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LEPIDOPTERA EXOTICA,

OR

Descriptions and Illustrations of Exotic Lepidoptera.

BY

ARTHUR GARDINER BUTLER, F.L.S., &c.

1869—1874.

Thou, Lord, hast made me glad through thy work: I will triumph in the works of thy hands.

PL. 545. 1.



London:

E. W. JANSON, 28, MUSEUM STREET, W.C.

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P R E F A C E .

WHEN I commenced the present Work in 1869, I did so under the impression that Lepidopterists generally would be as grateful to me, for the time and labour which I devoted to it, as I have always felt to those who have assisted in accurately delineating these beautiful insects which all admire: from May 1865 (when I first began to publish descriptions and illustrations of Exotic Lepidoptera), to July 1873, I had added 708 good species to those previously known to Science, of these 57 were described for the first time in "Lepidoptera Exotica"; I had given representations of 676 species, illustrated by 854 figures, 230 of which species, illustrated by 358 figures, had appeared in the present Work: notwithstanding this, so far from receiving the "blessings" to which I have referred in my "Advertisement," I have met with the greatest discouragement; in fact, excepting from the Presidents of the Entomological Society, my kind friend Mr. Druce, my self-sacrificing publisher Mr. Janson, and a chosen few at home and abroad, my evening labours through eight weary years have elicited reproaches rather than thanks; and this Work, instead of receiving fair support from Lepidopterists, has been a burden both to Mr. Janson and myself.

Having then given a sufficient reason why "Lepidoptera Exotica" should terminate with the first volume, I will now proceed to give a further explanation of the motives which have induced me to abandon my former well-meant but rash determination to figure all the Lepidoptera which I described:—In the first place, I found that, as I advanced in the study of the Order, I was enabled by degrees to comprehend more easily, without the aid of illustrations, the descriptions of others; and I began to see that figures were not such an absolute necessity as I once imagined them to be: in the second place, I found that so many Collections which arrived in this country teemed with novelties, that either many beautiful and distinct species must remain unnamed in our cabinets, or the bright dream of figuring the whole of them must be dissipated: of these two evils I was constrained to choose the less, the consequence of which has been the publication of several papers, containing numerous descriptions of new species, none of which I have promised to figure, and many of

which I probably never shall figure: the species which I have described up to the present time amount to 827, of these 60 have appeared for the first time in "Lepidoptera Exotica;" 741 having been figured by myself, 313 of them, illustrated by 449 figures, in this Work.

It can, I think, scarcely be denied that, as a book of reference, this Work is not entirely valueless, when it is considered that, in addition to a complete illustrated Monograph of the genus *Callidryas*, it contains representations of no less than 117 genera, several of them previously unknown to Science: I feel therefore, notwithstanding the cold water which has been lavishly cast upon my undertaking, that I have, in a measure, advanced the study of this most attractive branch of Entomology.

I now turn to the pleasant task of expressing my gratitude to those who have kindly assisted me with subjects for my illustrations, foremost amongst whom I am indebted to Herbert Druce, Esq., W. Wilson Saunders, Esq., and Andrew Swanzy, Esq., who have at all times allowed me to select what I chose from their extensive Collections, and who have ever shown a warm interest in my Work: my thanks are also due to H. Ansell, Esq., E. Brown, Esq., T. Chapman, Esq., E. Charlesworth, Esq., the Rev. T. Cornthwaite, W. L. M. D'Urban, Esq., E. C. Reed, Esq., W. C. Hewitson, Esq., E. W. Janson, Esq., Raphael Meldola, Esq., F. Moore, Esq., Lieut. Howland Roberts, Osbert Salvin, Esq., the Rev. F. A. Walker, Alfred Wallace, Esq., Lord Walsingham, C. Ward, Esq., and H. Whitely, Esq., all of whom have lent or given me specimens.

I have not followed the plan adopted by Messrs. Edwards, Hewitson, and Ward, of leaving the pages and plates unnumbered, as I have myself experienced much difficulty in referring to their descriptions and figures until the completion of a volume; I have also been unwilling to put myself under the necessity of figuring species of the same genus on one plate.

A. G. BUTLER.

17, OXFORD ROAD, EALING, *April*, 1874.

CORRECTIONS.

- Page 6, line 20 from bottom of page, for "*parallelibus*," read "*parallelis*."
- „ 11, *Euptychia Zohdi* (= *Pindis squamistriga*, Felder).
- „ „ line 11 from top of page for "*Choctum*," read "*Choctum*."
Toggetis Kera (= *Cyrtopsis Heidemanni*, Felder).
- „ 22, line 15 from top of page, omit note.
- „ 31, line 12 „ „ omit (*C. Anacyllis*, Fabr.)
- „ 59—63, heading of page, for "*Nymphalidae*," read "*Papilionida*."
- „ 71, line 9 from top of page for "*E. Limonia*," read "*E. Limonia*."
Dolus Ihicho (locality *Dorjerling* not *Peang*.)
- „ 110, line 11 from top of page for "*ereseus*," read "*ereseus*."
- „ 110, „ 18 „ „ for "*analischerna*," read "*analischerna*."
- „ 111, „ 2 „ „ for "*palidus*," read "*palidus*."
- „ 127, „ 13 „ „ for "*Aire-la-Chapelle*," read "*Aire en Provence*."
- „ 156, lines 5 & 6 „ „ for "*Morphe Zephyritis*," read "*M. Lymphearis*."
- „ 151, „ 18 „ „ for "*Morphe Lymphearis*," read "*M. Zephyritis*."
- „ 162, „ 13 „ „ for "*Tmolus Reuricus*," read "*Tmolus Duricus*."
- „ 162, „ 17 „ „ for "*Carexstus Sabosa*," read "*Amphites Leana*."

Pages 113 and 114 are, in some copies, repeated, but in all those issued *subsequent* to the detection of the error they have been marked 113a and 114a.

The hiatus of pp. 129—136 is a *typographical* error discovered too late for correction.

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* There can be no doubt that this group contains many good distinct genera, but they have not yet been separated.

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ADVERTISEMENT.

THE great necessity for recognizable figures of Lepidoptera is a thing which, in common with other working Entomologists, I have long and deeply felt. Complex descriptions without illustrations of any kind to assist in their determination, are, to say the least, a severe tax upon the patience and ingenuity of all who wish satisfactorily to interpret them.

That magnificent Work which the FELDERS have so recently produced, from the number of its minutely exhaustive descriptions of unfigured species, destroys the pleasure which one would otherwise derive from a contemplation of its very beautiful plates. The temptation to describe new and striking species, with or without figures, is doubtless strongly felt by all who love to call the beautiful their own; and in common with others, I must plead guilty to having been betrayed into it: this is however an error of which I have long repented, and long desired to atone for; but up to the present time no opportunity has offered of which I could avail myself.

Through the kindness of Mr. JANSON I am at length enabled to commence a Work which will, I trust, entitle me to those blessings which my esteemed friend Mr. HEWITSON has so often assured me are the reward of a recognizable figure. I can only add that it will be my endeavour throughout the present undertaking to produce characteristic copies of the originals, and render the accompanying descriptions as definite as possible.

The object of this Work, which will be issued in *Quarterly Parts*, is to give representations of all such new or little known species as may be considered of sufficient interest to merit attention.

A. G. BUTLER.

London, May, 1869.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PAPILIONINÆ. *Bates.*

GENUS PAPILIO, (*Lin.*) *Fabricius.*

SECTION ORNITHOPTERA. *Bates.*

PLATE I.

Papilio Miranda, *sp. nov.*

♂ Alæ anticæ nigerrimæ, certo situ nitide cærulescentes; striis tridecim (quarta elongato-lunulari) de quarta submarginalibus, decrescentibus, flavidis; ciliis nigris flavo interruptis: posticæ flavæ nitidæ certo situ minime virescentes, margine omni nigro, externo sex-elevato, venis nigris; corpus nigrum abdomine flavescente. Alæ anticæ subtus regione apicali sericea, striis supernis albidis: aliter velut supra; corpus thorace nigro, abdomine flavo valvulis albidis: exp. alar. unc. 6, lin. 4.

? Alæ anticæ supra brunneæ venis nigris, striis velut mari positis sed albidis: posticæ flavæ nigro irroratæ, basi, margine, fasciæque maculari discum fere totum obtegente, sericeo-nigris: corpus nigro fusco collo flavo, abdomine paulum pallidiore lateraliter flavo squamoso.

Alæ subtus characteribus multo distinctioribus, aliter velut supra: corpus thorace nigro, abdomine flavo, hoc fusco sex-fasciato: exp. alar. unc. 7, lin. 5. Sarawak (*Lowe*). ♂, ♀, B. M.

This grand acquisition has recently arrived in a Collection made at Sarawak (Borneo) by Mr. Lowe; it is only surpassed in beauty, in its own peculiar group, by the *P. Megalonus* of Felder, sent from the Philippines by Dr. Semper. One of the most striking characters observable in *P. Miranda* is the distinctness of the deep purple gloss which in certain lights overspreads the entire surface of the front wings of the male: this species seems to find its true position between *P. Helena* and *P. Amphirionus*, the form of the front wings being most like the former, the striation of the wings more nearly resembling the latter species: six or eight specimens of *P. Miranda* came in the same collection from Mr. Lowe, some of which are now in the Collections of Messrs. Druce, Salvin, &c.

FAMILY NYMPHALIDÆ.

SUB-FAMILY NYMPHALINÆ. *Bates.*

GENUS CHARAXES. *Ochsendwimer.*

PLATE II.

Charaxes Smaragdalis, fig. 1.

♂ *Charaxes Smaragdalis*, *Buller*, Proc. Zool. Soc. p. 630, n. 32, pl. 36, fig. 5 (1865).

♀ Major et robustior; alæ anticæ fasciâ transversali obliqua nivea, partim cœruleo-viridi marginata; maculis discalibus minoribus; posticæ cauda exteriori longiore: subtus obscuriores, fasciâ anticis obliqua nivea; aliter velut mari: exp. alar. unc. 4 lin. 8.

Congo. ♂, B. M.; ♂, ♀, Coll. Chapman.

Charaxes Saturnus, fig. 2.

♂ *Charaxes Saturnus* *Buller*. Proc. Zool. Soc. p. 624, n. 5, pl. 36, fig. 1. (1865.)

♀ Major, alæ posticæ supra maculis anali-discalibus cœruleis multo majoribus inerescentibus; subtus characteribus paulo distinctioribus; macula media in fasciam posticarum niveam, nigra; maculis subocellaribus violaceis apud marginem externum, majoribus; aliter velut mari: exp. alar. unc. 5.

♂, Interior of S. Africa. Zambesi, B. M.; ♀, Congo, Coll. Chapman.

The two females described above have been kindly lent to me by Thomas Chapman, Esq., of Glasgow, from a rich little Collection of Congo insects, recently sent for comparison to the British Museum.

SUB-FAMILY SATYRIDÆ. *Bates.*GENUS EUPTYCHIA. *Hübner.*

PLATE III.

1. *Euptychia Cærulea*, sp. nov., figs. 1, 2.

♂ Affinis *E. Cælestis* paulo major: alæ supra cæruleæ nitidæ; antice margine externo, costa apicali striolaque obliqua pone cellam fuscis; postice lineola submarginali interrupta, altera marginali latiore apud apicem tenuiore, tertiæ anteciliari tenuissima nigris: corpus fuscum.

Alæ subtus pallidiores, posticæ paululum virescentes, anticæ stria cellam transerrante, altera pone cellam obliqua, tertia undata submarginali, quarta marginali subintegra, quinta anteciliari, omnibus fuscis; costa media fusca; ocello nigro caeco fusco circumdato, punctisque tribus fuscis inter strias secundam et tertiam positis: posticæ stria basali, altera tertiæque mediis parallelibus, quarta valde irregulari apud marginem, quinta undulata marginali, sextaque anteciliari, omnibus nigris; ocellis duobus nigris carcis (fusco introrsum circumdatis et a punctis duobus fuscis connectis), inter strias tertiam et quartam positis: corpus cinereo albidum: exp. alar. unc. 2.

♀ Alæ pallidiores, anticæ fasciis duabus transversis longioribus fuscis, costa tota fusca; posticæ fasciola pone cellam abbreviata, lineola submarginali latiore haud interrupta; apice late fusco: aliter velut mari.

Alæ subtus multo pallidiores ocellis majoribus; fasciis omnibus latioribus rufescentibus, ocellis quoque anticis uno, posticis tribus, rudimentariis; aliter velut mari: exp. alar. unc. 2. lin. 1.

Maranham (*Wendeborn*). ♂, ♀, Coll. Salvin.

This species is most nearly allied to my *E. Cælestis*, but is quite distinct from it; the male differs much more than the female.

2. *Euptychia Mare*, sp. nov., fig. 6.

♂ Affinis præcedenti cujus femine maxime simulat; minor est et gracilior, fasciis supra subtusque tenuioribus; arcâ autem anticarum apicali latius nigrescente: exp. alar. unc. 1. lin. 8.

Parâ (*Wallace*). ♀, Coll. Salvin.

In my Monograph of *Euptychia*, I unfortunately mistook this species for a variety of *E. Cælestis* ♀, it is however an undoubted male.

3. *Euplychia Zeba*, sp. nov., fig. 3.

♂ Alæ supra fuscae elongatae, striis una anticis, duabus posticis, submarginalibus fuscis nebulosis; linea anteciliari nigra; ciliis pallide fuscis: corpus fuscum.

Alæ subtus multo pallidiores; characteribus fere *E. Antonois*, fasciis autem mediis latioribus, ad angulum ani posticarum magis approximatis obscurioribusque, externa quoque anticarum apud angulum ani introrsum curvata; anticae ocellis tribus, supremo nigerrimo, squamis flavo-cincto, fusco circumdato et albo pupillato, quinto pupilla geminata, tertio et quarto fuscis, flavo cinctis, fusco circumdati et ceruleo bipupillatis; corpus fuscum: exp. alar. unc. 2. lin. 7.

Pebas, E. Peru. (*Hauvrell*). ♂, Coll. Salvin.

This species is very nearly allied to Cramer's *E. Antonois* of which it is probably a local form: it differs considerably in outline and other minor particulars.

4. *Euplychia Fulgora*, sp. nov., fig. 4.

♂ Affluissima *E. Tricolori*, formâ autem omnino distans; anticae fascia discoidea longitudinali, plaga pone eam fasciolarî disco-costali lineaque marginali, nitidissime ceruleo-viridibus: fascia aurantiaca posticarum costali, angustiore; fascia ceruleo-viridi interno-anali magis virescente: alæ subtus pallidiores, ocellis posticarum intermediis, longioribus; fascia interna anticarum media magis arcuata, externa magis undata, linea anteciliari magis albicante: exp. alar. unc. 2. lin. 2.

Pebas, E. Peru. (*Hauvrell*). ♂. ♀, Coll. Salvin.

This beautiful species though nearly allied to *E. Tricolor* differs entirely from it in the form and coloration of the anterior wings, and must be considered distinct: the female I am unable to describe, as I have not a female of *E. Tricolor* with which to compare it.

5. *Euplychia Quadriata*, sp. nov., fig. 5.

♂ Alæ supra fuscae; posticae striolis duabus antimarginalibus ocelloque indistincto subanalibus; fascia subquadrata transversa lata nivea ad costam haud attingente: corpus fuscum.

Alæ subtus pallidiores, anticæ illis *E. Honidis* persimiles obscuriores, lineisque transversis latius separatis, quarum externa haud arcuata; posticæ ad basin fuscae, linea transerrante fracta obscuriore, tunc fascia superna nivea a linea (apud costam angularem) limitata; area pone hanc aurantiaca flavido varia, maculam permagnam subovalem nigerrimam argenteo bipupillatam subanalem includente; punctis aliis argenteis velut in *E. Honide* positis; lineis duabus antimarginalibus albidis in fundum fuscum positis; corpus cinereo-fuscum, pedibus ochraceis: exp. alar. unc. 1. lin. 5.

Maranham (*Wendeborn*). ♂, Coll. Salvin.

Allied to *E. Itonis* of Hewitson from which, however, it is very distinct.

PLATE IV.

6. *Euptychia Ziza*, sp. nov., fig. 1.

♀ Alæ supra lilacino-cæruleæ, anticæ fasciis duabus mediis et margine externo fuscis; area apicali fusco squamosa; posticæ fascia media interrupta duabusque submarginalibus undatis fuscis; corpus cinereum, abdomine flavido.

Alæ subtus pallidè cæruleæ fasciis duabus mediis duabusque submarginalibus fuscis, inter secundam et quartam fasciola ocellos includente fusca; anticæ ocello uno, posticæ quinque (tertio et quarto rudimentariis) nigris albido-cinctis; corpus cinereum: exp. alar unc. 1, lin. 9½.

Pebas, E. Peru. (*Hau.ewell*). ♀, Coll. Salvín.

This species bears a distant resemblance to the male of *E. Corstis*, it is nearly allied to *E. Cerulea*, from which its smaller size and more lilac colouring readily distinguish it: it also differs in having the bands of the frontwings more angular, of nearly equal width, placed nearer together, and reaching the inner margin of the wing; the marginal band is narrower, the central band of the hindwing more strongly defined, especially at the anal margin and the black spot on the disc wanting.

7. *Euptychia Zeredatho*, sp. nov., fig. 2.

♀ Alæ supra fuscae pallidae, lineis duabus submarginalibus undatis obscurioribus, ocelloque posticis nigro fulvo-cincto et plumbeo bipupillato.

Alæ subtus pallidiores, lineis duabus (interiore anticarum abbreviata) fuscis irregularibus, et duabus submarginalibus undatis: anticæ ocellis tribus minutissimis subapicalibus, posticæ quatuor, primo quartoque majoribus, omnibus nigris flavido cinctis et plumbeo pupillatis: corpus cinereum: exp. alar. unc. 1, lin. 1½.

Rio. ♀, Coll. Salvín.

This may be a race of *E. Eous*, it is of the same form as the male of that species, but it is smaller and its hindwings are more angular: it differs also in being paler, with more irregular central bands and smaller ocelli.

8. *Euptychia Ihama*, sp. nov., fig. 4.

♀ Alæ supra fuscae, fascia communi discali coccinea indistincta: posticæ maculis sex ocellaribus marginalibus nigris, tertia distinctiore magna.

C

Alæ subtus olivaceo-fuscae fusco striolatae, fascia lata media obscuriore, anticis a rufo, posticis ochraceo limitata; margine externo quoque obscuro, anticis a rufo angulis alternis limitato, margine posticarum striolam argenteam ocellumque medium nigrum fulvo cinctum et rufo circumdatum includente: corpus fuscum: exp. alar. unc. 1. lin. 11—unc. 2. lin. 4.

Valley of the Polochie and S. Lorenzo, Plain of Salama. (*Hague*).
♀, Coll. Salvin.

