

XIV. *On Ogyris Genoveva, Hewitson, and its life-history.* By W. H. MISKIN.

[Read July 5th, 1882.*]

PLATE XV.

THIS species was first made known by the late Mr. Hewitson, who was, however, acquainted with the female only, which he figured and described in his 'Exotic Butterflies.'

In this, as in the other species of this very rare genus, the individuals are few and far between, being extremely local in their habits.

My friend Mr. George Barnard, of Coomooboolaroo, has, however, been so extremely fortunate as to penetrate the mystery of its metamorphosis, and has kindly communicated the particulars to me for publication, and the obligation is doubly enhanced by the accompaniment of figures of individuals of both sexes, variety of the female, larvæ and pupa, as also the food-plant, beautifully executed by the pencil of Mrs. Barnard, and which supplement this paper.

I am now in a position to make known to Science the complete history of this the finest species (excepting the somewhat aberrant, if not doubtful, *Liphyra Brassolis*, Westw., which, by the way, is probably not hitherto known to be Australian) of the whole family (*Lycænidae*); as also the hitherto undescribed male and variety of the female.

LEPIDOPTERA.

LYCÆNIDÆ, *Stephens.*

OGYRIS, *Westwood.*

Ogyris Genoveva, Hewitson.

Hewitson, Ex. Butt., i., pl. 48, figs. 5, 6.

Male.—Upper side: Dense purple, inclining to violet, somewhat darker towards outer margins; marginal

* Publication delayed owing to miscarriage of drawings.—
E. A. F.

fringe white. Primaries with three short oblique white dashes at apex of costa. Secondaries with outer and hinder margins deeply dentated, anal angle somewhat spatulate; termination of 3rd median nervule prolonged into a decided tail. Abdominal margin brown. Thorax and abdomen black. Under side: Primaries, basal and discal areas dull black; apical angle and part of the outer margin grey; six transverse discal bands of silvery blue, and one beyond cell larger, whitish. Secondaries grey, with numerous transverse waving double black lines. Thorax and abdomen grey. Expanse, 2 inches.

Female.—Upper side: Black; base of both wings, extending on the secondaries to anal angle, and faintly to termination of 1st and 2nd median nervules, light silvery blue; marginal fringe white. Primaries with an oblique apical, somewhat curved, band of pale yellow; two faint white oblique short dashes at apex of costa. Secondaries dentated and tailed as in male; the 1st median nervule rather more developed; abdominal fold very light brown. Thorax and abdomen greyish brown. Under side: Primaries as in male, except for the broad apical band of light yellow. Secondaries also as in male, but with the addition of a broad lightish transverse band from about centre of costa half-way across wing, and patches of ashy brown intermingled with the grey. Thorax and abdomen grey. Expanse, 2 inches 4 lines.

Var a. *Female*.—With the basal area violet, not extending so far into the wings as does the blue in the typical female. Expanse, 2 inches 5 lines.

Hab. Brisbane; Dawson River (*Barnard*); Queensland.

As I have not myself seen the larva and pupa, I reproduce my friend Mr. Barnard's description and remarks:—

“*Larva*.—1 inch to 1 inch 2 lines, subonisciform when at rest, but flattening out considerably when in motion; attenuated posteriorly; anterior segments retractile; ochreish yellow; base of each segment on the back dark brown; head reddish brown, hidden by the projecting 2nd segment; spiracles black; each segment at side and apex of posterior segment produced into a small fascicle of white bristles.

"Pupa. — 9 to 10 lines, dull black, smooth and rounded, with the usual central girth.

"The larva, which is nocturnal in its habits, feeds upon *Loranthus* sp., descending and remaining beneath the surface of the ground during the day, where also it undergoes its changes, fastening up to projections of wood at the foot of the tree which bears its food-plant, immediately under the surface. It is social in its habits, numbers in all stages and of various ages being found together.

