grey - A remarkably handsome moth.

Drawing of exact size & appearance. Originally painted 18 Apr. 1839 (See No 46) from a preserved specimen - but entirely retouched 5 May 1840 - from the live insect - M.S. & F.M.S.

No. 252. Female of the above. Took wing 30 Apr. 40

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Length of expanded wings

$7\frac{1}{2}$ in. = of body $2\frac{7}{8}$ in.

Similar in appearance

to the male, but much lighter
in color. The two yellowish

transparent spots near the
tips of each wing the

underwings, more scolloped

than in the male. Antennae

thick & slightly feathered.

The whole insect much
larger than the male. &

very handsome. — An

orange spot on each ^{between}
between the white & yellow bands
Painted on the 30 Apr.

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Physiognomy & Appearance -
F.M.S.

When - Butterfly & moth

Wings - Superior & under - inferior

Thorax - Abdomen - Antennae

Annulations - Bands - Segments

dimidiati - Caterpillar - Chrysalis

Posterior horn - Sub - Pupa

Larva - Hyaline - Umbonate

subulate - caudate - denticulate

Note - See drawing Nos 13, 14, 15

Phalaenoides Glycina -

The Chrysalis was placed near a
fire - & evidently forced -

Larva state 75 days as the period
before change into Butterfly -

Plate 1 of *Lewin* -

Plate 5 of *Lewin* - *Bombus*

nasuta - I think the illustration
No 67, is the same insect -

No 66 *Curculio Spectabilis* -

see *Donovan* -

No 35. *Buprestis imperialis*
see *Donovan*

No 23. *Buprestis* - ? *Donovan*

No 24. *Buprestis* - do

No 42. *Papilio Euctheus*
Donovan

Nos. 36. 37.

Papilio Harpalus ce
Donovan

Nos. 50. 51.

Papilio Negrina
Donovan

No 52

Papilio Abconia Donⁿ

No 53.

Papilio Acantha

No

Papilio Itca — Donⁿ

No 25.

Epheus Australasia?
Donⁿ

No 54.

Epheus triangularis?
Donⁿ