This wonderful insect is the finest of the *E. Gemma* group, of which it constitutes the third described species, it is interesting from the almost caudate angulation of its posterior wings, in which particular it approaches the genus *Taygetis*: *E. Gemma* is synonymous with the "*Papilio Cornelius*" of Fabricius, to which it will have to give place.

9. *Euptychia Binocula*, sp. nov., fig. 5.

♀ Alæ supra fuscae subpellucidæ, fasciis duabus mediis obscurioribus; posticæ fundo medio et margine externo albicantibus; ocello magno subanali nigro albo cineto et pupillato: corpus fuscum.

Alæ subtus fuscae, area basali albicante, a fasciis tribus regularibus fuscis interrupta; margine externo paulum albicante, lineis duabus undatis submarginalibus fuscis; anticæ ocellis tribus, posticæ quinque, primo anticarum, et primo secundo quintoque posticarum nigris, aliis fuscis, omnibus plumbeo pupillatis et flavo-cinctis, primo posticarum minuto: corpus fuscum: exp. alar. unc. 1. lin. 6.

Cayenne. (*Deyrolle*). ♀, Coll. Salvin.

E. Binocula appears to be intermediate between *E. Lydia* and *E. Ocypte*.

10. *Euptychia Jesia*, sp. nov., fig. 6.

♂ Alæ supra albæ subhyalinae, anticæ costa et area apicali fuscis; posticæ lineâ marginali fusco: corpus fuscum.

Alæ subtus fere velut in *E. Westwoodii*, fasciis autem haud rufescentibus et angustioribus: corpus cinereum: exp. alar. unc. 1. lin. 5.

♂, S. Ecuador. (*Krause*). ♂, Coll. Salvin.

This species looks somewhat like a large pale female of *E. Westwoodii*, it however bears very little resemblance to the male of that species: the female of *E. Jesia* is in the Collection of the British Museum, from Venezuela and Peru, and (excepting that it is darker and has a black spot on the upper surface of the hindwings) differs little from the male: this insect differs from *E. Westwoodii* female in its superior size, more angulated hindwings, and less strongly pronounced markings, which on the under-surface are brown, not reddish, and narrower.

11. *Euptychia Zabdi*, sp. nov., fig. 7.

♂ Alæ supra fusæ, area apicali anticarum paululum pallidiore: corpus nigrescens.

Alæ subtus pallidioreâ fusco strigosæ, area apicali quoque dilutiore; anticea disco fulvescente; linea aream basalem limitante angulato-undulata, altera abbreviata submarginali et tertia marginali recta, obscuris: posticæ lineis duabus mediis, tertia aream basalem limitante angulata, quarta submarginali dentato-undulata, quinta antemarginali undata, omnibus fuscis obscuris, ocellis sex punctiformibus discalibus, quinto majore, nigris fulvo-cinetis: corpus cinereum: exp. alar. unc. 2. lin. 2.

Chaetum, Vera Paz. (*Hague*). ♂, Coll. Salvin.

Most nearly allied to *E. Neeps*, but differs in having the frontwings more strongly angulated and the hindwings deeply scalloped, the bands less irregular and more angular, the ocelli also are more distinct: but for the structure of its palpi this species might pass for a small *Taygetis*.

GENUS TAYGETIS. *Hübner*.*Taygetis Kereæ*, sp. nov., fig. 2.

♂ Alæ supra fusæ, linea submarginali obscuriore, altera antemarginali alba, tertia marginali nigra.

Alæ subtus cineræ, fusco fulvoque variegatæ; anticea lineola discoidea, linea alam transerrante discali, altera submarginali undulata et duabus marginalibus subintegrâ fuscis; area marginali obscura; ocellis quinque discalibus punctiformibus fuscis: posticæ linea subbasali undulata, fasciâ postmedia subangulata extus nigro limitata, linea submarginali extus albido marginata, fuscis; linea marginali albida nigro inclusa; area apicali-externa obscura; ocellis quinque discalibus punctiformibus ochraceis albo-pupillatis: corpus fuscum: exp. alar. unc. 2. lin. 3.

R. Polochie, Chuacus & R. Chisoy, Vera Paz. (*Hague*). Coll. Salvin.

This species belongs to the *Neonymphe* group of *Taygetis*; and as will be seen on the plate, bears a great resemblance to the larger species of *Euptychia*.

SUB-FAMILY NYMPHALINÆ. *Bates.*GENUS CALLITHEA. *Boisduval.*

PLATE V.

Callithea Optima, sp. nov. figs. 1, 2.

♂ Alæ supra cæruleæ nitidissimæ, area media nigra purpureo nitente, margine externo virescente; area interna posticarum fusca: corpus fuscum.

Alæ subtus virides nitentes, costa basali anticarum et area basali posticarum coccineis nigro limitatis: area interna anticarum fusca nigro circumdata; antice punctis quatuor subapicalibus striolaque discoidea nigris; posticæ fascia angulata media, maculis octo postmediis, striolis septem discalibus septemque submarginalibus, et margine externo, nigris: corpus fuscum: exp. alar. unc. 2. lin. 6.

Santa Cruz, [Hauthoga] Peruvian Amazons. (*E. Bartlett*). ♂, Coll. Druce.

This species is the grandest *Callithea* that I have ever seen, the great red space at the base of the wings on the under surface distinguishing it from all the other known species: it is especially interesting as being a link between the two groups of species into which the genus has hitherto been readily separable.

GENUS CHARAXES. *Ochsenheimer.*

PLATES V. & VI.

1. *Charaxes Zelica*, pl. v., fig. 3.

♂ *Charaxes Zelica* Butler, Ent. Month. Mag. 6. p. 28, (July, 1869.)

Alæ supra cæruleo-nigræ ciliis aurantiacis; area basali cæruleo-viridi nitente: antice maculis sex discalibus unaque subcostali cæruleis, posticæ maculis septem discalibus alas serie obliqua transerrante et ad angulum antice decrescente, striolisque septem marginalibus squamosis, omnibus cæruleis; punctis octo submarginalibus albis a squamis nonnullis cæruleis circumcinctis; margine interiori fusco: corpus fuscum.

Alæ subtus sericeo-olivaceæ, area apicali subochracea a linea distincta limitata; area basali fasciis duabus argenteis, interiore extrorsum et exteriori introrsum a linea nigra albaque limitatis; antice linea subapicali pallida; maculis

duabus ocellaribus nigris albo iridatis apud basin positis, striolaque nigra cellam claudente; posticæ plaga magna subanali argentea maculisque octo submarginalibus albis partim nigro pupillatis: corpus fuscum, pectore, palpis, tibiis tarsisque ochraceis: exp. alar. unc. 3. lin. 3.

West Africa. (*Ashanti?*) ♂, B. M.

This species, recently obtained from the Collection of T. P. Dossetor, Esq., is intermediate between *C. Tribates* and *C. Myerina*: there seems to be little doubt that it is from Ashanti, as the other insects with which it is said to have come appear to be from that locality.

2. *Charaxes Orilus*, pl. v., fig. 5.

C. Orilus, Wallace in litt.

Alæ anticæ supra fuscæ area basali paulum rufescente; fascia maculari submarginali, increcente ochraceo-flava; posticæ area basali fusca; area apicali ochraceo-flava apud marginis abdominalis medium rufescente; linea marginali, maculis septem subhastatis submarginalibus aliisque nonnullis subanalis, omnibus nigris: corpus fuscum collo albipunctato.

Alæ anticæ subtus pallidè olivaceæ, striis basalibus brunneis; fundo statim pone aream basalem albicante, tunc brunnescente; fascia discali elongato-lunulari olivaceo squamosa maculas obscuriores includente et introrsum brunneo limitata; area externa albicante; fascia undulata olivaceo-squamosa decrescente a squamis ochraceis marginata, hanc transerrante; posticæ area basali pallidè olivaceo-squamosa, lineis basalibus brunneis; striis duabus mediis approximatis brunneis, extrorsum a lunulis septem ochraceis brunneo-olivaceo marginatis, limitatis; area apicali albida, marginali ochracea; maculis septem triangularibus viridibus nigro acuminatis et partim fusco-cinctis submarginalibus; linea marginali olivacea; corpus albidum, antennis nigris fulvo acuminatis: exp. alar. unc. 3. lin. 6.

Timor. (*Wallace*). ♂, Coll. A. R. Wallace.

This marvellously distinct *Charaxes* is not nearly allied to any of the known species, it is perhaps best placed in the *Fabius* group, in general appearance it looks somewhat like a *Papilio* of the *Pammon* group.

3. *Charaxes Hannibal*, sp. nov., pl. vi., fig. 5.

C. Hannibal, Wallace in litt.

♂, ♀ Alæ supra ferè velut in *C. Lampedine*.

Alæ subtus sericeo-fusca, lineis basalibus nigris; fascia media albida introrsum nigro marginata, extrorsum diffusa, anticarum maculari et apud costam irregulariter bifurcata: anticæ maculis sex discalibus fulvis increscentibus extrorsum apud angulum analem nigro latè marginatis; maculis septem pallidis (ad angulum ani albis) submarginalibus increscentibus; posticæ fascia discali humulari flavo-squamosa, introrsum nigro marginata, extrorsum humulas aurantiacas exhibente; maculis octo cæruleis nigro humulatis introrsum a humulis albis, extrorsum a humulis difractis flavis, inclusis; margine fusco: corpus fusco-albidum: exp. alar. ♂, unc. 3. lin. 8; ♀, unc. 3. lin. 10½.

♂, Tondano, ♀, Macassar. (*Wallace*). ♂, ♀, Coll. A. R. Wallace.Closely allied to *C. Lampedo*, but quite distinct.4. *Charaxes Jupiter*, sp. nov., pl. v., figs. 4, 7.

♂ Alæ supra similimæ *C. Pyrrho* fascia media autem angustiore; area basali magis fuscescente, punctisque submarginalibus minoribus: subtus anticæ fascia lata infra cellam olivacea, fascia discali nigra indistincta ad costam haud attingente, fasciolis nigris discoideis angustioribus: posticæ fascia media alba multo latiore, area abdominali quoque albicante; striis omnibus nigris angustioribus: corpus olivaceo-albidum: exp. alar. unc. 3. lin. 6.

♂, Dory. (*Wallace*). ♂, Coll. A. R. Wallace.

This handsome species is closely allied to *C. Pyrrhus* from Amboina, but may be readily distinguished from it: the only specimen in Mr. Wallace's possession is in a very shattered condition so that I have been obliged, in my figures, to supply the outer margin of the posterior wings.

5. *Charaxes Gilolensis*, sp. nov., pl. v., fig. 6; pl. vi., fig. 4.

C. Gilolensis, Wallace in litt.

♂ Alæ supra simillimæ *C. Lactaria*, cella autem anticarum discoidali nigro-fusca viridi squamosa et margine anali angustiore; corpus thorace fusco.

Alæ subtus area basali anticarum olivacea, fasciis nigris latioribus, fasciis albis angustioribus: posticæ serie macularum discum transerrante latiore maculis omnibus coccineis; area abdominali olivacea, fasciis latis nigris albo-marginatis: corpus olivaceum: exp. alar. unc. 1.

Batelian and Gilolo. (*Wallace*). ♂, Coll. A. R. Wallace.

This species differs from all its allies in having all the discal spots on the under-surface of the hindwings red, in other respects it approaches *C. Lectaria*.

6. *Charaxes Papuensis*, sp. nov., pl. vi., figs. 1, 4.

C. Papuensis, *Wallace in litt.*

♂ Alæ supra fulvæ, stria cellam anticarum claudente et margine lato regulari, nigris; punctis quatuor albis unoque fulvo apud angulum posticarum analem: corpus fulvum.

Alæ subtus simillimæ *C. Cimonis* mari fascia autem posticarum lunulari, alteraque submarginali obscurioribus: corpus fuscum.

♀ Alæ supra simillimæ *C. Cimonis* feminae, linea autem lunulari discali multo pallidiorè, maculisque omnibus ocellaribus, minoribus: corpus olivaceo-fulvum.

Alæ subtus *C. Cimoni* simillimæ, pallidiores et linea lunulari ad fasciam medianam multo magis approximata, fascia posticarum lunulari latiore ocellisque minoribus: corpus fulvum: exp. alar. ♂, unc. 3. lin. 7; ♀, unc. 4. lin. 3.

♂, Dory, ♀, Aru. (*Wallace*). ♂, ♀, Coll. A. R. Wallace.

This species is nearly allied to *C. Cimon* and *C. Lotomi*; the male differs from *C. Cimon*, in its more strongly sinuated and less sharply angulated anterior wings, and in the narrower black border of these wings; the apex of the posterior wings is also tinted with purplish, which is wanting in *C. Cimon* ♂; the female differs in its pale colouring and markings, the lunulate discal line of the anterior wings being placed nearer to the centre of the wing; also in its smaller size and short tails: from *C. Lotomi* it differs in the relative sizes of the submarginal ocellations which on the under-surface are also considerably smaller and isolated; the lunulate line is nearer the centre of the wing than in *C. Lotomi*; and the tails of the hindwings reversed as to length.

7. *Charaxes Borneënsis*, sp. nov., pl. vi., fig. 2.

C. Borneensis, Wallace in litt.

♂ Alæ supra fusco-fulvæ, area apicali nigra; anticæ fascia irregulari ad costam haud attingente albida, hac lunulas nigras extrorsum inter venas exhibente et a venis nigris interrupta; posticæ maculis sex ocellaribus subconicis submarginalibus nigris, ad angulum ani albipunctatis: corpus fulvo-fuscum, thorace minimè virescente.

Alæ subtus nitidissimè sericeo-fusce, caracteribus numerosis lineas formantibus, basalibus albis; fascia discali alteraque marginali lunulari olivaceo-viridibus; anticæ maculis quinque subapicalibus fusco diffusis, posticæ septem ocellaribus violaceis nigro-punctatis introrsum albo striolatis: corpus fuscum, pectore palpisque albidis, pedibus fusco-ochraceis, antennis nigris fulvo acuminatis.

♀ Alæ supra fulvæ, anticæ area apicali nigra; fascia media lata fulvo-albida maculisque quinque ad eam approximatis fulvis; posticæ area discocostali albicante; maculis octo ocellaribus decreescentibus submarginalibus nigris albedo-innatis, harum postremo caeruleo-squamosa: corpus fulvo-olivaceum.

Alæ subtus area basali albida, fasciis consuetis fuscis nitentibus nigro limitatis; fascia lunulari discali et area marginali, ochraceis; fundo submarginali pallidè brunneo, fusco introrsum angulis alternis limitato; hoc anticarum striam albidam, posticarum maculas octo caeruleas nigro punctatas et introrsum albo-terminatas exhibente, linea posticis submarginali olivacea: corpus albidum: exp. alar. ♂, unc. 3. lin. 9; ♀, unc. 4. lin. 1.

♂, Sarawak. (*Wallace*). ♀, Borneo. (*Low*). ♂, ♀, Coll. A. R. Wallace.

A superficial glance at this *Charaxes* would lead one to suppose it identical with *C. Bernardus*, upon comparison however the two species prove to be quite distinct.

The "*Nymphalis Caledonia*" of Hewitson, removed some time since from *Charaxes* to *Prothoe* (the coloration of which it possesses), appears to be intermediate in character between these two genera the venation being more nearly that of *Charaxes*: it should form a new genus allied to both the above.

SUB-FAMILY SATYRINÆ. *Bates.*GENUS TAYGETIS. *Hübner*

PLATE VII.

1. *Taygetis Jimna*, sp. nov., fig. 5.

♀ Allinis *T. Armillata*, minor autem et multo pallidior lineis omnibus subtus multo distinctioribus et minus angularibus: alæ anticæ minus elongatæ, margine interno longiore; posticæ margine costali breviorè, margine externo anali multo minus sinuato: corpus, capite minore: exp. alar. unc. 3, lin. 6.

Isthmus of Panama. (*McLeannan.*) ♀, Coll. Salvin.

This species, though nearly allied to *T. Armillata*, may be readily separated from that insect by its paler colouring and much more feeble build. The outline of the wings, and the markings of the under surface, notwithstanding that they are evidently modifications of those which are seen in *T. Armillata*, will not bear the test of comparison.

2. *Taygetis Zippora*, sp. nov., fig. 2.

♂ Alæ supra fusæ, anticæ plaga subapicali subochracea; posticæ plaga permagna media nigra: corpus fuscum.

Alæ subtus area basali picea, marginibus internis dilutioribus; linea communi cellas transerrante et altera aream basalem limitante (introrsum nigro-fusco, extrorsum lilacino marginata) nigris; area apicali fusca, linea submarginali irregulariter undata et margine ipso, nigris; anticæ apice lilacino-squamoso; ocellis quinque discalibus parvis, albis fusco-cinctis et ocluræco-iridatis; posticæ ocellis subseptem similibus, quinto paululum majore; corpus pallidè fuscum: exp. alar. unc. 2, lin. 9½.

Cayenne. (*Deyrolle.*) ♂, Coll. Salvin.

This handsome *Taygetis* appears to come nearest to *T. Cleopatra*: it should be placed between it and *T. Echo*. The great black patch upon the upper surface of the hindwings readily distinguishes it from all the other species of the genus.

3. *Taygetis Xenana*, sp. nov., fig. 3.

♂ Alæ supra fusca; posticæ stria valde indistincta antemarginali pallidiore: corpus fuscum.

Alæ subtus vult in specie præcedente area apicali angustiore, fasciæque postmedia lilacino-squamosa et arcis discalibus obscurioribus; corpus pallide fuscum: exp. alar. unc. 3, lin. 2.

Cayenne. (*Deyrolle*.) ♂, Coll. Salvin.

T. Xenana and *T. Cleopatra* are so much alike upon the under surface, that, but for the totally different form of their wings, one would almost hesitate to consider them distinct species. The distinctions between *T. Xenana* and *T. Zippora* are much more apparent, although these two species inhabit the same district. In the latter case, however, the differences of colour are chiefly confined to the upper surface of the wing, so that we may, I think, safely conclude that for some reason or other the retention of the under surface coloration is of importance to this little group of species. I have no doubt that, when the economy of tropical butterflies is better known, we shall discover disguises in very many more of the butterfly patterns than, in our present state of ignorance, we could conceive possible. With regard to the parallel resemblances in the different genera of the *Heliconiæ* two ideas have occurred to me, which, though they may be but "childish guesses," I think there can be no harm in stating. First, it is within the range of possibility that these butterflies were originally modified to resemble certain flowers, and the latter subsequently becoming extinct, necessitated the development of a new protective agency—namely, the acrid fluid with which the *Heliconiæ* are now provided. In the second place it may be that only one genus originally possessed the protective fluid, and was the model upon which the other genera were formed, but since the latter were then preserved by their colours only, individuals must occasionally have been destroyed; and, to the extent of that destruction, there was a necessity for additional protection: thus a physical as well as merely external resemblance may have been the ultimate consequence. Two notes by Mr. Swainson in his "Illustrations" somewhat confirm me in this view, inasmuch as he shows that certain Heliconoid moths have acquired all the defences common to the butterflies which they resemble. He says,—“In their slow flight, long transparent wings, and proneness to imitate death on being handled, they offer a most beautiful analogy to the Heliconian butterflies.” “They fly slowly and heavily during the middle of the day, and, on the least touch, counterfeit death. Most of the species, when handled, discharge from their body a brown liquor like their prototypes the *Heliconida*.”