"It apparently secretes some sweet substance, being invariably attended by numbers of large ants (a peculiarity common to other of the *Theclinæ*, as I have observed the same thing occur with *Ialmenus Evagoras* and *I. Ictinus*).*

"The imago makes its appearance from November to April."

EXPLANATION OF PLATE XV.

- FIG. 1. *Ogyris Genoveva*, ♂.
 2. " " ♀.
 3. " " ♀, var.
 4. " " larva.
 5. " " pupa.

The plant is *Loranthus* sp.

* Ants are known to attend on the larvæ of several European and North American species of *Lycæna* for the sake of a sweet secretion. *Vide* W. H. Edwards, *Canad. Ent.*, x., pp. 1—15 131—136, 160 (1878).—W. F. K.

XV. *Descriptions of twelve new species of South-African Lepidoptera-Rhopalocera.* By ROLAND TRIMEN, F.R.S., &c., Curator of the South-African Museum, Cape Town.

[Read June 6th, 1883.]

THE species here described comprise one member of the *Nymphalidæ*, six of the *Lycænidæ*, two of the *Papilionidæ*, and three of the *Hesperidæ*. Seven of them will be figured in my new work on the South-African Butterflies.

The most remarkable among these new species is *Lycæna stellata*, one of the smallest of known forms, in which the ordinary pattern of the under side of the wings is in both sexes distinctly outlined in white on the very dark upper side. *D'Urbania saga* is a very distinct and interesting addition to a genus hitherto represented by a single species.

NYMPHALIDÆ.

NYMPHALINÆ.

Precis, Hübn.

Precis Sesamus, n. s.

Exp. al. 2 in. 5—11 lin.

Closely allied to *P. Amestris*, Drury.

Black, irrorated and transversely banded with violaceous-blue; a common discal row of conspicuous red spots. Fore wing: Basal area thickly irrorated with blue, crossed by five black streaks in discoidal cell; discal row of four red spots (surmounted near costa by two small round white spots) between two blue bands, of which the inner one is continuous and irregularly excavated along its internal edge, and the other one regular but macular; a series of bluish-white lunules along hind-marginal edge. Hind wing: Bands and basal irroration much as in fore wing, but inner blue band soon merges in basal blue, and outer one is continuous;

six or seven red spots in discal row. Under side: Glossy dark greenish bronze, with transverse fuscous striæ corresponding in position with the black portions of the upper side; a discal row of small fuscous rings (of which the third from the costa of fore wing is filled with white). Fore wing: Two lower red spots of discal row present, but much paler and less defined than on upper side. Hind wing: Basal area crossed by three or four much broken irregular fuscous striæ. Cilia, above fuscous, with white internervular markings; beneath much more obscure, especially in hind wing.

This southern representative of *P. Amestris* is readily separable by (1) its larger size, (2) its conspicuous basal blue irroration, (3) the constancy and large development of the inner discal blue band, (4) the less irregular discal row of red spots, (5) the absence of red striæ in discoidal cell of fore wing, and (6) the uniform dark bronzy-green tint of the under side, without any representation of the red spots of the upper side, except near the inner margin of the fore wing.

Hab. Cape Colony (Eastern Districts), Kaffraria Proper, Natal, Transvaal, and as far north as the Zambesi River.

LYCÆNIDÆ.

LYCÆNA, *Fab.*

Lycæna lucida, n. s.

Exp. al. $8\frac{1}{2}$ lin.—1 in. $\frac{1}{2}$ lin.

Allied to *L. Lysimon*, Hübn.

♂. Pale violaceous, inclining to pink; nervules more or less defined with greyish brown; cilia whitish, much obscured with brownish in fore wing, and varied with it in hind wing. Fore wing: An indistinct thin brownish disco-cellular lunule; a greyish-brown hind-marginal border of variable width, usually ill-defined inwardly. Hind wing: A hind-marginal row of six small internervular fuscous spots. Under side: Pale grey, tinged with brownish; spots of bases and discs very distinct, black, in white rings; beyond ordinary discal row a row of sagittate white marks, succeeded by two hind-marginal rows of white lunules almost forming internervular rings. Fore wing: Two spots near base, one in cell, the other below it; discal row of spots

strongly incurved on 2nd median nervule. Hind wing : A spot at base ; a transverse row of four spots before middle ; discal row strongly elbowed on 2nd subcostal nervule ; a straight white ray runs longitudinally along radial nervule from disco-cellular terminal lunule as far as row of sagittate white marks ; near anal angle, two small blackish spots enclosed by lunules of the two hind-marginal rows.