4. *Taygetis Uzza*, sp. nov., fig. 1.

♂ Alæ supra fusca, anticæ area apicali pallidiore, fasciæ postmedia, alteraque marginali introrsum fusco limitatis ochraceis; posticæ linea antemarginali, alteraque marginali nigro-fuscis: corpus fuscum.

Alæ subtus fere velut in varietatibus nonnullis *T. Andromeda* colorata: lineis autem mediis ad marginem posticarum abdominalium approximatis: anticæ ocellis sex oclraceis; posticæ ocellis sex, quinto sextoque nigris fulvo-cinctis, aliis oclraceis: corpus cinereo-fuscum: exp. alar. unc. 3. lin. 4.

San Geronimo, Plain of Salama. (*Hague.*) ♀, Coll. Salvin.

T. Uzo is nearly allied to *T. Andromeda*, and but for the different position of the central lines upon the under surface of the wings, might be considered an extreme variety of that *Taygetis*: however, after carefully comparing it with a good series of *T. Andromeda*, I have no hesitation in pronouncing it a good and distinct species.

5. *Taygetis Keneza*, sp. nov., fig. 5.

♂ Alæ supra fusca: corpus fuscum.

Alæ subtus fusca, fasciis subquatuor diffusis lilacino-squamosis; fasciis duabus mediis valde irregularibus, linea undata submarginali et altera ante-marginali, fuscis; margine ipso nigro: anticæ fascia nebulosa discali ocellos quinque vix distinguendos includente; plaga marginali media nigrescente; posticæ plaga disco-cellulari ochrea; fascia discali nebulosa ocellos quinque distinctos includente; plaga caudali nigrescente: corpus cinereo-fuscum: exp. alar. unc. 2. lin. 9.

Cayenne. (*Deyrolle.*) ♂, Coll. Salvin.

T. Keneza is a charmingly distinct species of the *Valentina* group; it may be placed before that species.

6. *Taygetis Zimri*, sp. nov., fig. 6.

♀ Alæ supra fusca: corpus fuscum.

Alæ subtus pallidiores lilacino-tinctæ et ochraceo nebulosæ, lineis duabus valde irregularibus mediis, anticarum latius separatis, tertia undata

submarginali, quartaque antimarginali nigris; linea pallida marginali, posticearum ochracea, medio marginis anticarum et area apicali posticearum nigro-fusco nebulosis; corpus cinereo-fuscum: exp. alar. unc. 2, lin. 9.

Chuaeus, Vera Paz. (*Hague*.) ♀ Coll. Salvin.

This species is allied to *T. Marpessa*, but may be distinguished from all the species of this group by the different form of the central lines on the under surface.

PLATE VIII.

SUB-FAMILY DANAINÆ. *Bates*.

GENUS EUPLŒA. *Fabricius*.

Euplœa Jessica, *sp. nov.*, *fig. 3*.

♂ Alæ supra nigerrimæ purpureo viridique certo situ nitentes; anticæ macula terminali discoidea, duabus majoribus approximatis discalibus, striisque duabus internis flavo-albidis; posticæ maculis septem discalibus inæqualibus in serie arcuata digestis, flavidis: corpus nigro-fuscum albo præpunctatum.

Alæ subtus obscure olivaceis; anticæ maculis sex mediis inæqualibus flavo-albidis; posticæ serie macularum velut supra, punctis tribus mediis serie triangulari digestis, punctoque ad basin flavo-albidis: corpus nigrum, thorace albipunctato: exp. alar. unc. 3, lin. 11.

Fidji Islands. (*From Mr. Whitely*.) ♂, Coll. Druce.

This very interesting *Euplœa* is a key to the natural position of its near ally *E. Treitschkei* from New Ireland. In my monograph of *Euplœa* (*Proc. Zool. Soc.*, p. 292, 1866) I was obliged to make a distinct division for the reception of the latter species, whereas, had I possessed *Euplœa Jessica*, I should have placed it with *E. Treitschkei* close to *E. Diana*.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PAPILIONINÆ. *Bates.*

GENUS PAPHIO. *Fabricius.*

Papilio Joësa, *figs. 1, 2.*

♂ *Papilio Joësa* Butler, *Entomologist* 6, p. 348 (October, 1869).

Alæ supra cæruleæ nitidissimæ certo situ virescentes vel purpurascens, area marginali nigerrima, ciliis albo-variis; anticæ macula quadrata disco-cellulari nigra; plagis sex elongatis sericeis nigro-fuscis in venas positis; striola subcostali apud apicem albida squamosa; corpus fuscum squamose virescens, capite albido-punctato, antennis nigris.

Alæ subtus area basali late picea; anticæ area apicali pallide fuscescens fascia subtriangulari cum area basali contigua albido-squamosa; plaga lunulari squamosa discoidali ochreo-albida, margine externo nigrescente: posticæ fascia media irregulari interrupta, ochraceo roseoque squamosa; area marginali olivaceo-fusca, maculis septem, extrorsum nigro marginatis, submarginalibus, primo et postremo aurantiacis aliis ochreo-olivaceis, omnibus introrsum marginibus lilacino-squamosis: corpus fuscum, pedibus anterioribus albicantibus; exp. alar. unc. 4, lin. 10.

Queensland. ♂, Coll. Druce.

This beautiful species was obtained through Mr. Whitely from a small collection of Queensland insects; it is nearly allied to *P. Ulysses* of Amboina, but differs from it in the proportional length of the wings, the greater width of its tails, and in several important colour distinctions on the under surface of the wings.

P L A T E I A.

SUB-FAMILY PIERINÆ. *Bates.*

MONOGRAPH OF THE GENUS CALLIDRYAS WITH FIGURES OF THE TYPICAL FORMS OF THE DIFFERENT SPECIES.

In the present Monograph of this most difficult group of Butterflies, I propose to give representations of both surfaces of such species, whether previously figured or not, as I can obtain. It is a fact to be much deplored that in almost every instance in which Lepidopterists have professed to represent both sexes of a *Callidryas* they have grievously erred. Hubner, for instance, on one of his plates, figures the males of two species as sexes of one. Poey, again, in his little pamphlet on the Lepidoptera of Cuba, gives Cramer's *P. Marcellina* as the female of his new species *C. Orbis*.^o Cramer figures the male *C. Larra* as the female of *C. Eubule*, and so on. These errors, therefore, render it exceedingly desirable that the true sexes of each separate species should be brought together upon one plate, and this it will be my endeavour to effect in the present revision of the genus.

Papilio Castalia of Fabricius is a member of the allied genus *Gonepteryx*.

GENUS CALLIDRYAS. *Boisduval.*

Hist. Gén. et Icon. Lép. et Chen. Am. Sept., p. 73 (1829).

1. *Callidryas Crocale*, figs. 1, 2, 3, 6.

♀ *Papilio Crocale*, *Cramer*, Pap. Exot. 1, pl. 55, figs. C, D (1779).

♀ *Papilio Jugurtha*, *Cramer*, Pap. Exot. 2, pl. 187, figs. C, D (1779).

♂ *Papilio Alcmeonc*, *Fab.* (nec. *Cramer*), Ent. Syst. 3, p. 196, n. 611 (1793).

♀ *Colias Jugurthina*, *Godart*, Enc. Méth. IX., p. 95, n. 21 (1819).

Var. ♀ *Callidryas Eudeer*, *Boisd.* Voy. de l'Astrolabe, pl. 2, figs. 3, 4 (1833).

Male. Wings above with the basal area yellow, the apical white, the external margin of the frontwings from near the base to near the anal angle black; wings below yellow with whitish disc.

Female. Wings above bright yellow, the frontwings with broad dentated marginal band, macular discocellular striole, and seven to eight partially connected submarginal spots, brown; base, greyish; hindwings with broad dentated marginal band and five indistinct discal points, brown; base, reddish; costa, white; under surface glazed, rosy and yellow, the markings of the upper surface indistinctly seen through the wings: average expanse about 3 inches.

^o This insect has nothing to do with Swainson's *C. Golarthoan*.

The specimens that I have examined are from the following localities:—, Himalayas, Coll. Druce; ♂, Darjeeling, Coll. Wallace; ♀, Wuzerabad, Punjab (*Hearsey*); Almota; Nepal (*Wright*); Hong Kong (*Harrington*); Moulmein; ♂, ♀, Madras Coast, B. M.; ♂, ♀, Ceylon (*Templeton & Cuming*), also in Colls. W. W. Saunders and A. R. Wallace; ♂, Sumatra, Coll. Wallace; ♂, Borneo (*Loew*); ♂, ♀, Sarawak (*Brooke & Loew*), B. M.; ♂, Java, B. M. and Coll. Druce; ♀, Lombok; ♂, ♀, Phil. Islands, Coll. Wallace; ♂, ♀, Batchian, Coll. Saunders; ♀, Ceram, (*Pfiffer*), B. M., also in Colls. Saunders and Wallace; ♂, Moreton Bay, B. M.

Var. C. Ember, Assam; Nepal, (*Wright*), B. M.

Var. approaching *C. Flava*; ♀, Ceylon, Coll. Saunders; ♂, Queensland, Coll. Wallace.

This species is not identical with Cramer's *C. Alcmeon*; the latter being a New World species, and identical with the *C. Statira* ? of authors. In Cramer's representation of his *C. Jugurtha*, the ocelloid spots are more strongly defined than in any specimens of this insect which have passed through my hands.

Captain A. M. Lang says that this species frequents *Callitriche fistula*, an introduced plant in gardens of the North Indian plains, but indigenous to the lower slopes of the Himalayan ranges, 2,000 to 5,000 feet. Captain H. L. De la Chaumette observed it in gardens at Saugor; he states that it is very fond of the outside branches of the "Babool" (*Acacia arabica*): it is on the wing from July to November.

2. *Callidryas Flava*, figs. 4, 5.

Callidryas Flava, Butler, Ann. & Mag. Nat. Hist., Ser. 4, Vol. 4, n. 21, p. 202 (1869).

Male.—Wings above sulphur yellow, the apical area of the frontwings slightly paler; the apical costa black, and the nervures towards the apex tipped with black; below, sulphur yellow, the anal area of the frontwings whitish.

Female.—Very like *C. Ember*, but smaller, yellower, and with the submarginal spots of the frontwings interrupted in the centre.

♂, Menado, Coll. Wallace; ♂, ♀, Macassar, B. M. and Coll. Wallace; ♂, ♀, Ceram; ♂, Batchian, Coll. Wallace.

♂, *Var.* approaching *C. Crocealis*, ♀, Celebes, Coll. W. W. Saunders.

♀, *Var.* with darker frontwings, Ceram, Coll. Saunders.

This species may eventually turn out to be an extreme form of *C. Crocealis*. The male, however, can always be distinguished from yellow specimens of that species by its very narrow black costal border. *C. Phlegon*, on the contrary, cannot be thus separated from *C. Calliba*, for the latter species varies immensely in this very character, and the female of *C. Phlegon* not being known, there remains nothing to distinguish it from yellow varieties of *C. Calliba*.

3. *Callidryas Catilla*, figs. 7 to 10.

♀ *Papilio* Catilla, *Cramer*, Pap. Exot. 3, pl. 229, figs. D, E (1781).

♂ *Papilio* Hilaria, *Cramer*, Pap. Exot. 4, plate 339, figs. A, B (1782).

♂ *Papilio* Titania, *Fabricius*, Ent. Syst. Suppl., p. 28, n. 655-6 (1798).

Var. ♂ *Callidryas* Phlegens, *Wallace*, Trans. Ent. Soc. Lond. 4, 3rd Ser., part 3, p. 401 (1867).

Subsp. ♀ *Papilio* Pomona, *Fabricius*, Ent. Syst. 3, p. 243, n. 665 (1792).

Male. Above very similar to *C. Creole*, but with the apex more acute and with a smaller dark margin; below silky, with rosy outer margin; the frontwings with silver centred rosy spot at end of cell, and three to four obliquely placed strioles between upper median and discoidal branches; hindwings with two connected silver centred rosy spots at end of cell, and six to seven discal lunules forming an arc round them.

Female. Above bright sulphur yellow; the frontwings with broad dentated marginal band, interrupted waved striolate discal band, and subgeminatè discocellular spot; hindwings generally with orange tinged outer margin, the internervular folds terminating in blackish spots: below golden yellow, the margin slightly deeper coloured, a rusty irregular patch terminating the cells of both wings and enclosing two connected silver centred ocelloid spots; frontwings with rusty discal band answering to that of the upper surface; hindwings with three black centred orange discal lunules, one below each of the median branches.

Specimens from the following localities have passed through my hands—♂, India, Colls. Druce and Wallace; ♂, ♀, Silhet, Colls. B. M. and W. W. Saunders; ♀, Wuzerabad (*Hearsey*), B. M.; ♂, Central India, Coll. Saunders; ♀, Bengal, Coll. Druce; ♂, ♀, Calcutta, (*Hardwiche*); Moulmein; ♂, Nepal, (*Wright*); ♀, Ceylon, (*Templeton*.) B. M.; ♂, Malacca; ♀, Mount Ophir, Col. Wallace; ♀, Penang, B. M.; ♂, Sarawak, (*Low*.) B. M.; ♂, ♀, Coll. Wallace; Java, Colls. B. M. and Druce; ♂, ♀, Philippine Islands, Bouru, and Timor, Coll. Wallace; ♀, Champion Bay, (*De Boulay*); ♂, Rockingham Bay, (*McGillivray*); ♂, ♀, Moreton Bay, B. M.; ♂, Queensland, Coll. Wallace.

Var. C. Phlegens, ♂, Lombok, Coll. Saunders; Timor, Coll. Wallace.

Subsp. *P. Pomona*, ♀, Moreton Bay, (*Duggles*), B. M.

The commoner form of the female has no rusty blotches upon the under surface of the wings, but the blotched form being the type of the species I have felt bound to figure it, though it is not so much like the male. The species, according to Captain Lang, frequents *Cathartocarpus fistula*.

FAMILY NYMPHALIDÆ.

SUB-FAMILY NYMPHALINÆ. *Bates.*

GENUS CHARAXES. *Ochsenheimer.*

PLATE X.

1. *Charaxes Pelias*, fig. 5.

Papilio Pelias, *Cramer*, Pap. Exot. I, pl. 3, figs. C, D (1775).

Eriboea Pelopia, *Hubner*, Verz. bek. Schmett. p. 47, n. 424 (1816).

Affinis *C. Saturno*, minor: alæ antice supra maculis in fasciam nigris, ad venam submedianam attingentibus; posticæ caudis multo brevioribus, interna curvata; fascia media ad angulum ani attingente; maculis submarginalibus vix albicantibus, maculis discalibus cæruleis minoribus; alæ subtus fundo griseo, maculis strîisq; basalibus obscurioribus; fascia anticarum alba extrorsum recta, posticarum apud angulum ani latiore, maculas duas nigras includente; maculis pone fasciam nigrescentibus, anticarum multo majoribus, posticarum minoribus; area discali posticarum fuscescente; macula ocellari anali multo majore; exp. alar. unc. 3, lin. 9.

Cape of Good Hope. ♂, ♀, Coll. Druce.

I think that the differences given in the above comparative description, aided by a figure of the under surface, will be enough to convince any unprejudiced entomologist that *C. Pelias* is totally distinct from *C. Saturnus*.

2. *Charaxes Phraortes*, fig. 6.

Charaxes Phraortes, E. Doubleday, Am. & Mag. Nat. Hist., 1st Ser. xx., p. 65 (1857).

“Ch. alis omnibus supra fulvis, nigro limbatis maculatisque, anticis serie marginali punctorum, posticis lunularum fulvarum, subtus saturatè fulvis, fascia media alteraque submarginali argenteis, maculis plurimis, vittisque numerosis nigris argenteo cinetis : exp. alar. $1\frac{1}{2}$ unc. vel. 116 mill.”—*Doubl.*

Madagascar (type). Coll. B. M.

This magnificent *Charaxes* has hitherto been unfigured, it is allied to *C. Saturnus*.

3. *Charaxes Druceanus*, fig. 4.

♂ *Charaxes Druceanus*, Butler, Cistula Entomologica, I. p. 4 (October, 1869).

♂ *Charaxes Cinadon*, Hewitson, Ent. Month. Mag. vi., p. 177 (January, 1870).

Albis C. Eudoxo, vix differt supra a *C. Cyathia*; alæ subtus rufescentes anticæ costa argentea; area basali maculas quatuor discoideas et quatuor disciales nigrescentes argenteo-cinetas includente, a fascia lata argentea continua limitata; hæc apud costam bifurcata; area anali fulvo-varia, a serie macularum subocto nigrarum submarginalium (a linea plumbea extrorsum cinetarum) limitata; alæ posticæ area basali rufescente, argenteo strigosa (strigis lineas nigras includentibus) et a fascia lata argentea limitata; margine externo fulvo, linea tenuissima marginali argentea; maculis septem ferruginosis, argenteo cinetis, extrorsum nigro fasciatis, in serie irregulari discali positis; macula anali ocellari plumbea nigro-cincta; corpus ferrugineo-fuscum, palpis lateraliter albis, antennis nigris : exp. alar. unc. 3, lin. 3.

Old Calabar, Coll. Druce; Port Natal, Coll. Ward.

The type of this species was in the Kaden Collection, it is nearly allied to *C. Echoni*, but is much more beautifully adorned with silver upon the under surface, all the markings rendered as white in my figure are brilliant silver in the insect: this species, like all the other *Charaxes*, is stated to be exceedingly rapid on the wing.

4. *Charaxes Zephyrus*, Fig. 1.

Charaxes Zephyrus, *Buller*, Cistula Entomologica, I, p. 5 (October, 1869).

Simillimus *C. Echoni*, supra area basali et subtus fundo toto pallidioribus; fascia media supra flavida subtus albida, multo magis irregulari; subtus maculis alarum posticarum discalibus multo pallidioribus et minoribus: exp. alar. unc. 2, lin. 10.

Inhabits ♂ Coll. Kaden in Coll. Druce.

C. Zephyrus is another novelty of the *Fabius* group; though closely allied to *C. Echo*, the longer inner margin of the posterior wings, the more irregular central band, and the pale colouring at the base of the wings, will at once distinguish it from that species.

5. *Charaxes Alladinis*, fig. 2.

Charaxes Alladinis, *Buller*, Cistula Entomologica, I, p. 5 (October, 1869).

Alæ supra nigrescentes, nitide caeruleo micantes; anticae area basali ferruginosa; macula ad cellæ angulum superiorem alba; serie macularum quinque pone cellam roseo-albarum, maculisque octo ejusdem coloris submarginalibus; posticae fascia disco-submarginali lunulari nitidissime caerulea, ad costam albicante; serie punctorum octo alborum submarginalium; fascia marginali, dimidio ejus apicali aurantiaco, dimidio anali virescente; margine ipso nigro; corpus nigro-fuscum: exp. alar. unc. 3, lin. 3.

Inhabits — ? Coll. Kaden in Coll. Druce.

There is no doubt that the above magnificent species is from Africa, and in all probability, like its allies *C. Viola*, *C. Ephyra*, and *C. Etheocles*, it is from the West Coast. In appearance it is much like a female insect, but the abdomen is that of a male, and the colouring brighter than in the females of its allies.

6. *Charaxes Bohemani*, fig. 3.

♂ *Charaxes Bohemani*, *Felder*, Wien. Ent. Monatschr. III, p. 321, pl. 6, fig. 3 (1859).

♀ Major et robustior; alæ anticae fascia postmedia obliqua nivea: exp. alar. unc. 3, lin. 10.

Zambesi, ♂, ♀, Coll. Hewitson.

I am indebted to Mr. Hewitson for the pleasure of figuring this interesting female, which, like all its allies, is distinguished from the male by the conspicuous white band in the front wings. The species appears to come near to *C. Smaraghalis*, the female of which is figured at pl. 2 of this work.

PLATE VI.

SUB-FAMILY MORPHINÆ. *Butler*.

GENUS AMATHUSIA. *Fabricius*.

Amathusia Ottomana, fig. 1.

Amathusia Ottomana, *Butler*, Ent. Month. Mag. VI., p. 55 (August, 1869).

Alæ suprâ fuscae area basali obscuriore; anticae fascia limata disco-costali violacea; posticae cauda albo binotata; alæ subtus roseo-fuscae, striis septem anticis, sex posticis divergentibus, brunneis; ocellis duobus permagnis, fusco ochreis: exp. alar. unc. 4, lin. 5.

Sarawak. (*Lowe*.) Coll. Druce.

I have named this handsome species *A. Othonana*, because of the large blue crescent on the frontwings; it is allied to *A. Anorthocera*, the under surface of the wings being nearly the same as in that species, but of a more rosy tint and with larger ocelli.

A fine species belonging to the allied genus *Zeuridia*, and figured by Dr. Felder in the Reise der Novara, Tab. LXII, fig. 3, as *Zeuridia Wallacei*, appears not to differ from my *Zeuridia Aethystra* from Sumatra, described previously at p. 485 of the Proceedings of the Zoological Society for 1865. This species has come several times during the last few years from Borneo.

SUB-FAMILY BRASSOLINÆ. *Bates.*

GENUS CALIGO. *Hübner.*

Caligo Hemichroa, *fig. 2.*

♂ *Caligo Hemichroa*, *Buller*, Cistula Entomologica I. p. 3 (October, 1869).

Alæ supra area basali fusca; anticae area submarginali nigrescente; disco toto pone medium purpurascente; macula subapicali geminata alba; margine externo ochraceo-fusco; posticae disco pone medium ad nervulum fere primum medianum purpurascente; arcis submarginali et anali nigrescentibus; margine externo ochraceo-fusco; plaga abdominali maculaque ejusdem coloris ovali; corpus fuscum:

Alæ subtus fere velut in *C. Automedone*, fascia autem subbasali aurea recta; exp. alar. unc. 4, lin. 2.

Minas Geraes. Coll. Druce.

Nearly allied to *C. Automedon*, which it somewhat resembles upon the under surface; it is, however, more conspicuously coloured and with the straight subbasal band of a dead golden colour; the hindwings are longer than in *C. Automedon*.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PIERINÆ. *Boles.*

GENUS CALLIDRYAS. *Boisduval.*

Monograph continued.

PLATE VII.

4. *Callidryas Gorgophone*, figs. 1—4.

Callidryas Gorgophone, Boisduval, Sp. Gen. Léop. p. 632. n. 26 (1836).

♂ *Papilio Scylla*, Fabricius (nec Linnaeus) Syst. Ent. p. 475. n. 142 (1775).

Male. Frontwings above white, the base tinted with rosy, the outer margin with sulphur yellow, a black disco-cellular point; the nervures tipped with black; hindwings sulphur yellow with the outer area slightly deeper in colour; the base tinted with rosy; wings below golden yellow; frontwings with the internal area white; a geminate rosy-centred spot at end of cell, a small brown scale-spot just above them and between the first and second subcostal branches and an angulated series of seven similar spots between the nervures on the disc; hindwings with two ringlike spots placed obliquely just beyond the end of the cell; a brown spot towards the base of the cell, a second at the origin of the first subcostal branch and two just below the origin of the first median branch; seven brown bisinuate scale spots forming an irregular area beyond the cell.

Female. Frontwings above white; the apex and four spots terminating the nervures, brown; a series of seven discal brown spots beginning near the apex, forming an arc to the third median branch, and then continuing in an oblique line to the fold between the first median branch and the submedian nervure; hindwings sulphur yellow, the subcostal and discoidal nervures tipped with black; wings below nearly as in male, but the disco-cellular ring-spots larger and more distinct.

♂, ♀. Queensland, Colls. B. M., Druce and Wallace; ♀, N. W. Australia (*De Booboy*), Clarence River (*Stroup*), Moreton Bay (*Duggles*), B. M.; specimens also merely labelled New Holland in Colls. Druce and W. W. Saunders. The above species seems to vary very little, the chief modifications that I have noticed are confined to the disco-cellular spots upon the under surface. Fabricius describes the species as follows—

“P. D. C. Scylla. *Alis integerrimis, coluæobis flavis: anticiis supra albis: limbo nigro, subtus omnibus nebulosis.*—*Habitat in India.*”

That the above is not the Linnean *P. Scylla* may be at once concluded from the fact that it is a modification of the Linnean description which stands thus—

“P. D. Scylla. *Alis subintegerrimis coluæobis flavis: primariis supra albis: limbo nigro, subtus omnibus nebulosis.*—*Habitat in Java.*”

5. *Callidryas Hinda*, sp. nov. figs. 9, 10.

Callidryas Thisorella ♀, *Wallace*, Trans. Ent. Soc. Lond. 3rd Ser. IV, p. 399 (1867).

Male. Unknown.

Female. Wings above milky-white, tinted with rosy at base and outer margin of frontwings, the same wings with black disco-cellular spot and two ill-defined scale-spots placed obliquely below the first and second subcostal branches.

Wings below whitish, rosy tinted; markings as in the male of *C. Gorgophone*, but more faintly indicated; a rose-red spot at the base of each wing.

Queensland (type). Coll. Wallace.

This cannot be the female of *C. Thisorella* (*C. Amargyllis* Fabr.), the latter is a species belonging to the next group, the females of which generally have a deep black apical border to the frontwings; it is, I think, more likely to be a curious albino form of *C. Gorgophone*, but since it differs from the latter in form as well as colouring, I have felt obliged to consider it a distinct species.

6. *Callidryas Scylla*, figs. 5, 6, 7, 8.

♂ *Papilio Scylla*, *Linnaeus*, Syst. Nat. II, p. 763, n. 95 (1766).

♂ *Papilio Cornelia*, *Fabricius*, Mant. Ins. p. 21, n. 229 (1787).

♂ Var. *Callidryas Gorgophone*, *Hewitson* (nec *Boisduval*), Gen. Diurn. Lepid., pl. 9, fig. 2 (1847).

Callidryas Etesia, *Hewitson*, Exot. Butterf. 4, part 63, pl. Eron. et Callid., figs. 5, 6 (1867).

Male. Frontwings above white, rosy tinted at base, with deep black-brown dentate-sinuate marginal border, beginning very narrow upon the costa near the base, widening to the apex, and then slightly narrowing to the submedian nervure; hindwings orange, with base and abdominal margin sulphur yellow; wings below almost exactly as in *C. Gorgophone*.

Female. Frontwings above white, the base and apical area rosy tinted; a subquadrate ring-spot at end of cell (frequently filled in with black), the margin broadly black-brown as in male, but dentate

state, with an angulated series of seven to eight submarginal irregular black-brown spots; hindwings orange, generally paler than in male, and becoming sulphur yellow towards the base; five irregular diamond-shaped black brown spots terminating the nervures upon outer margin; and four indistinct angulated scale spots between the nervures upon disc. Wings below bright golden yellow; frontwings with outer margin and apical costa broadly rosy, uniting near the apex with an irregular semi-connected discal series of five to six rosy brown spots; a large irregular rosy centred brown ring-spot at end of cell, and a small brown spot above it at origin of second subcostal branch; hindwings with two ocelloid silver centred spots placed obliquely just beyond end of cell, and surrounded by an irregular circular series of rosy brown spots, connected by rosy streaks from base to beyond middle of costa, continuing through the centre of disc to the submedian nervure and terminating in a ring-spot at the origin of the first median branch; outer margin rosy; the nervures black-tipped.

The localities are as follows—♂, ♀, Menado (*Pfiffer*), B. M.; ♂, Coll. Wallace; ♀, Ternate, Coll. Wallace; ♂, ♀, Java (*Horsfield*), B. M., also in Coll. Druce; ♂, Timor; ♀, Lombok Coll. Wallace.

Var. C. Elesia, ♂, N. Australia (*Elsey*); Champion Bay (*De Boulay*); Port Essington, B. M.

♂, *Var.* with frontwings dark, as in *C. Flava*, but on a white ground; hindwings with spots, as in ordinary examples, but on a golden-yellow ground. Menado (*Wallace*), Coll. W. W. Saunders.

♀, *Albino*. Frontwings with brown margin, as in male specimens, a few very indistinct submarginal spots towards apex; hindwings yellowish white with yellow tinted margin, nervures brown-tipped; wings below rosy, markings very indistinct. —♂ Coll. Kaden in Coll. Druce.

C. Scylla is a much more variable species than *C. Goryphone*, the males even differing considerably both on the upper and under surfaces; a striking variety of this sex (which I regret to say cannot rank as a distinct species) has been figured as *C. Elesia* by Mr. Hewitson, who gives the following as the characters by which it may be distinguished from *C. Scylla*, namely, that it is "of paler colour and spotless on the underside." In the British Museum we have a male agreeing exactly with Mr. Hewitson's figure, from Port Essington; a second from N. Australia, which has both of the characters mentioned above, but differs from *C. Elesia* in having the black border of the upper surface dentate-sinuate as in *C. Scylla*; and a third from Champion Bay, which has the black border of *C. Elesia* but the under surface of *C. Scylla*, the markings being all strongly defined. Even the brighter golden orange upon the upper surface of the hindwings will not serve to distinguish this form, since the specimens from Celebes are generally darker in tint than those from Java; and a female in Mr. Wallace's collection from Lombok has the hindwings of the same tint with that of *C. Elesia*.

Fabricius describes his *C. Cornelia* as "alis rotundatis integerrimis fulvis: anticis supra albis, margine nigro. Habitat Tranquebarie," thus discriminating between it and his *C. Scylla*, the description of which I have given under *C. Goryphone*.

The larva of *C. Scylla*, according to Dr. Horsfield, feeds on various species of *Cassia*, particularly *C. Fistula* and *C. Oblusifolia*, but is occasionally found on other plants. It is most abundant in the early part of the rainy season.

The larva and pupa are figured on pl. 1 of the first volume of Horsfield and Moore's Catalogue of the Lepidoptera of the East India Company.

FAMILY PAPILIONIDÆ

SUB-FAMILY PAPILIONINÆ. *Bates*

PLATE XIII.

GENUS PAPILIO. *Fabricius*.

1. *Papilio Zanoa*, *fig. 1.*

Papilio Zanoa, *Butler*, Ent. Month. Mag. vol. 6, p. 56, n. 2 (1869.)

Alæ supra fuscaæ, area basali obscuriore: anticæ nitide cærulescentes, puncto discoideo et quinque discalibus in serie arcuata, pallide lilacino-cæruleis; punctis octo submarginalibus albis; posticæ punctis sex submarginalibus albis; alæ subtus pallidiores, anticæ punctis octo, posticæ septem (septimo punctulo adjuncto minutissimo) albis: corpus nigro-fuscum, albo-punctatum: exp. alar. unc. 4, lin. 2.

Sarawak. (*Low*). ♂, Coll. Druce.

Very like *Eupha Collitor* of Northern India, which probably has its representative in Borneo.

2. *Papilio Kerosa*, *fig. 2.*

Papilio Kerosa, *Butler*, Ent. Month. Mag. vol. 6, p. 55, n. 1 (1869.)

Alæ supra fuscaæ, anticæ obscuriores purpurascentes: anticæ puncto discoïdali, aliis quinque area apicalis submarginalibus dilutioribus, striolis quatuor

ejusdem coloris indistinctis internervularibus pone cellam positis; posticæ punctis duobus subapicalibus albis: alæ subtus fuscæ, anticæ punctis septem posticæ sex submarginalibus albis; corpus nigro-fuscum, albo punctatum: exp. alar. unc. 3, lin. 8.

Sarawak. (*Loew*). ♂, Coll. Druce.

Allied to *P. Paradoxa*, appears to be an imitation of *Euplexa Anonymous* which it closely resembles on the upper surface of the wings.

3. *Papilio Juda*, figs. 3, 4.

Papilio Juda, *Butler*, Ent. Month. Mag. vol. 6, p. 56, n. 3 (1869).

P. Telearcho persimilis sed minor; alæ anticæ maculis sex tantum in serie discali caeruleis: posticæ maris punctis quinque submarginalibus albis; in striis hastatis caeruleis inclusis, feminae striis subseptem nigris, puncta sagittiformia alba includentibus; subtus punctis minime violascentibus: corpus nigrum albo punctatum: exp. alar. ♂, unc. 3, lin. 11; ♀, unc. 4, lin. 5.

Sarawak. (*Loew*). ♂, ♀, Coll. Druce.

A local representative of *P. Telearchus* and like it closely resembling the sexes of *Euplexa Midamus*.

The species above described are chiefly interesting as belonging to a group, the members of which are all close copies of different species of *Euplexa*; they differ structurally from the type of *Papilio* in the narrow compressed form of the hindwing cell and in their shorter, more slender and less curved antennæ.

SUB-FAMILY PIERINÆ. *Bates.*GENUS CALLIDRYAS. *Boisduval.*

(Monograph continued.)

PLATE XVI.

7. *Callidryas Evangelina*, figs. 1, 1, 3.

♂ *Callidryas Evangelina*, *Butler*, Trans. Ent. Soc. London, p. 1, pt. 11, n. 6 (March, 1870).

Callidryas Minna, *Wallace*, (nec. *Herbst*). Trans. Ent. Soc. 4, 3rd Ser. pt. 3, p. 100, n. 4 (November, 1867.)

Male. Wings above white; frontwings with very minute discocellular striole; the apical half of costa, apex, outer margin and outer half of nervures, black; hindwings with narrow, interrupted, squamose, brown margin. Wings below white, the costal half of frontwings and the whole of hindwings tinted with pale yellow, and striolated with pale brown, and with somewhat macular, arched, discal band of the same colour.

Female. Wings above white, marginal banding wider and paler than in male, in frontwings considerably widened from end of costal nervure to third median branch so as to enclose five more or less distinct white spots; base dusky; discocellular striole enlarged. Wings below paler than in male, markings obsolete.

Localities—♂, Flores, Coll. Wallace; ♀, Flores (*Wallace*) Coll. W. W. Saunders. ♂, var. with narrower black margin, nervures not blackened. Baly Island (*Wallace*), Coll. W. W. Saunders.

This species may be distinguished from small specimens of *C. Chryseis* by the more rounded apex and outer margin of its frontwings, the narrower and more regular brown border, (the macular expansion of which in the female only extends to the third median branch), the greater extent of black on the nervures of male, and the paler tint of the under surface.

8. *Callidryas Chryseis*, figs. 4, 5, 6, 7.

♂ *Papilio Chryseis*, *Drury*, Ill. 1, pl. 12, figs. 3, 4, (1770).

♂, ♀ *Papilio Aleyouc*, *Cramer*, Pap. Exot. 1, pl. 58, figs. A—C, (1779).

Male. Wings above white; frontwings with blackish costa widening towards the apex into a broad marginal black band, which tapers suddenly from the third median branch to the submedian

nerve in elongate-disco-cellular black spot: hindwings with a narrow squamose marginal blackish border. Wings below whitish, the costal half of frontwings, and the whole of hindwings tinted with yellow and striolated with pale brown: hindwings with an obsolete disco-cellular point.

Female. Wings above yellowish white: frontwings with broad costal and external brown border, that of the outer margin dentated on its inner edge, and widened from costa to second median branch so as to enclose three or four white spots: hindwings with elongate squamose brown spots as termination of nervures: wings below almost as in male.

The localities are as follows—♂, N. India; ♀, Assam, B.M.; India, Coll. Druce; ♂, Bengal B.M.; ♀, Formosa, Coll. Wallace; ♀, Moulmein, B.M.; ♀, Sumatra, Colls. Wallace and Saunders; ♀, Singapore, Coll. Wallace; ♀, Manila, Coll. Saunders; Philippines, (*Coming*) B.M. and Coll. Wallace; ♀, Port Stephen, (*Macgillivray*) B.M.; Queensland, Coll. Wallace; New South Wales, Coll. Saunders.

Drury remarks of his *P. Chryseis* that "it seems to be a distinct species from that described by Linnaeus, in his Syst. Nat. page 763, No. 98 (*Pyranthe*) there being no red or silver spots on the underside," there is no doubt that he is right in this conjecture, doubtless the *P. Pyranthe* of Linnaeus is the species both sexes of which are figured by Hubner under the name of *Mauripium faper Minna* (Samml. Ex. Schm. 1, pl. 114), and identical with the *P. Minna* of Herbst & Jablonsky.

9. *Callidryas Pyranthe*, figs. 8, 9, 10.

♂ *Papilio Pyranthe*, *Linnaeus*, Syst. Nat. 2, p. 763, n. 98 (1766).

♀ *Papilio Minna*, *Herbst*, Natursyst. Schmett, 5—7, p. 74, n. 9; pl. 89, figs. 1, 2 1792.

Var. ♂ *Papilio Hea*, *Fabricius*, Ent. Syst. Suppl. p. 421, n. 587—588 (1798).

♂ *Callidryas Thisorella*, *Boisduval*, Sp. Gen. Lép. 1, p. 629, n. 3 (1836).

Giant Race ♂ *Papilio Nephite*, *Fabricius*, Ent. Syst. 3, p. 190, n. 588 (1793).

Callidryas Chryseis, var. *Gnoma*, *Butler*, Fabr. Cat. p. 224, n. 11.

Male. Wings above white, frontwings with black disco-cellular spot, the apical part of costa, apex and outer margin to below second median branch black; the marginal border narrower and more distinctly dentated than in *C. Erangelina* or *C. Chryseis*.

Wings below coloured almost as in the male of *C. Chryseis* but paler and with a reddish-disco-cellular spot in all the wings.