♀. Dark brown, usually more or less marked with violaceous on lower part of discs and towards bases. Hind wing : Dusky spots of hind-marginal row, as in male, more or less apparent in violaceous-marked specimens. Under side : Usually a little more brownish than in male ; the spots even more distinct, and the white ray of hind wing broader.

This insect may be distinguished from *L. Lysimon* by the much more conspicuous spotting of the under side with the white ray exhibited by the hind wing. The male also differs in the decided pink tinge of the upper side, and in the absence of the dusky border of the hind wing. The female has the upper side much darker than in *L. Lysimon*, and the violaceous colouring is deeper and not of so blue a tint.

Hab. Cape Colony, Kaffraria Proper, Natal, and Transvaal.

Lycæna stellata, n. s.

Exp. al. 7—9 lin.

Greyish fuscous, with numerous subannular and other white spots arranged in correspondence with those of the under side. Fore wing : Terminal disco-cellular annulet, and discal inferiorly much-incurved band of annulets, enclose spots somewhat darker than ground colour ; two similar annulets near base, one in cell, the other below it ; a submarginal row of six minute white spots ; cilia broad, fuscous, with narrow but very distinct white internervular interruptions, those close to apex and to posterior angle wider than the rest. Hind wing : An indistinct annulet near base below cell ; other markings as in fore wing, but not so pronounced ; in submarginal row of small white spots the first is considerably larger than the others ; cilia broad, white, with imperfect fuscous nervular interruptions. Under side : Pale brownish grey, the white annulets enclosing

fuscous spots. Fore wing: Markings very distinct; discal row of annulets commencing about middle with two very small costal ones; submarginal row of minute white spots black-edged on both sides; fuscous of cilia paler than on upper side. Hind wing: An annulet at base; a subbasal transverse row of four annulets, that on costa enclosing a spot darker than the rest; 1st and 2nd annulets of discal band separate from succeeding ones and nearer base; submarginal row of minute white spots rather indistinct, but their inner black edges well marked, subsagittate; the 1st and 2nd of these spots are out of line with and before the others.

Like *L. lucida*, this butterfly belongs to the *Lysimon* group, both in form and in the pattern of the under side; but the upper side in both sexes is quite unlike that of any member of that group, or indeed of the genus *Lycæna*, presenting as it does, on a blackish ground, the under side pattern in finely-depicted white annulets and spots. In the total absence of blue in both sexes, and in its very small size, *L. stellata* resembles *L. Metopis*, Wallengr., and *L. Barberæ*, Trim., but its under side is altogether different, and quite wants the row of metallic-dotted ocelli so conspicuous in the hind wing of those two species.

This very remarkable little butterfly was discovered by Dr. D. R. Kannemeyer, near Burghersdorp, in the north-east of the Cape Colony, in November, 1882. He describes it as being numerous in a damp spot of a few yards in extent, flitting about low flowers in a circular direction.

Hab. Burghersdorp (Albert District), Cape Colony.

Lycæna puncticilia, n. s.

Exp. al. 1 in.—1 in. $3\frac{1}{2}$ lin.

Closely allied to *L. Methymna*, Trim.