Formb.—Wings above almost as in *C. Chelypsis* $\frac{1}{2}$, but with additional white spots on marginal border.

Wings below yellowish and (with the exception of the internal area of the frontwings which is white), striated with pale brown; frontwings with a small disco-cellular ring-spot, and beyond it an angulated series of pale brown striae; the extreme outer margin orange; hindwings with three more or less distinct central silver ring-spots, and beyond them an irregularly arched series of reddish or orange spots; nervures minutely black-tipped.

Localities— $\frac{1}{2}$, Darjeeling, Coll. Wallace; Wuzerabad (*Hershey*) B.M.; Central India, Coll. W. W. Saunders; Ceylon (*Templeton*), $\frac{2}{2}$, (*Cunning*) B.M.; $\frac{1}{2}$, Formosa, Coll. Wallace; Java, Coll. Druce.

Var. *P. Itea*— $\frac{1}{2}$, Wuzerabad (*Hershey*); Ceylon (*Cunning*), $\frac{1}{2}$, (*Templeton*), B.M.; $\frac{1}{2}$, India, Coll. W. W. Saunders.

Race. *P. Nephele*, $\frac{1}{2}$, $\frac{2}{2}$, Hong-Kong (*Larkin*) B.M.

The caterpillar and chrysalis of *C. Pyrautha* are figured in Mr. Moore's Catalogue of the Lepidoptera of the East India Company, pl. 1, figs. 8, 9a.

Herr George Semper describes the caterpillar, which frequents *Cassia fistula* and *C. occidentalis*, as yellowish green with a black and yellow lateral stripe, the pupa rests seven days, this species has been reared by Capt. Lang who found it on *Cassia tora*; the perfect insect, according to Mr. Swinhoe, is abundant amongst rank and overgrown herbage.

The variety *P. Itea* of Fabricius differs from the typical form on the upperside, in its extremely narrow marginal border, below in its uniform colouring and more distinct disco-cellular spots; the race *P. Nephele* (which I unfortunately confounded with *P. Guonua*, when determining the Fabrician species of *Callitropis* for my Catalogue) differs only in its much greater size, in which respect it agrees with *C. Chelypsis*, the pattern of both surfaces being however precisely as in *C. Pyrautha*.

FAMILY NYMPHALIDÆ.

SUB-FAMILY SATYRINÆ. *Bates.*

PLATE XIII.

GENUS ANCHIPHLEBIA. *Butler.*

Anchiphlebia Ornata, fig. 5.

Anchiphlebia Ornata, *Butler*, Ann. & Mag. Nat. Hist. 4th S., 5, p. 362 (1870).

♀ Alæ supra fusæ; antiæ ocellis quatuor permagnis ovalibus connectis nigris, albo pupillatis, ochraceo diffuse cinctis: posticæ maculis quinque connectis, in serie arcuata dispositis, (pupillis plus minus distinctis albo squamosis) caeruleis, nigro cinctis, ochraceo limbatis; fundo areæ apicalis lilacino; corpus fuscum.

Alæ subtus ochreæ, velut in *L. Hele* striatæ: exp. alar. unc. 3, lin. 3.

Cayenne. (*Deyrolle*). ♀, Coll. Druce.

The most beautiful species of this Genus yet described, in the marking of the frontwings it comes near to several species of the allied Genus *Antirrhoea*.

FAMILY ERYCINIDÆ.

SUB-FAMILY ERYCININÆ. *Bates.*

PLATE XIV.

GENUS LYMNAS, *Blanchard.*

Lymnas Jesse, fig. 8.

Lymnas Jesse, Butler, Ann. & Mag. Nat. Hist. 4th S., 5, p. 363 (1870).

Alæ subhyalinæ, lilacino-tinctæ; venis omnibus late nigrescentibus; anticæ dimidio apicali marginibusque nigrescentibus; fasciâ punctoque ante apicem margines haud attingentibus albis; posticæ margine externo nigrescente: corpus fuscum, palpis aurantiacis: alæ subtus albicantes, aliter velut supra: exp. alar. unc. 1, lin. 11.

Venezuela. ♀, Coll. Kaden in Coll. Druce and in Coll. B.M.

For some time I was uncertain as to the true affinities of this species, but at last it struck me that it might be an abnormally coloured *Lymnas*, which, upon comparison, it proved to be: in the Kaden Collection I found it labelled as the *Illempiopsis heliconides* of Herrich Schaffner, to which it bears a distant resemblance, it is more like the female of *Uraucis hyalina*.

GENUS LYROPTERYX. *Westwood.*

Lyropteryx Olivia, fig. 2.

Lyropteryx Olivia, Butler, Ann. & Mag. Nat. Hist. 4th S., 5, p. 364 (1870).

Alæ supra nigre: anticæ fasciâ maculari, mediocri, angulata, a costa ad nervulum secundum medianum oblique currente, hinc autem marginali

coccinea: posticæ fasciæ ejusdem coloris paululum latiore marginali, a venis nigris intersecta et introrsum dentata; corpus fuscum, abdomine pallidore; collo anoque rufescentibus; alæ subtus pallidiores, venis distinctioribus; maculis basalibus coccineis, velut in *L. Apollonia* ♀ positis: exp. alar. unc. 2, lin. 5.

—? ♀, Coll. Kaden in Coll. Druce.

Differs from the female of *L. Apollonia*, to which it is allied, in having the scarlet band carried through the frontwings and the spots towards the base on the under surface without any libeine reflection.

GENUS EMESIS. *Fabricius.*

Emesis Zela, *fig. 1.*

Emesis Zela, *Buller*, *Ann. & Mag. Nat. Hist.* 4th S., 5, p. 364 (1870).

♂ Alæ supra fusca, characteribus basalibus, linea angulata pone medium interrupta, lineaque indistincta duplici submarginali, nigro-fuscis; posticæ striolis basalibus lineisque tribus interruptis discalibus nigro-fuscis; plaga subapicali aurantiaca; corpus fuscum; alæ subtus fulvæ, striolis indistinctissimis ferrugineis; area interna anticarum pallidore nigro maculata: exp. alar. unc. 1, lin. 7.

♀ Alæ supra fulvo-fusca, characteribus basalibus lineisque tribus macularibus discalibus, nigris: subtus pallidiores, fasciæ angulata pone medium anticarum flavida: maculis marginis interni nigris, aliis ferrugineis: exp. alar. unc. 1, lin. 5.

Venezuela. ♂, ♀, Coll. Druce. Mexico. Coll. B.M.

One of the prettiest species in this very sombre Genus.

GENUS CHARIS. *Hübner.*

Charis Libna, *fig. 1.*

Charis Libna, *Buller*, *Ann. & Mag. Nat. Hist.* 4th S., 5, p. 364 (1870).

Alæ supra flavidæ, stria basali, costa et area externa fuscis, stria ante-marginali plumbea; anticæ macula ante apicem et altera minore subanali flavidis; posticæ macula subapicali flavida: corpus fuscum; alæ subtus fere velut supra

macula autem posticarum subapicali longiore striolaque anali distincta albida; corpus albicans: exp. alar. un. 1.

Mexico? ♂, Coll. Kaden in Coll. Druce.

This insect is remarkable for its resemblance to several of the species of *Brodia*. I have seen no other *Chalcis* like it.

GENUS ARICORIS. *Westwood.*

Aricoris Jansoni, fig. 5.

Aricoris Jansoni, *Butler*, *Cistula Entomologica* 2, p. 31 (1870).

♂ Alæ supra fere velut in *A. Lago*, majores et ad basin virescentes; apice posticarum latius nigrescente; subtus fuscae, anticæ plaga basali a vena costali intersecta, duabus pone medium (fasciam interruptam formantibus), a venis intersectis, albis; posticæ arcis basali et apicali albidis; venis nigrescentibus: exp. alar. un. 1, lin. 9.

♀ Alæ supra fere velut in *A. Lago*, majores et area basali nitide cærulescentes; subtus fuscae, cupreo-functe, albido venose; anticæ fascia postmedia obliqua ochrea; posticæ costa basali ochreo-albida; margine externo albo quadrimaculato: exp. alar. un. 1, lin. 9.

Chontales (*E. M. Janson*). Colls. Druce & B.M.

This species, though allied to *A. Lago*, differs entirely on the under surface of the wings, above it is more brilliantly shot with blue, which in the male is of a greener tint than in *A. Lago*; it is named after its captor.

GENUS STALACTIS. *Hübner.*

Stalactis Evelina, fig. 6.

Stalactis Evelina, *Butler*, *Ann. & Mag. Nat. Hist.* 4th S., 5, p. 365 (1870).

Affinis *S. Phacusa*, maculis autem anticarum hyalinis latioribus et omnino majoribus; arcola solum interna violacea; striola anali aurantiaca tenuiore; costa posticarum late fusca et linea marginali aurantiaca tenuissima; corpus fuscum: exp. alar. un. 1, lin. 11.

— ♂, ♀, Coll. Kaden in Coll. Druce.

Allied to *S. Phacusa* but differing in many particulars.

FAMILY LYCÆNIDÆ.

SUB-FAMILY THECLINÆ. *Butler.*

GENUS MYRINA. *Fabricius.*

Myrina Timon, *figs. 3, 4.*

Papilio Timon, *Fabricius*, *Mant. Ins.* p. 65, n. 611 (1787).

Myrina Timon, *Butler*, *Cat. Fabr. Diurn. Læp.* p. 183, n. 4, (1869).

“Alæ anticæ supra fusæ, basi virescente; subtus albæ, apice obscuriores; posticæ virescentes apice obscure albo-maculatæ; caudæ tres, exteriori parva, obtusa, nigra, albo-ciliata, intermedia longiori alba, ante apicem nigra, interiori longissima alba; subtus albæ ad angulum ani striga abbreviata fusca fasciaque sanguinea, maculis duabus atris.”—*Mant. Ins.*

Old Calabar. Coll. Druce.

This very interesting Fabrician species, has never before been figured: indeed, until the publication of my Catalogue the name *P. Timon* was applied to a perfectly distinct insect: I am indebted for the identification of *P. Timon* to my cousin, Miss J. K. Lorimer, eldest daughter of the late Dr. Lorimer, of Glasgow, and to John Gibson, Esq., also of Glasgow, who sent me a sketch and description of the type in the Hunterian Collection.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PIERINÆ. *Bates.*

GENUS CALLIDRYAS. *Bolton.*

[Monograph continued.]

PLATE XVI.

10. *Callidryas Gnoma*, *figs. 1, 2, 3, 4.*

♂ *Papilio Gnoma*, *Fabricius*, Syst. Ent. App. p. 828, n. 152-153, (1775).

♀ *Papilio Philippina*, *Cramer*, Pap. Exot. t. pl. 361, figs. C, D, (1782).

Male. Wings above white; frontwings with small black disco-cellular spot and small brown marginal spots; hindwings unspotted; wings below as in some males of *C. Papilio* but with the markings better defined.

Female. Wings above white, margins yellow-washed, frontwings with basal costa brownish ochreous, a large round disco-cellular black spot and reddish brown maculate marginal border; wings below as in some females of *C. Papilio* but the markings bolder and much better defined.

I have examined specimens from the following localities—

♂, Afghanistan, B.M.; ♀, N. India, Coll. Wallace, 2, B.M.; ♀, ♀, India, Coll. E. Green; ♀, ♀ Punjab, B.M.; ♀, Hong Kong, Coll. Hewitson.

♀ Var. resembling ♂ on upper surface, Ceylon, B.M.

Captain Lang caught *C. Gnoma* on the Himalayas and Plains, and reared the larva on *Cassia bany.* Captain H. L. De la Chumette states that it occurs also on *C. Decubitalis*, he found the larva on the 13th September and describes the transformations (Ent. Month Mag. 2, p. 36) as follows—Larva "Length $1\frac{1}{2}$ inch, cylindrical, elongated, attenuated at both ends, rough, covered all over (particularly on the sides) with black slightly raised spots, forming, on the upper side of the broad pale yellowish lateral line, a dark border. Dorsal artery plainly visible. The back strongly transversely ringed on each incision with deep furrows, giving it rather a crustal appearance. Abdomen, head, anus, and prolegs pale dull green. Body above grass-green, dark. Thoracic legs pale yellow. Head spotted like the rest of the body, spiracles cream colour. Slow in its movements. It went into chrysalis on the 11th September, 1864. Chrysalis, very delicate green, with a narrow straw-coloured lateral line from the anus to the eighth segment. After eight days the marginal pinkish spots of the imago were distinctly visible under the wing covers. Came out on the 24th September, 1864. Egg spindle-shaped, perfectly white, fastened by one end to the under surface of the leaf, several on one leaf, placed apart."

11. *Callidryas Lactea*, *figs. 5, 6, 7.*

♂, ♀ *Callidryas Lactea*, *Butler*, Ann. & Mag. Nat. Hist. 4th S., 5, p. 361 (1870).

♀ *Callidryas Thisorella*, (part) *Wallace*, (nec. *Boisd.*) Trans. Ent. Soc. Lond., 3rd. Ser., IV., p. 309 (1867).

Male.—Wings above milky white; frontwings with the apex sometimes tinted with brown, the corners towards apex tipped with brown; base of wings slightly rosy-tinted, a minute disco-cellular brown spot; hindwings unspotted; the usual mealy patch upon disc.

Wings below pale ochraceous, hatched with brownish ochreous, rosy tinted at base; a minute brownish disco-cellular ring-spot; frontwings with the internal area whitish.

Female.—Generally only to be distinguished from male by the larger disco-cellular spot on upper surface of frontwings, but in the example figured it differs also in the well-defined brown spots at termination of nervures on outer margin; and below in the brighter ochraceous ground colour with ill defined disco-cellular ring-spots.

The localities are as follows—♂, ♀, Solomon Islands (*Beachley*); ♀, Australia (*Stutchbury*); ♂, Champion Bay (*De Boulay*) B.M.; ♂, Queensland. Coll. Wallace, ♀, B.M.

The above species seems to supply the place of *C. Guoni* in Australia.

12. *Callidryas Pyrene*, figs. 8, 9, 10.

♂, ♀ *Colias Pyrene*, *Swainson*, Zool. Ill., 1st Ser., pl. 51 (1820-1).

Callidryas Florella, *Boisduval*, (nec. *Fabricius*), Sp. Gen. Lép. 1, p. 608, n. 2 (1836).

Male.—Wings above milky-white; frontwings with exceedingly narrow brown marginal border from beyond middle of costa to middle of outer margin; a very minute disco-cellular brown point; hindwings with usual mealy patch; the outer margin of all the wings very feebly yellow-tinted.

Wings below, pale yellowish or greenish ochraceous, hatched with brownish; base rosy; frontwings with red disco-cellular ring spot; three indistinct brown spots in an oblique line from second median to first brachoidal nervure; hindwings with red disco-cellular ring-spot; five indistinct brown spots forming a bracket shaped line between subcostal and median branches.

Localities—♂, ♀, Interior of S. Africa (*Burke*), B.M.; ♂, S. Africa, Coll. Wallace; ♂, Madagascar, Coll. T. De Grey; ♂, ♀, Mauritius (*Beke*), B.M.; ♂, ♀, Kartoum Coll. Wallace; ♂, Sierra Leone (*Fivecroft and Morpyn*), B.M.

Dr. Boisduval in all probability followed Fabricius, when describing the female of his *C. Florella*, but had he possessed the same opportunity that I have of examining the Fabrician type, he would have discovered that the true *Florella* was a faded and worn female of his *C. Rhodia*; in fact, Swainson is perfectly in the right when he says that the sexes of his *C. Pyrene* are identical in pattern and colouration.

The Fabrician description of *C. Florella* says "alis posticis subtus punctis tribus argenteis" which would at once distinguish it from the female of *C. Pyrene*.

Mr. Bowker states (Trimen's Rhop. Afr. Austr., p. 332) that the species is numerous about March, appearing in one day by thousands, it is rare by the middle of April. Easily caught, settling upon flowers at edge of forest, but rarely met with inside woods. Seen on 20th July, 1863.

Hopfler, in Peters's "Reise nach Mosambique" p. 365, remarks that "the colour of the female, which Boisduval entirely passes by in his description, is quite distinct from that of the male, it is on the upper side sometimes pale yellow, sometimes beautiful gamboge yellow, on the underside always yellow ochre;" there can be no doubt that Hopfler has here referred the female *C. Flossilla* to the male *C. Pygmaus*.

In the "Könl. Wet. Akad. Verhandl.," for 1858, Wallengren characterizes a new genus under the name of *Thespis*. But in his paper on the Rhopalocera of Caffaria, he described the genus under the name of *Ptychoplyge*; as no reason is assigned for this alteration I cannot follow him.

In describing the above Genus, Wallengren invents a system of nomenclature entirely different to that in general use, and calls each nerve a costa; the costæ of the frontwings are counted upwards from the inner to the anterior margin of the wing, and are stated to be ten in number, whilst *Callidryas*, the most nearly allied genus, is said to have nine; the actual difference in neuration between the two genera is one of position, not of number; some of the characters distinguishing *Ptychoplyge* from *Callidryas*, when put into the usual form, are good, others bad; for instance, the character of a patch of fine bristles at base of hindwings, is common to *Callidryas* (See Drury on *C. Clerys*, and Trimen on *C. Flossilla*); the costal nerve of hindwings much arched; the first subcostal arched, emitted from centre of its nerve, and running to apex; the straight fold from base through whole length of cell and between discoidal and third median branches to outer margin, are all characters common to *Callidryas*; the following good characters remain:—

h. w. The second subcostal and discoidal branches springing from nearly the same place so as to reduce disco-cellular to a point.

f. w. Upper discoidal not branching from subcostal but emitted close to it at end of cell; second subcostal nearer to first.

1. *Ptychoplyge Bohemani*.

♂, ♀ P. Bohemani, *Wlgr.* Wings above whitish yellow, frontwings deeper coloured, apex broadly black-brown intersected by five orange yellow spots, a discoidal black point; hindwings below with very many short striolations of a pale reddish grey colour and a longitudinal deeper streak upon the fold. Caffaria.

The following must I think be a second species of this Genus.

2. *Ptychoplyge Lucasi*.

Callidryas Lucasi, *Grandisler*, *Revue et Mag. de Zool.*, 2nd S. t. 273 (Aug 1867.)

Male. Frontwings above falcate, whitish towards base; with black apex exhibiting a rounded yellow spot; discoidal spot elongate, black; below beautiful yellow, with hind-margin yellowish white and apex ferruginous.

Hindwings above white, exhibiting two marginal rows of blackish spots; below, yellow with ferruginous hatchlings; costa and outer margin spotted with same colour.

Female. Differs in the dentated, not falcated frontwings; three silver spots on under surface of hindwings.

Cape Sainte-Marie (*Grandisler*.)

FAMILY CASTNIIDÆ.

PLATE XVII.

GENUS CASTNIA. *Fabricius.*

Castnia Diva, *sp. nov.* *figs. 1, 2.*

♂, ♀ Alæ anticæ supra fuscae; fascia postmedia diffusa obliqua ochraceo-fusca punctoque ante apicem aurantiaco; puncto discoidali, tribus in serie triangulari postmediis et duabus subanalibus, inæqualibus, ovalibus, flavo-argenteis; posticæ ceruleæ purpureo-tinctæ; fascia decrescente marginali aurantiaca, introrsum nigro late limitata; ciliis nigris; corpus fuscum.

Alæ subtus rufo-fuscis; anticæ area basali purpureo viridique certo situ micante, area apicali, apice excepto, ochrea, maculis quatuor oblongis decrescentibus nigris ante apicem positis, una rufescente in serie eadem discali; maculis subanalibus supernis ochreo-albis; posticæ fascia media nebulosa maculisque quinque humularibus, distinctis, ferrugineis; corpus fuscum: exp. alar. ♂ unc. 2, lin. 11; ♀ unc. circ. 3 lin. 3.

Chontales. (*Janson.*) Coll. B.M.

This beautiful *Castnia* is somewhat like a species figured on one of the uncoloured provisional plates for the fourth part of the Lepidoptera of the Novara Voyage, as "*C. Tricolor*," but the differences, in the frontwings especially, between the two species, seem to justify their separation.

FAMILY ARCTIIDÆ.

GENUS PERICOPIS. *Hübner.*

1. *Pericopis Ignita*, *fig. 3.*

Pericopis Ignita, *Butler*, Cat. Fabr. Diurn. Lepid., p. 291 (1869).

Alinis *P. Nasica* (*P. Perspicua*, *Walker*), differt alis supra fascia media flava late disrupta, macula sub-triangulari interiore flava, punctis 3—4 ad costam basalibus coccineis; exp. alar. unc. 2, lin. 9.

Tapajos. (*Bates.*) B.M.

2. *Pericopis Jansonis*, *sp. nov.* *figs. 4, 5.*

Alæ anticæ fuscae, area apicali dilutiore; plaga permagna pone medium fusco-albida, fasciam fuscam includente; posticæ nigrae, macula subapicali lactea; plaga subanali quadrata coccinea; corpus fuscum. Alæ subtus fuscae obscure; anticæ fascia media lactea; posticæ velut supra; ambæ puncto basali coccineo; exp. alar. unc. 2, lin. 10.

Chontales. (*E. M. Janson.*) Coll. B. M.

Allied to *P. Turbida* from Venezuela, but very distinct.

FAMILY NYMPHALIDÆ.

SUB-FAMILY SATYRINÆ. *Bates.*

PLATE XVIII.

GENUS EPTYCHIA. *Hobbs.*

1. *Eptychia Caelica*, fig. 2.

Eptychia Caelica. *Hewitson*, *Equat. Lep.* 3, p. 35, n. 62 1869.

♂ Alæ supra ceruleæ, antice apice et margine externo late nigris; postice fasciâ apicali, lineis duabus submarginalibus ciliisque nigris; corpus pallide fuscum ceruleo tinetum.

Alæ subtus ceruleæ, striis duabus mediis continuis, duabus submarginalibus ciliisque nigro-fuscis; annulis tribus minutis ocelloque cerco subapicalibus, nigris; postice ocellis quinque, primo minuto, tertio et quarto annularibus, nigris; exp. alar. unc. 2.

Ecuador. (*Buckley*.) Coll. *Hewitson*.

2. *Eptychia Lobelia*, sp. nov. fig. 5.

♂ Allinis precedenti; antice apice, margine externo, venis apud marginem, striola discoidea annuloque subtriangulari pone cellam nigris; postice apice, striisque duabus marginalibus nigris; corpus pallide fuscum, ceruleo tinetum.

Alæ subtus ceruleæ, striola basali, lineis duabus mediis continuis, tertia discali maculari ocellos gerente, quarta pone eam continua et duabus tenuioribus marginalibus, nigris; antice ocello uno, postice duobus inæqualibus nigris caecis subapicalibus; corpus cinereo-albidum; exp. alar. unc. 1, lin. 9.

Ecuador. (*Buckley*.) Coll. *Hewitson*.

Allied to the preceding and to *E. Cerulea*, but differs from both in the form of the hindwings, the differently placed marginal lines on these wings, and the ocellation of the under surface.

3. *Eptychia Umbrosa*, sp. nov. fig. 8.

Alæ supra cinereo-virides, certo situ nitidiores; postice lineis duabus valde indistinctis cinereis marginalibus; ciliis fuscis; corpus fuscum.

Alæ subtus pallidiores, albido squamosæ; striis duabus mediis continuis, nebula ocellos gerente discali, stria submarginali angulis alternis undata, lineis duabus marginalibus, omnibus fuscis; antice ocello uno subapicali minuto

nigro, posticæ quinque secundo et quinto nigris albo-pupillatis, aliis fusco-cinereis fulvo-cinctis; corpus cinereum; exp. alar. unc. 1, lin. 8.

Ecuador. (*Buckley*). Coll. Hewitson.

Belongs to the *Hermes* group, and is remarkable for the green shot on the upper surface of the wings.

4. *Euptychia Ashua*, fig. 6.

Euptychia Ashua, *Hewitson*, *Equat. Lep.* 3, p. 36, n. 64 (1869).

Alæ supra ochreo-fuscae, ad basin obscuriores, posticæ macula subapicali et altera subanali valde indistinctis, lineis duabus marginalibus ciliisque fuscis; corpus nigro-fuscum.

Alæ anticæ subtus pallidiores, area anali albicante; stria postmedia indistincta, lineis duabus marginalibus, ciliisque, fuscis; posticæ obscuriores; fascia lata postmedia alba; ocellis quinque, secundo et quinto paululum majoribus, quinto albo bipupillato, tertio et quarto fuscis caeruleo-albo bipupillatis, aliis nigris; omnibus flavo-cinctis; corpus cinereum; exp. alar. unc. 1, lin. 6.

Ecuador. (*Buckley*). Coll. Hewitson.

Belongs to the *Amilla* group of *Euptychia*, but resembles *E. Promophila*.

5. *Euptychia Albofasciata*, fig. 7.

Euptychia Albofasciata, *Hewitson*, *Equat. Lep.* 3, p. 36, n. 63 (1869).

♀ Alæ supra fuscae; fascia lata media, margines laud attingente, alba; posticæ lineis duabus marginalibus, apud angulum ani albis; ocello magno subanali nigro fulvo-cincto et minutissime argenteo-pupillato; corpus nigro-cinereum.

Alæ subtus pallidiores, area basali fusca, fasciis duabus continuis; area apicali albida; fascia lata discali ocellos gerente fusca; lineis tribus marginalibus nigro-fuscis; anticæ ocello uno albo-pupillato fulvo-cincto; posticæ sex, primo et sexto minimis, tertio et quarto fuscis caeruleo bistriatis; aliis nigris albo-pupillatis; corpus cinereum; exp. alar. unc. 2, lin. 2.

Ecuador. (*Buckley*). Coll. Hewitson.

Allied to *E. Nossis*.

6. *Euptychia Tiessa*, fig. 4.

Euptychia Tiessa, *Hewitson*, *Equat. Lep.* 3, p. 37, n. 65 (1869).

♂ Affinis *E. Giganti*, differt alarum forma, fasciis subtus latioribus, ocellis rotundioribus, fascia lata ocellos gerente et margine externo rufescente; exp. alar. unc. 2, lin. 4.

Ecuador. (*Buckley*). Coll. Hewitson.

7. *Euplychia Francisca*, sp. nov., fig. 3.

Alæ supra fuscae violaceo-tinctæ; posticæ macula subanali indistincta lineisque duabus marginalibus fuscis; corpus cinereo-fuscum.

Alæ subtus ochraceæ; anticæ area postali fuscescente; striis duabus mediis continuis, tertiâ submarginali undata lineisque duabus marginalibus fuscis; anticæ nebula discali, ocello uno parvo nigro albo-pupillato; posticæ ocellis quinque, secundo et quinto majoribus nigris albo-pupillatis, primo nigro, tertio et quarto fuscis; omnibus flavo-cinctis; exp. alar. unc. 2.

Ecuador. (*Buckley*). Coll. Hewitson.

SUB-FAMILY NYMPHALINÆ. *Bates*.

GENUS PREPONA. *Balsawal*.

Prepona Louisa, fig. 1.

Prepona Louisa, *Butler*, Cist. Ent. 2, p. 39 1870.

Alæ supra purpureæ, fascia media viridi; marginibus fuscis; posticæ ocello magno subanali nigro, caeco, ferrugineo cincto; area abdominali pallide fuscescente, pilis consuetis fulvis; corpus fuscum.

Alæ subtus fere vult in *P. Demodice*; exp. alar. unc. 3, lin. 7.

Cuba. Coll. Kaden in Coll. Druce.

Allied to *P. Demodice*, but differing above in the much greater expanse of purple, which extends beyond the central green band.

SUB-FAMILY MORPHINÆ. *Butler*.

PLATE XVI.

GENUS MORPHO. *Fabricius*.

1. *Morpho Juturna*, fig. 1.

Morpho Juturna, *Butler*, Cist. Ent. 2, p. 28 1870.

Alæ supra cinereo-argenteæ; anticæ costa, plaga disco-cellulari a macula costali alba interrupta, apice et margine externo, nigro-fuscis; puncto apud apicem indistincto fulvo, maculis tribus ejusdem coloris et tribus albis submarginalibus, striolis sex subinterruptis ante-marginalibus fulvis; posticæ margine latius nigrescente; maculis subtribus disci superioris albis submarginalibus; lineâ antemarginali interrupta ferruginea; margine abdominali ochreo-tincto.

Alæ subtus rufo-fusceæ; anticeæ fasciis tribus discoideis albidis: striola pone cellam rufo-fusca per nebulam albidam errante; area interno-basali nigro-variegata; plagis tribus humularibus albidis nigro limitatis, aream basalem infra cellam limitantibus; ocellis tribus discalibus consuetis; fascia submarginali nigra, a plagis subseptem ochraceis introrsum limitata; fascia marginali ferruginea, a linea nigra intersecta; posticæ area basali albido quadrate fasciolata; ocellis tribus subanalibus et duobus infra costam oblique positis, fuscis ceruleo punctatis, fulvo-cinctis, nigro circumcinctis et fusco zonatis; strai submarginali fusca, introrsum albo, extrorsum ferrugineo limitata; margine nigro, albo intersecto; exp. alar. unc. 6, lin. 4.

New Granada. Coll. Druce.

This extraordinary species belongs to the *Hebea* group; it is the only *Morpho* possessing any approach to tails in the hindwing.

2. *Morpho Luna*, fig. 2.

Morpho Luna, *Bulver*, *Cist. Ent.* 1, p. 4 (1869).

Alæ supra sericeo-albæ, virescentes; anticeæ stria undata disco-cellulari, vena costali et apice fuscis; maculis tribus apicalibus inconspicuis; posticæ maculis octo magnis submarginalibus ovalibus fuscis; venis nigro-fusco acuminatis; corpus album, thorace fuscescente.

Alæ subtus albæ, anticeæ venis costali et sub-costali, fasciola transversa discoidali et altera disco-cellulari albido intersecta, fuscis; maculis tribus nigris albo-pupillatis, primo romoto, minutissimo; posticæ ocellis quinque albo-pupillatis flavo-iridatis, primo tertio et quarto magnis; lineis duabus sub-analibus nigris; corpus album, thoracis medio ochraceo; exp. alar. unc. 6, lin. 8.

Mexico. Coll. Druce.

The largest of the white species of *Morpho*.

3. *Morpho Æga*, fig. 3.

♂ *Leonte Æga*, *Hübner*, *Samml. Exot. Schmett.* 2, pl. 76 (1806).

♀ Alæ supra area basali fulvo-ferruginea; area apicali fusca; anticeæ plaga quadrata discoidea, tribus incresecentibus infra nervulos medianos, quatuor bisectis decresecentibus submarginalibus, maculis quatuor pone cellam et duabus apud apicem submarginalibus indistinctis flavis; macula subapicali alba; posticæ maculis quinque submarginalibus ciliisque flavis; striola interrupta subanali ferruginea; corpus ferrugineum.

Alæ subtus fere velut in mare: exp. alar. unc. 3, lin. 11.

S. Brazil. Coll. Druce.

The male of this species is of a brilliant metallic blue colour, and is in most collections; the female, now figured for the first time, is rare; a larger example than that represented on our plate has been for many years in the Collection of the British Museum.

FAMILY NYMPHALIDÆ.

SUB-FAMILY NYMPHALINÆ. *Bates.*

PLATES XX. & XXI.

GENUS GODARTIA. *Lucas.*

Godartia Ansellica, pl. xx., fig. 1.

Godartia Ansellica, *Butler*, Trans. Ent. Soc., Lond. (1870.)

♂ Affinis *G. Eurinomi* at viridior, maculis discalibus posticarum duplo majoribus. serie anticarum submarginali magis undata, area basali posticarum reducta : venis latius nigrescentibus : exp. alar. unc. 4.

Kinsembo, S. W. Africa. (*Ansell.*)

Five specimens of this species were sent home by Mr. Ansell : it differs constantly from *G. Eurinome* in its greener tint, larger discal spots of hindwing, the irregularity of the submarginal series of the front wings, the greatly reduced basal area of the hindwings and the more broadly blackened nervures : like *G. Eurinome* it resembles *Donaïs Leonora*, but not to the same extent.

GENUS ROMALEOSOMA. *Blanchard.*

Romaleosoma Lakuma, pl. xxi., fig. 2.

Romaleosoma Lakuma, *Butler*, Trans. Ent. Soc., Lond., pt. 1, p. 123 (March, 1870.)

♀ Alæ supra olivaceo-fuscae; antice albe acuminatæ; fascia subapicali obliqua, angusta, oclurea, a costa ad nervulum tertium medianum currente; costa obscure cærulea; striola subanali squamosa cærulea; posticæ stria angusta discali cærulea, margini externo paralleli.

Alæ subtus aureo-virides; antice apice albo; fascia superna subapicali albida (haud oclurea); maculis nigris discoideis velut in *R. Eupalo* fasciaque nebulosa annulari submarginali: posticæ fascia lata angulata albida pone cellam posita et a costa gradatim pyramidata: exp. alar. unc. 3, lin 9.

Gold Coast. (*Ussher.*) Coll. Swanzy.

This species is allied to *R. Eupalus* and *R. Harpalycæ*, which have been considered by some Lepidopterists to be varieties of the same species, but I am convinced from a careful examination of many examples of both sexes of the two forms, that they are perfectly distinct: *R. Losinga* is a third species of the same little group, and *R. Lakuna* will make a fourth.

GENUS PHILOGNOMA. *Westwood.*

Philognoma Ussheri, *pl. xvi., fig. 3.*

♂ *Philognoma Ussheri*, *Butler*, *Trans. Ent. Soc., Lond.*, pt. 1, p. 124 (March, 1870).

♂ *Nymphalis Decius*, *Lucas*, *Lep. Exot.*, pl. 64, fig. 2 (1835).

♂ Alæ supra nigerrimæ, area basali fuscescente; antice fascia media transversa subrecta sericeo-alba, infra venam medianam aureo-tincta; posticæ, basi apiceque exceptis, nitide fulvæ, ocellis nigris violaceo-pulpillatis velut in *P. Decio* at minoribus.

Alæ subtus fere velut in *P. Decio* sed nitidioribus, fascia media angustiore et multo magis regulari; stria nulla posticis subapicali rosea; ocellis majoribus et a fascia nigra ad angulum ani distinctius limbatis: exp. alar. unc. 3, lin. 1.

Gold Coast. (*Ussher.*) Coll. Swanzy.

This novelty is of great interest from the fact of its belonging to a small but conspicuous genus of the *Charaxes* group; I have therefore felt great pleasure in naming it after its captor, Mr. Herbert T. Ussher, the present Administrator of the Gold Coast; I must here also take the opportunity of acknowledging my obligations to Mr. Swanzy for the use which he has so frequently allowed me to make of his Collection.

The above species is perfectly distinct from Cramer's *P. Decius*, which M. Lucas describes at p. 122 of his work; I suspect that the violet tint in the frontwing band of his figure is incorrect, and intended to make it correspond to some extent with his description, which is probably a compilation.

SUB-FAMILY DANAINÆ. *Bates.*

GENUS DANAIS. *Latrville.*

1. *Danais Leonora*, *pl. xv., fig. 2.*

Danais Leonora, *Butler*, Proc. Zool. Soc., Lond., p. 51, n. 35 (1862).

Affinis *D. hamata* maculis viridibus pellucidis latioribus et brevioribus; plaga interna apud basin obsoleta; posticæ minores, rotundiores; cella discoidali brevior; exp. alar. unc. 3, lin. 9.

Bembe Mines, Angola. (*J. J. Monteiro*), and W. Africa. B. M.

Allied to *Danais hamata*, from which it differs most strikingly in the absence of the interno-basal spot in the frontwings, and in the broader and shorter form of all the transparent markings: I have figured it here to show the amount of resemblance between it and *Godartia Ansellica*, this is a less perfect instance of preservative assimilation than that of its near ally, *G. Eurinome*; the female of the latter is most like *D. Leonora*.

2. *Danais Ishma*, *pl. xv., fig. 3.*

Danais Ishma, *Butler*, Cist. Ent. 1, p. 2, n. 2 (October, 1869).

Alæ supra productæ, nigro-fuscæ: stria discoidea basali et plaga profunde indentata; fascia lata inæquali a venis in maculas subocto persceta, alam oblique transerrante et cellam partim limitante; punctis undecim (nono et decimo geminatis) alam circumcingentibus et a costæ medio ad angulum ani cur-

rentibus; punctis nonnullis marginalibus minutis, omnibus viridibus, pellucidis; posticæ area basali late viridi, pellucida, a venis interseeta; area apicali nigro-fusca, maculis plurimis geminatis in seriebus duabus submarginalibus dispositis; area abdominali pallide fusca, griseo striata: corpus thorace nigro albo punctato; abdomine fusco.

Alæ subtus fere velut supra maculis autem majoribus: exp. alar. unc. 3, lin. 8.

Gilolo. Coll. Druce. Celebes. Coll. B. M.

The above species is allied to *D. Sobrina*, from which it differs in the pattern of the frontwings.

GENUS AMAURIS. *Hübner*.

1. *Amauris Vashti*, pl. *xxi.*, fig. 1.

Danaïd Vashti, *Butler*, Cist. Ent. 1, p. 1, n. 1 (October, 1869).

Alæ supra obscurissimæ, antice nigerrimæ; plaga permagna discali a nervulo primo mediano persecto, maculis duabus conspicuis subapicalibus, oblique positis, tribus costalibus minoribus, duabus apicalibus punctisque quatuor submarginalibus, pellucidis niveis; posticæ piæ, area apicali obscuriore, abdominali pallidiorè; punctis subseptem submarginalibus minutissimis albis; corpus thorace nigro albo-punctato, abdomine fusco, lateraliter pallidiorè; antennis nigris: exp. alar. unc. 4, lin. 4.