Dark brown, with a slightly æneous surface gloss; cilia dark brown, with rather small but very conspicuous pure white internervular spots. Hind wing: In some female examples, along hind-marginal edge, a row of minute internervular white spots, only separated from the white spots of the cilia by a blackish bounding line. Under side: Dull ashy brown; ordinary discal row of

darker white-edged spots indistinct, or sometimes obsolete, except for the thin internal white edging; adjoining the conspicuous white spots of the cilia a row of elongate-ovate white rings, usually better marked in fore wing than in hind wing. Fore wing: Spots of discal row confluent into a nearly straight fascia, slightly bent inward on median nervules; beyond this traces of a row of thin sharply-sagittate white marks. Hind wing: First and last spots of discal row ovate, black, white-ringed; other spots of row confluent, suffused; a sub-basal transverse row of three round black spots in white rings; beyond discal row a conspicuous, very acutely dentated, white transverse line composed of contiguous sagittiform marks; on hind margin, between 1st and 2nd median nervules, a small indistinct blackish spot centred with a few bluish-white scales.

Separable from *L. Methymna*, Trim., by (1) darker upper side, without any reddish tinge; (2) absence of disco-cellular lunule on upper side of fore wing; (3) darker, more ashy under side, with (4) less distinct and less macular discal row; (5) more elongate and distinctly defined white rings of hind-marginal row; and (6) more conspicuous and acutely dentated white transverse line in hind wing.

Taken in some abundance at and near Malmesbury, a village some miles to the northward of Cape Town, by Colonel Bowker and myself.

Hab. Cape Colony (Western Districts).

Lycæna Bowkeri, n. s.

Exp. al. 1 in. $1\frac{1}{2}$ — $2\frac{1}{2}$ lin.

Allied to *L. Thespis*, Linn.

♂. Silky lilacine-blue; each wing with a rather large blackish lunular mark closing discoidal cell, and a moderately wide macular blackish hind-marginal border; cilia broad, black, conspicuously interrupted with white between nervules. Hind wing: The spots composing hind-marginal border more separated than in fore wing (especially near anal angle), and immediately preceded by contiguous thin whitish lunules. Under side: Yellowish white; each wing with disco-cellular lunule, irregular interrupted discal row of spots, and sub-marginal row of smaller subquadrate spots,—all pale

ochreous-brown, finely edged, internally and externally, with blackish; close to hind margin a row of very distinct sublunulate black spots. Fore wing: A longitudinal brown stripe from base (where it is almost black) along subcostal nervure to a little before and above extremity of discoidal cell; three small ochreous-brown spots near base (one in cell); discal row of spots abruptly interrupted on 2nd median nervule; costa from before middle to apex edged with blackish. Hind wing: Curve of costal edge close to base black; an irregular basal marking composed of three or four contiguous small ochreous-brown spots; subbasal row of three spots much as in fore wing; an additional spot on inner margin near base; discal row abruptly interrupted on 2nd subcostal nervule, and thence angulated in almost a direct line to about middle of inner margin; the 7th (and very slightly the 8th) black spot of hind-marginal row dotted with silvery blue.

♀. Only the basal and inner-marginal area of both wings, and the hind-marginal region of hind wing, lilacine-blue, the disc being white in both; terminal discocellular spot and irregular discal row as on under side, but black and strongly marked; row of violaceous-whitish lunules internally edging hind-marginal blackish spots more conspicuous than in male in hind wing, and also indistinctly marked in fore wing. Under side: As in male, but all the spots somewhat sharper and clearer in outline.

This interesting species is in the male distinguishable from *L. Thespis*, by (1) the much less vivid more lilacine-blue, and (2) much wider hind-marginal blackish border of the upper side; and in the female by (3) the much more developed discal white (especially in the hind wing) and hind-marginal lunulate markings. On the under side both sexes display (4) a whiter ground, (5) smaller and more clearly-defined markings, and (6) much more conspicuous and black spots of hind-marginal row. The tail of the hind wing is in both sexes longer than in *L. Thespis*; and in this character, as well as in those of the under side just noted, *L. Bowkeri* exhibits indications of alliance with such congeners as *L. Sybaris*, Hopff., and *L. Hintza*, Trim.