Old Calabar. Coll. Druce.

This very handsome *Amauris* is the ninth described species of the genus to which it belongs which now stands as follows:—

1. *A. Phædon*, *Fabr.*, E. S. S., p. 423.
2. „ *Echeria*, *Stoll*, P. E., pl. 29.
3. „ *Egialea*, *Cramer*, P. E., pl. 192.
4. „ *Damocles*, *Pal de Beau.*, Ins. Afr. & Am., p. 238.
5. „ *Vashti*, *Butl.*, C. E., 1, p. 1.

6. *A. Hecate*, *Bull.*, P. Z. S., p. 44 (1866).
7. „ *Nossima*, *Wood*, E. M. M., 6, p. 225.
8. „ *Ochlea*, *Boisd.*, App. V. Del., p. 589.
9. „ *Niavins*, *Linn.*, S. N., 2, p. 766.

I think Reakirt is right in adopting *Hübner's* Genus for the above species, the characters pointed out by Doubleday seem constant enough; Mr. Reakirt appears to have entirely overlooked Mr. Trimen's full-page description of *A. Ochlea*, Boisd, which is also described in Delongorue's Voyage.

SUB-FAMILY SATYRINÆ. *Bates.*

GENUS MYCALESIS. *Hübner.*

Mycalesis Ignobilis, pl. xxi., fig. 4.

Mycalesis Ignobilis, *Butler*, Trans. Ent. Soc., Lond., pt. 1, p. 123 (March, 1870).

Alæ supra fusæ; antice ocellis duobus obsoletis velut in *M. Eusiro*, fascia distincta subapicali alba bilobata; marginibus apicali et costali pallidis: linea tenui submarginali undulata; postice margine externo pallidiorè, linea obscura undata submarginali: alæ subtus fusæ, fasciis tribus roseo-albis obliquis; margine fusco-albido lineam nigram undatam includente; antice fascia alba superna interrupta cum fascia media in costam conjungente ocellisque partim circummeingente; ocellis duobus magnis; postice ocellis duobus permagnis, duobus subapicalibus parvis tribusque analibus: exp. alar. unc. 1. lin. 10.

Gold Coast. Coll. A. Swanzy.

Allied to *M. Venos* and *M. Eusiro*.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PIERINÆ. *Bates.*

GENUS CALLIDRYAS. *Boisduval.*

P L A T E X X I I I .

[Monograph continued.]

13. *Callidryas Thaurama*, *figs. 3—6.*

Callidryas Thaurama, *Reakirt*, Proc. Acad. Nat. Sci., Philad., p. 238 (1866).

Callidryas Fiaduna, *Hewitson*, Exot. Butterf., p. 63, pl. Callid. et Eron., figs. 1—4 (1867).

Male. Wings above very similar to *C. Catilla*, but with large black disco-cellular spot, and without black at apex: below pale green with white hatchings; frontwings with inner half (excepting the anal area which is white), sulphur yellow, an orange discoidal streak at base; a disco-cellular ring spot, and the outer margin towards apex, reddish; hindwings, subcostal nervure yellow margined: a small ring spot at end of cell, and six brown points forming an arch beyond it.

Female. Wings above with basal area white, apical area golden yellow, deeper towards outer margin; frontwings with large black disco-cellular spot; the subcostal and median branches terminating in large brown spots united at apex; an indistinct brown spot below second subcostal branch, and three in an oblique series beyond cell; below golden yellow hatched with orange, frontwings with a large reddish spot at end of cell, and two or three brown points beyond it: hindwings with three silver-centred ring-spots at end of cell, and eight red-brown points placed in an arch beyond it.

♂, ♀, Madagascar. Colls. Hewitson and Saunders.

The above species seems to represent *C. Catilla* in Madagascar.

14. *Callidryas Florella*, *figs. 1, 2, 2a.*

♀ *Papilio Florella*, *Fabricius*, Syst. Ent., p. 479, n. 159 (1775).

♂, ♀ *Callidryas Rhadia*, *Boisduval*, Sp. Gén. Lép., p. 617, n. 11 (1836).

Pontia Marcellina, *Bertoloni*, in *Memorie Acad. Sci. Inst.*, Bologna, 2, p. 178 (1849, publ. 1850).

Var. *Callidryas Hybkeæ*, *Boisduval*, Sp. Gén. Léop., 612, n. 11 (1836).

Var. *Callidryas Florella*, ♂ var. Maillard in "Notes sur L'Île de la Réunion," p. G.—5, pl. 22, figs. 1—4 (1862).

Male. Wings above sulphur yellow, without spot: below citron—yellow; the frontwings exhibit a transverse disco-cellular brick-red mark, divided by yellow nervures; the hindwings with a silver-centred disco-cellular spot, and a transverse series of indistinct ferruginous points beyond cell.

Female. Wings above sulphur yellow becoming deeper coloured on the outer margin, the nervures terminated by reddish spots; frontwings with large black disco-cellular spots; the basal costa rosy-tinted; below golden yellow with scattered red-brown hatchings; frontwings with rosy silver-centred ring-spot at end of cell; an angulated series of five or six reddish spots; the nervures terminating in rosy spots; hindwings with three silver-centred ring-spots at end of cell and an irregularly arched series of ill-defined reddish spots beyond it; the nervures terminating in ill-defined rosy spots.

I have examined specimens from the following localities:—

♀, Sierra Leone, (*Fisereft and Morgan*); Ashanti, B. M.; Senegal, Coll. Druce; Abney, Coll. Saunders; Madagascar, Coll. T. De Grey.

Dr. Boisduval seems to be the only Lepidopterist, who has been favoured with a sight of the male of this species, it is in none of the collections to which I have access, and (so far as I can judge from the writings of Messrs. Trimen, Wallengren, and others), has not made its appearance since the publication of the *Species General*: indeed Dr. Wallengren, in the *Svenska Handlingar*, evidently considers the male *C. Pyrene* to be that sex of *C. Florella*.

In the *Species General*, Dr. Boisduval, described the typical female, *C. Florella* (under its true name), as the female of *C. Pyrene*, in all probability compiling his description from that of Fabricius: Mr. Trimen in his "*Rhopalocera Africæ Australis*" translated Dr. Boisduval's description, with the following remark:—"Having only seen males of this species, I am obliged to borrow the above description of the *female* from M. Boisduval's work;" under the localities, however, I find "Interior of South Africa, Sierra Leone, St. Vincent (Cape Verd Islands).—Coll. Brit. Mus.," which proves to me that my friend Trimen, (like Mr. Doubleday and myself), was under the influence of the Boisduvalian description, when he examined the Museum specimens (See localities at p. 44 of this work). In a foot-note to the same page, however, Mr. Trimen says, "A ♀ of *Florella*, in Mr. D'Urban's collection confirms Mr. Swainson's statement, being identical in colour and marking with the ♂;" I mention the above facts to explain a note in my Fabrician Catalogue, which Mr. Trimen, in his paper, recently read before the Entomological Society, seems to have misunderstood; at p. 221, I observed "The female is much like a large pale variety of the *C. Rhodina* of Mr. Doubleday's List;" unfortunately the sheet was printed off before I discovered my error, which I corrected in the next page, "*Callidryas Rhodina*, Bois. (*Florella* Fabr.);" I had no intention of suggesting the identity of two apparently so distinct species, as *C. Pyrene* and *C. Florella*, nor do I now think, considering the totally different colouring and pattern of the two, and the fact that the sexes of both have been described, that the capture of a single ill-assorted pair is a sufficient reason for uniting them as modifications of one variable form: I cannot help thinking that the intermediate form mentioned by Mr. Trimen must have been *C. Theurania*.

Signor Bertoloni received *C. Florella* ♀ from Inhambane, and observing its near resemblance to the *P. Marcellina* of Cramer, came to the conclusion that the latter species was indigenous to the east coast of Africa.

Mr. Trimen remarks (Rhop. Afr., Austr.) :—" I once saw this butterfly at Knysna, on the 11th of March, 1859, flying rapidly over the marshes near the river. I chased it for some time, but when close upon it, by an unlucky fall gave the insect time for so long a start, that it was useless to try further pursuit. An aged specimen of the *femula*, from the same locality was given me by a lady who took it there some years ago. The insect is conspicuous in flight, owing to its bright-yellow colour."

The chrysalis figured was sent with the perfect insect from Sierra Leone by Mr. Foxcroft.

15. *Callidryas Eubule*, figs. 7—10.

♂ *Papilio Eubule*, *Linnaeus*, Syst. Nat. 2, p. 743, n. 102 (1766).

Male. Wings above sulphur yellow, unspotted, with narrow marginal mealy band; below sulphur yellow; frontwings with paler internal area, an irregular rosy-centred ring-spot at end of cell and a deeply bisinuate series of eight brown spots beyond it; hindwings with two silver-centred spots at end of cell, encircled by an irregular discal series of ten or eleven red-brown scale-spots, sometimes obsolete.

Femula. Wings above sulphur yellow, with orange margin, the nervures terminating in black spots; frontwings with large black disco-cellular spots, and sometimes with an indistinct series of discal spots towards apex; below golden yellow, the margins deeper coloured; frontwings with a large geminate silver-centred ring-spot, the discal spots as in male, but redder; hindwings with two silver-centred ring-spots placed obliquely upon a squamose rusty band at end of cell, and encircled by a discal series of irregular reddish markings; several reddish spots at base.

Localities—♂, ♀, St. John's Bluff, (*E. Doubleday*), B. M., Coll., Saunders; N. America, Coll. Druce.

Dr. Boisduval rightly observes that the individuals from North America have the wings less rounded than those from South America, but I cannot agree with him in considering the Southern form a local variety of *C. Eubule*, I would rather call it a representative form of the latter, since the female differs constantly in its smaller size, deeper or paler* colouring, and more strongly defined markings.

Messrs. Smith and Abbot figure both sexes of *C. Eubule* in their "Lepidopterous Insects of Georgia," with the food-plant *Cassia chama-crista*; they call attention to "the conformity of colours between the flowers of this plant, and the fly bred upon it;" the following observations on the transformations of this (figured on the plate) are added—"one of them spun itself up the 30th of August, changed the next day, and the perfect insect appeared September 10th; another spun on the 23rd of September, changed the 24th, and came out on the 6th of October.

* A white form occurs at Honduras and Venezuela.

P L A T E X X I I I .

16. *Callidryas Senna*, figs. 1-4.

♀ *Papilio Senna*, *Linnaeus*, Syst. Nat. 2, p. 764, n. 103 (1766).

Papilio Eubule, *Cramer*, Pap. Exot. 2, pl. 120, figs. E, F (1779).

♂ *Papilio Marcellina*, *Cramer*, Pap. Exot. 2, pl. 163, figs. A, C (1779).

♀ Var. *Papilio Pomona*, *Donovan*, Ins. New Holland, &c., pl. 17, figs. 3, 3. (1805.)

Callidryas Orbis ♀, *Poey*, Cent. Lép. Cuba, pl. 1 (1852).

♀ albino *Papilio Hyperici*, *Sepp.*, Surinamische Vlinders, vol. 1, pl. 19. (1855.)

♀ albino? *Callidryas Yamana*, *Reakirt*, Proc. Ent. Soc. Philad. 2, p. 352 n. 3 (1863.)

Male. Generally smaller than *C. Eubule*, the colouring of the under surface deeper, and the markings much better defined.

Female. Above deep golden-yellow, sometimes inclining to orange, or dirty white; frontwings with internally dentated, well defined dark brown margin beginning at second-third of costa, and terminating at anal angle; a large black disco-cellular spot, and a sub-apical series of angulated lunules between the nervures, also a point of the same colour between median branches; hindwings with rosy margin; a sub-marginal series of five large geminate dark-brown spots at termination of nervures; abdominal and basal areas pale rosy; under surface of wings paler; the margin with band and spots as above but deep rosy; frontwings with a large geminate silver-centred ring-spot at end of cell, and a zig-zag series of irregular characters on disc, all rosy-brown; costa rosy; hindwings with two silver-centred ring-spots placed obliquely at end of cell on a brownish streak and encircled by a series of bracket-shaped characters beginning at base, and continuing in the form of a heart through disc, all rosy brown.

Localities—♂, ♀, S. America, Coll. Druce: Brazil, ♂, Rio Janeiro (*Macgillivray*), B.M.; ♀, Para. Coll. Wallace; ♂, Central America, ♀, Bahia Coll. Ward; Colombia (*Dryson*), ♂, Sta. Martha, ♂, Texas, Coll. Saunders; ♀, West Coast of Mexico (*Belcher*), B.M.; ♂, ♀, Trinidad, ♀, Honduras (*Dryson*), Coll. Saunders and B.M.; ♂, ♀, Venezuela (*Dryson*), Jamaica, Haiti (*Trivedi*), ♀, Polochic Valley (*Salvin*), B.M.; ♂, San Lorenzo C. H. Salvin.

♀ Dwarfed form. Trinidad, Coll. Saunders.

♂, ♀ Var. differing from the typical form of *C. Senna* in the more sulphur colour of the upper surface, but exactly the same in other respects. Chili (*Reed*), Coll. Saunders.

The *Phorbis Eubule* of Hubner, (Samml. ex. Schmett. 2, pl. 131, 1805) represents the two common forms of female *C. Senna*; we have examples of both from Honduras.

The *Papilio Panama* of Donovan, which I have given in the above synonymy, and which somewhat resembles the *C. Orbis* ♀ of Poey's plate, appears to be a slight variety of *C. Senna* ♀, it can

scarcely be the female of *C. Orbis* since it does not possess the characters common to the *Godartianus* group, and also because the true female of *C. Orbis* is in Mr. Druce's Collection from Cuba, and is perfectly distinct in form, marking, and coloration.

The *C. Yamana*, of Reakirt, is described as being nearly allied to *C. Pyranthe* to which it bears considerable resemblance; indeed, I am informed by Mr. Edwards, of West Virginia, who has kindly communicated with Mr. Reakirt respecting the species, that the description of *C. Yamana* was delayed until the arrival of a second example from the same locality, in order that Mr. Reakirt might be sure of the correctness of its habitat; under these circumstances I could not well have referred it to *C. Senno* had I not received evidence which leads me to suspect that that species has not been correctly identified by American authors.

It is not impossible that *C. Yamana* may be an albino female of *C. Drya* or *C. Trilo*, either of which would bear a close resemblance (especially on the upper surface) to *C. Pyranthe*, however without examining the type, or a figure of it, it is impossible to do more than guess at the relations of the species.

Dr. Boisduval, in his *Hist. Gén. Lép. Am. Sept.* remarks that the *P. Senno* of Linnaeus is a variety of *C. Eubule* which has no black points at the extremity of the frontwings; this is far from being the case, since *C. Senno* invariably has the black spots well-defined whilst in *C. Eubule* they are often entirely wanting. Many naturalists seem to have observed the close resemblance existing between *C. Senno* and *C. Marcellina* yet almost all have agreed in separating them as distinct species; thus, Mr. James Duncan in his *Naturalist's Library*, vol. 5, p. 122, says that *C. Eubule* (which most old authors considered synonymous with *C. Senno*) "so closely resembles *C. Marcellina* that it is possible they would still have continued to be confounded, as they were by the earlier entomologists, had not the different appearance of the caterpillar indicated their essential distinction;" he describes the caterpillar of *C. Eubule* as "green, covered with small black granules, and having a yellow line along each side, surmounted by another of a blue colour. Donovan, however, tells us that "the specific character of *Papilio Senno* consists chiefly, according to Linnaeus, in having the double spot in the centre of each wing of a ferruginous colour, while in *Papilio Marcellina* that characteristic mark has the exact appearance of two approximating spots of molten silver. The tips of the wings are sometimes spotted as in *Marcellina*, and are sometimes destitute of spots;" Herbst, with more shrewdness than either of the above worthies observes that "*P. Senno* is so like *P. Marcellina* that it can scarcely be regarded as a distinct species."

Sepp in his figure of *Papilio Hyperici* omits the black border on outer margin of frontwings, but on the under surface figure, which also shows part of the upper surface, this border is put in: he gives the following account of the transformations, "It was on the 1st of March that we found this caterpillar, of a bluish green and speckled, on the underside of the leaves of the plant which at Surinam bears the Dutch name of Ringwormkruid; as it appeared to us to be full grown we expected soon to see it change to a chrysalis, indeed, four days afterwards it began to fix its body and spin a transverse band over it; after its colour had been altered to a shining and transparent green, on the following day it changed into a red chrysalis prettily striped with yellow, nine days afterwards the butterfly emerged from it."

Under *C. Eubule* Sepp gives us a second account thus: "The green caterpillar of our plate very much resembles the caterpillars of the cabbage butterfly of Europe, and is scarcely less common than

them, it lives on the leaves of the *Hypericum bucciferum*, known in Surinam under the name of Ringwurmkruid, and on various species of *Cassia*; it is met with at various times of the year, it grows rapidly and does not change colour until about to undergo its metamorphosis, then it assumes a shining yellowish tint, the chrysalides are either red or green."

The most quaint description of *C. Sanna*, in all its stages is to be found in Slean's History of Jamaica (p. 212, 1725) as follows—

THE COMMON YELLOW CATERPILLAR.

"Its bigness is as that of a goose-quill, it is about an inch long, of a yellowish colour, having here and there black spots on it, after it attains its due growth it becomes the—

AURELIA TRIANGULARIS PURPUREA, LINEIS LUTEIS NOTATA.

THE COMMON TRIANGULAR AURELIA.

This is almost triangular, about half-an-inch long, and one fourth part of an inch broad at broadest, having here and there some angles and eminences, and is sharp at both ends, it is of a purple colour with some yellow streaks. When the worm or caterpillar has fed itself full, it creeps to a place free from wind, and there fastens one end to the under part of a stone, twig, &c., and the other end hangs in a string like that of a spider's web, where it takes this figure and comes out—

THE COMMON YELLOW BUTTERFLY.

This was about an inch long from the head to the tail, about twice as much from wing to wing extended; it had six feet, three of each side, it had two brown *antennæ*, three quarters of an inch long went out of its brown head, and two large brown globular eyes. It had hanging out of its mouth a long spiral twirling *Proboscis*, of a brown colour; the body was covered over with a long yellow down and the wings with a shorter, there were in the middle part of each of the four wings, two silver spots or eyes, inclosed in a brown circle, or *Iris*, besides several other brown spots or lines, here and there, especially on the margin of the wings on the upper sides. On that pair of wings nearest to the head, or the upper pair, were by the outside, two brown spots as big as a large pin's head.

The *Eruca* of this butterfly above described, No. 1, feeds on what they call here Wild Indigo. They are the most common of all butterflies."

The figures accompanying the above description are those quoted by Linnaeus for his *C. Sanna*. Mr. Gosse observed *P. Sanna* in Jamaica flitting about the expanded blossoms of the prickly pear

17. *Callidryas Drya*, figs. 5—8.