Colonel Bowker, to whom I dedicate this species, captured four examples early in the year 1881, on the

summit of a high hill overlooking the Inchanga Valley in Natal. He took two of each sex, and notes that they were flitting about the flowers of a small leguminous shrub.

Hab. Natal (Inchanga).

ARRUGIA, Wallengr.

Arrugia brachycera, n. s.

Allied to *A. basuta*, Wallengr., and *A. Protumnus*, Linn.

Exp. al. (♂), 1 in. 4—6 lin. ; (♀), 1 in. 7—9 lin.

♂. Dull fuscous-grey, with a slight ochraceous tinge ; in both wings a blackish terminal disco-cellular spot and discal row of spots (indistinct in hind wing). Fore wing : Hind-marginal area beyond discal spots darker than basal area ; between disco-cellular spot and discal spots a dull suffused space of pale grey tinged with ochraceous, radiating on the basal portion of the median nervules ; first four spots of discal row confluent and forming a costal bar as far as 3rd median nervule—the other four small, indistinct, separate, in a row inclining inwardly, between 3rd median nervule and submedian nervule. Cilia dull white, with rather narrow fuscous interruptions at extremities of nervules. Under side : Hind wing and apex of fore wing dull hoary grey. Fore wing : Basal area whitish grey, scarcely separable from discal suffused space, which is dingy whitish and much more extensive than on upper side, forming a band beyond discal row of spots ; this row and disco-cellular are very distinctly defined on the pale ground ; near base two less distinct small fuscous spots, one in cell the other below it ; outwardly edging discal dingy-whitish band a row of rather ill-defined sagittate fuscous marks ; hind-marginal border pale brownish from a little below apex. Hind wing : Irregularly reniform disco-cellular spot, and almost regular discal row of spots, very pale brownish, with a thin dark brown edging line (stronger on inner edge of row) relieved externally by a thin white line ; in basal area the traces of two highly-irregular transverse rows of broken pale-brownish spots ; a submarginal row of minute, almost obsolete, subsagittiform spots ; hind-marginal border clouded with pale brownish.

♀. Rather paler and slightly more ochraceous. Fore wing: Discal pale space less obscure, not radiating on median nervules, but extending more or less distinctly beyond discal row of spots. Hind wing: Spots not quite so indistinct. Under side: Hind wing and apex of fore wing less hoary, more brownish grey. Hind wing: Spots of basal area, except first and last of outer row, altogether obsolete; sagittiform spots of sub-marginal row much larger and more distinct.

The absence of yellow-ochreous colouring at once distinguishes this very dingy *Arrugia* from *A. Protumnus* Linn., and makes it more like *A. basuta*, Wallengr., which is the type of the genus.

From the latter, as far as the male is concerned, *A. brachycera* may be known by (1) its darker colouring, (2) larger and more pronounced spots, and (3) want of whitish on disc; while on the under side (4) it is considerably darker, (5) has the fore-wing spots much larger (with the marked exception of the spot near base below cell), and (6) the discal row of hind wing much broader and more regular. The female is readily recognised by (7) wanting the conspicuous white discal markings of the female *A. basuta* on the upper side. Apart from pattern and colouring, the remarkable shortness of the antennæ is very noticeable, especially in the female, where they are only about $2\frac{1}{2}$ lines in length,—shorter than in *Protumnus*, and much shorter than in *A. basuta*.

This *Arrugia*, which I formerly regarded as a local race of *Protumnus* (see Rhop. Afr. Aust., ii., p. 279, *obs.*), is rare in collections. I found it in some abundance at Kuysna, on the south coast of the Cape Colony; and a few examples of what I consider a small dark variety of it have been taken at Cape Town. It appears in the height of summer, and delights to sit on the ground in the hottest and dustiest places.

Hab. Cape Colony (Western Districts).

D'URBANIA, *Trim.*

D'Urbania saga, n. s.

Allied to *D. amakosa*, Trim.

Exp. al. 1 in. 1 lin.

♂. Dark brown; a discal row of dull pale ochreous-yellow spots in each wing. Fore wing: Discal row of



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