Papilio Drya, *Fabricius*, Syst. Ent. p. 478, n. 153 (1775).

Callidryas Amphitrite, *Blanchard*, Gay's Fauna Chilena 7, p. 20; pl. 5, figs. 1, 2 (1852).

Callidryas Eubule ♂ var. *Butler*, Fabr. Cat. p. 222, n. 9, (1869.)

Male. Wings above sulphur yellow, with mealy margin narrower than in *C. Eubule* or *C. Sanna*, below sulphur yellow; frontwings with a deep orange point on lower disco-cellular veinlet; hindwings with two minute silver-centred reddish ring-spots at end of cell, the outermost one indistinct; two or three indistinct squarose lines between nervures on disc.

Female. Wings above sulphur yellow, markings intermediate between *C. Eubule* and *C. Sanna* but most like the latter, the discal series of spots in frontwings wanting; below pale yellow, deeper

tinted at base—outer margin narrowly edged with rosy, discal characters as in *C. Sanna* but brown and very indistinct; frontwings, basal costæ rosy, discocellular spot as in *C. Sanna* but narrower; hindwings with two black edged silver-centred spots at end of cell: base rosy.

Localities—♂, Peru, B.M.; ♀, Chih., ♀, Hatt, ♀, Cuba, Coll. Druce.

The above may be nothing more than a variety of *C. Sanna*, but at present I have not sufficient evidence to allow me to form a definite opinion as to their identity or non-identity so that I am obliged to keep them separate. Dr. Herrich Schaefer remarks (Corr. Blatt, d. Zool. min. Ver. Regensburg, p. 169, n. 6, 1864), "It will surely be no longer doubted that *Marellina* and *Drya* Boisl. are not specifically distinct," he does not however state his reasons for arriving at this conclusion.

In Madame Merian's Insects of Surinam, a female *Callitropis* is figured (which appears to be *C. Drya*) concerning the metamorphoses of which the following remarks are made—"The yellow caterpillars ate the leaves ("Zoeteboontjes") they had black feet and black spines on the back: I have had more than a hundred, which all died, because the leaves of this tree become hard and dry as soon as they are broken off, and therefore cannot be eaten by the caterpillars; however, I had one on the 16th June, 1770, which became a pupa similar to the one at the end of the tendril, and at the end of June came out a beautiful butterfly like the one which is here represented flying and at rest."

GENUS DELIAS. *Hübner*.

PLATE XVII.

1. *Delias Ithiola*, fig. 1.

♂ *Thyca Ithiola*, *Butler*, Ann. and Mag. Nat. Hist., p. 242 (October, 1869).

Alæ supra nigrae, velut in *D. Horsfieldio* cinereo plagiatae et maculatae; posticae macula subcostali apud basin aureo-flava; maculis quatuor discalibus et uno apicali albidis; area abdominali albicante (haud flavo maculata): corpus nigrescens, antennis nigris; alæ subtus fere velut in *D. Horsfieldio*, maculis posticarum multo minoribus, latius separatis: corpus cinereum, abdomine albicante, antennis nigris, cinereo squamosis; exp. alar. unc. 3, lin. 8½.

♂ Penang. Colls. B. M. and W. W. Saunders.

Larger than *D. Horsfieldio*, from which it may be readily distinguished by the smaller spots on both surfaces of hindwings, and the absence of a yellow patch upon abdominal margin.

2. *Delias Lucerna*, figs. 2, 3.

♂, ♀ *Thyca Lucerna* *Butler*, Ann. and Mag. Nat. Hist., p. 243 (Oct., 1869).

♂ Alæ supra simillimae iis *D. Henningia*; anticae fascia media multo angustiore et cinerescens; striolis subapicalibus distinctioribus; posticae fasciola cinerea indistincta; plaga flava duplo majore: corpus nigro-cinereum alæ subtus fascia media anticarum angustiore; maculis quinque subapicalibus albis, fascia marginali posticarum latiore venis angustius nigrescentibus; corpus thorace cinereo-fusco, abdomine albo; exp. alar. unc. 3, lin. 3.

♀ Alæ supra nigro-fuscæ; antice fere velut in *D. Pasithoe* maculatæ, fascia media albidiore et magis integra; postice plagis tribus maculisque quatuor squamosis a margine abdominali serie arcuata decrescente currentibus, striaque squamosa discoidali a vena mediana ab his separata; corpus thorace nigro; abdomine albo, stria dorsali cinerea, antennis nigris; alæ subtus velut in mare at pallidiores et maculis sex anticis subapicalibus albis: exp. alar. unc. 3, lin. 2.

♂, ♀ Philippinæ [Mindanao?] B. M.

Intermediate between *D. Pasithoe* and *D. Henningia*.

3. *Delias Ochreopicta*, figs. 4, 5.

♀ *Thyca Ochreopicta*, *Butler*, Ann. and Mag. Nat. Hist., p. 244 (Oct. 1869).

Alæ supra nigro-fuscæ, antice fere velut in *D. Egiptia*, cinereo-albido fasciatæ et cinereo punctatæ; postice fere velut in *D. Henningia*, plaga abdominali brevior et ochracea; corpus nigro-cinereum; alæ subtus iis *D. Henningie* persimiles, antice autem fascia alba magis obliqua; striolis quinque subapicalibus; postice ochraceo-flavæ, striola basali angustiore; corpus thorace nigro, abdomine albido: exp. alar. unc. 2, lin. 9—, unc. 3.

♀ Alæ supra nigro-fuscæ, area basali fusca, antice velut in mare, fascia autem alba vix cinerescente; postice plaga permagna introrsum cinereo tineta a venis in partes quinque divisa, plagisque tribus inconspicuis apicalibus inter venas fuscis; corpus nigro-cinereum abdomine albo cinereo-dorsato; alæ subtus fere velut in mare: exp. alar. unc. 3, lin. 2.

Philippinæ [Luzon], ♂, Colls. B. M. and Salvin; ♀, Coll. Salvin.

Easily distinguished from *D. Henningia* by its more arched frontwings, and the more ochraceous colouring of the yellow in hindwings, with other less striking differences, it is intermediate between *D. Henningia* and *D. Egiptia*.

4. *Delias Inferna*, sp. nov., fig. 6.

♂ Alæ supra velut in *D. Arua*, subtus chalybeo-nigræ, antice arcis interiore et marginali fusciscentibus; plaga obliqua disco-cellulari, maculisque submarginalibus squamosis flavis; postice plaga basali coccinea; corpus nigro-cinereum, capite et prothorace subtus cinereis, abdomine flavo: exp. alar. unc. 3, lin. 9.

♀ Alæ supra dimidio basali aureo-fulvo, apicali nigro; area abdominali posticarum flavicante; area tota nigro conspersa; corpus thorace virescente; subtus fere velut in mare, antice autem plaga disco-cellulari duplo latiore: exp. alar. unc. 3, lin. 10.

North Western Australia. ♂, B. M.; ♀, Coll. W. W. Saunders.

I believe Mr. Hewitson has several examples of this species, it is quite distinct from *D. Arua*, the female being very unlike it on the upper surface and indeed more like *D. Belisana*.

5. *Delias Fragalactea*, fig. 7.

♂ *Thyca Fragalactea*, *Butler*, Ann. and Mag. Nat. Hist., p. 243 (Oct. 1869).

The example which I have figured is not the type, but a variety intermediate between *D. Fragalactea* and *D. Argentona*, in the Collections of Messrs. Osbert Salvin and W. W. Saunders, so that it is highly probable that the typical form in the British Museum is merely a northern race of *D. Argentona*; in the latter the black area of the hindwings is limited by the outer edge of the central red spot, which gives the insect a very different aspect.

FAMILY HESPERIDÆ.

GENUS GONIURUS. *Hübner*.

PLATE XXV.

1. *Goniurus Lindora*, fig. 1.

Goniuris Lindora, *Butler*, Trans. Ent. Soc. Lond., 4, p. 491, n. 1 (December, 1870).

Alæ supra olivaceæ apud basin cinerescens, anticæ plaga media, maculaque subapicali hyalinis, corpus minime virescens; alæ subtus pallidiores, posticæ fasciis punctisque obscurioribus; macula subanali albida: corpus pallide cinerescens, palpis et prothorace sordide albidis: exp. alar. unc. 1, lin. 11.

Allied to *G. Decussata* and *G. Anginus*.

—? Coll. Kaden in Coll. Druce.

2. *Goniurus Hirtius*, fig. 3.

Goniuris Hirtius, *Butler*, Trans. Ent. Soc. Lond., 4, p. 491, n. 2 (December, 1870).

Affinis præcedenti, alis magis angulatis, posticis strîis duabus mediis fuscis; subtus pallide olivaceo-fuscis; posticæ maculis tribus in triangulo positis subcostalibus, stria discali et fascia marginali obscurius fuscis: corpus fuscum: exp. alar. unc. 1, lin. 10.

Venezuela. Coll. Kaden in Coll. Druce. E. Peru. B.M.

3. *Goniurus Jethira*, fig. 4.

Goniuris Jethira, *Butler*, Trans. Ent. Soc. Lond., 4, 492, n. 3 (Dec. 1870).

Alæ supra olivaceo-fuscæ, anticæ maculis quinque mediis hyalinis flavis, tribus subapicalibus unoque discali; subtus rufescentes, anticæ macula triangulari punctisque tribus costalibus nigris, stria discali fusca; posticæ fascia media nigrescente, nebula submarginali, cauda, punctoque apicali fuscis, stria subapicali nigra: corpus cinereo-fuscum: exp. alar. unc. 2, lin. 2.

Peru. Coll. Druce.

4. *Goniurus Corydon*, fig. 2.

Goniurus Corydon, *Butler*, Trans. Ent. Soc. Lond., 4, p. 492, n. 4, (December, 1870).

Alæ supra fuscae punctis quinque mediis, uno discali et tribus subapicalibus albis hyalinis; ciliis ochraceis; alæ subtus area externa cinereo-albida, stria undata submarginali fusca; posticæ fascia interrupta media alteraque discali arcuata nigrescentibus; corpus cinereo-fuscum, palpis albis: exp. alar. unc. 1, lin. 11.

Cuba. Coll. Kaden in Coll. Druce.

5. *Goniurus Cenis*, fig. 5.

Goniurus Cenis, *Butler*, Trans. Ent. Soc. Lond., 4, p. 493, n. 5 (Dec. 1870).

Alæ supra fuscae; anticæ stria media alba subhyalina, punctis duobus discalibus, tribusque subapicalibus; posticæ stria undata discali fusca; alæ subtus rufescentes: punctis fusco cinetis et connectis; posticæ fasciis tribus obscure fuscis punctoque ejusdem coloris basali; cauda nigrescente, ciliis cinereis; corpus fuscum, palpis albidis: exp. alar. unc. 1, lin. 11.

—? Coll. Kaden in Coll. Druce.

This and several other species of *Hesperidae* have been introduced by Dr. Herrich-Schäffer into a mystical diagnostic table, but, as he himself informs us, that he did not intend to give any descriptions ("dass ich keine Beschreibungen geben wollte") it is useless for me to quote them.

GENUS EUDAMUS. *Swainson*.1. *Eudamus Epigena*, fig. 6.

Eudamus Epigena, *Butler*, Trans. Ent. Soc. Lond., 4, p. 493, n. 6 (December, 1870).

Alæ supra fuscae, anticæ punctis septem (tribus subapicalibus, discalibus albis hyalinis; ciliis ochraceis; posticæ ciliis niveis; alæ subtus fusco, cinereo nigroque marmoratae, posticæ fascia lata marginali alba, fusco reticulata; corpus fuscum: exp. alar. unc. 1, lin. 11.

Mexico. Coll. Kaden in Coll. Druce.

GENUS TELEGONUS. *Hübner*.1. *Telegonus Egregius*, fig. 11.

Telegonus Egregius, *Butler*, Trans. Ent. Soc. Lond., 4, p. 494, n. 1, (December, 1870).

Alæ supra dimidio basali viridi, apicali fusca; punctis duobus costalibus tertio subapicali, striola mediana et puncto submediana hyalinis; posticæ ciliis albidis; alæ subtus velut in *G. Ceni* (antè): exp. alar. unc. 2.

—? Coll. Kaden in Coll. Druce.

2. *Telegonus Cepio*, figs. 9, 10.

Telegonus Cepio, *Butler*, Trans. Ent. Soc. Lond., 4, p. 494, n. 2 (Dec. 1870).

Alæ supra ochraceo-fuscae, plaga quadrifida media, puncto adhaerente minuto maculaque (a venis in partes quinque divisa) sub-apicali, hyalinis; posticæ stria punctoque fuscis; anticæ subtus olivaceæ basi flavescente; posticæ area basali flava, apicali fusca introrsum a maculis obscurioribus limitata: corpus flavidum, palpis albis. exp. alar. unc. 2, lin. 7.

Venezuela. Coll. Kaden in Coll. Druce.

The chrysalis is also from Dr. Kaden's Collection.

3. *Telegonus Lotus*, fig. 12.

Telegonus Lotus, *Butler*, Trans. Ent. Soc. London, 4, p. 495, n. 3. (Dec. 1870.)

Alæ supra fuscae area basali pallidiore, anticæ maculis tribus mediis et una exteriore hyalinis; corpus fuscum: alæ subtus pallidiores, area discoidali anticarum nigrescente, apicali cinerescente, externa olivaceo-fusca; posticæ dimidio costali a fasciis quatuor diffusis, fuscis, cinereo-marginatis, marmorato: corpus fuscum, palpis albidis: exp. alar. unc. 2, lin. 5.

Venezuela. Coll. Kaden in Coll. Druce.

GENUS *ETHILLA*. *Herrison*.1. *Ethilla Memmius*, fig. 7.

Ethilla Memmius, *Butler*, Trans. Ent. Soc. London, 4, p. 495, n. 1. (1870).

Alæ supra picæ; subtus velut supra; posticæ fascia nebulosa marginali aurantiaca maculas tres fuscas includente; corpus picum: exp. alar. unc. 2, lin. 6.

Venezuela. Coll. Kaden in Coll. Druce.

2. *Ethilla Coracina*, fig. 8.

Ethilla Coracina, *Butler*, Trans. Ent. Soc. London, 4, p. 495, n. 2. (Dec. 1870.)

Alæ supra picæ indistincte lilacino fasciata; subtus pallidiores; area marginali squamis cinereo-albidis rorata; corpus picum: exp. alar. unc. 2, lin. 4.

Ipaunema (*Beske*). Coll. Kaden in Coll. Druce.

The two species above described offer a good illustration of the Generic Divisions of Dr. Herrich-Schaffer, one being referred by him to the Genus *Aethlyodes* and the other to *Tidides*.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PIERINÆ. *Bates.*

GENUS CALLIDRYAS. *Boisduval*

PLATE XXVI.

[Monograph continued.]

1. *Callidryas Irrigata*, *figs. 1, 2.*

♀ *Callidryas Irrigata*, *Butler*, *Trans. Ent. Soc. Lond.*, p. 9, n. 2 (1870).

Male. Unknown.

Female. Wings above rosy-tinted ochraceous; frontwings with a brown spot interrupted by the lower disco-cellular nervure, a second extending round the apex, the discoidal nervures also terminating in brown points; hindwings with marginal patches of rosy scalings upon the nervures below ochraceous irrorated with ferruginous; frontwings with a broad discal zigzag interrupted band, diffused internally and bounded externally by a purplish line; a double silver-centred disco-cellular ring-spot; hindwings with two similar shining spots and about seven diffusely silvery markings forming an irregular arch round the cell.

Locality—♀, Ipanema? Brazil. Coll. Kaden in Coll. Druce.

Intermediate in character between the *Eubule* and *Cipris* groups; it is the smallest tailed species of the genus, and differs from *C. Noegypris*, its nearest ally, in the slightly more curved outer margin

of the frontwings, which are not edged with a continuous series of brown points; both surfaces more deeply coloured, the under-surface densely irrorated with ferruginous, and the silver markings broader and more diffused.

19. *Callidryas Neocypris*, figs. 3—6.

♂ *Colias Neocypris*, *Hübner*, *Exot. Schmett.* 2, pl. 136, figs. 1, 2 (1806).

Male. Wings above sulphur-yellow; frontwings with central area to mealy border golden-yellow; outer margin orange-yellow; nervures conspicuously tipped with black; hindwings with outer margin, except mealy patch and nervures, broadly orange-yellow; nervures black-tipped: below orange-yellow irrorated with ferruginous, nervures black-tipped; frontwings with large irregular silver-centred reddish-brown disco-cellular spot and zigzag discal macular band of same colour; internal area sulphur-yellow; hindwings with two disco-cellular silver spots surrounded by a red-brown patch; several spots near base and an arched discal series of irregular markings, all brown.

Female. Wings above sulphur-yellow becoming golden-yellow externally, outer margin inclining to orange; frontwings with a large black disco-cellular spot and a well-defined series of black points terminating the nervures; below orange-yellow becoming sulphureous externally; a marginal series of silver spots bounded on both sides by purplish dots; frontwings with kidney-shaped silvery-centred disco-cellular spot and a zigzag discal series of silver markings; hindwings with two disco-cellular silver spots surrounded by a greyish silvery patch; the discoidal cell surrounded by an irregularly arched series of silver markings; nervures silver-tipped.

Localities—♂, Brazil. Coll. Kaden in Coll. Druce. ♀—? Coll. Hewitson.

The above species has been referred by modern authors to *C. Cipris*, it however differs from it in so many particulars that, without evidence of their identity, it would be rash to consider it a variety of that species; in all probability, if we possessed more accurate localities for this and several other nearly allied species in this genus, we should find that they were confined to a more limited area than is at present accorded to them.

20. *Callidryas Cipris*, figs. 7—10.

♂ *Papilio Cipris*, *Fabricius*, Ent. Syst. 3, 1, p. 212, n. 663 (1793);
Donovan, Nat. Rep. 2, pl. 40, fig. 1 (1824).

♀ *Callidryas Bracteolata*, *Butler*, Proc. Zool. Soc. Lond., p. 458, n. 6,
pl. 26, fig. 6 (1865).

Male. Wings above sulphur-yellow; frontwings with central area to mealy border pale golden-yellow; nervures minutely black-tipped; hindwings with outer area except mealy patch golden-yellow; nervures minutely black-tipped: below golden-yellow, finely irrorated with ferruginous, nervures minutely black-tipped; frontwings with silver-centred disco-cellular red-brown spot and slender zigzag discal macular line of same colour; internal area whitish; hindwings with two disco-cellular silver spots on an oblique red-brown line; several markings near base and an indistinct arched discal series of irregular markings, all red-brown.

Female. Wings above sulphur-yellow; frontwings with large disco-cellular black spot and a slender black line at apex: below greenish-yellow tinted with orange or brownish towards base and externally, and finely irrorated with ferruginous; a more or less distinct semicircular nebulous red-flecked greyish bar at base; frontwings with silver-centred reddish disco-cellular spot and zigzag discal series of silver markings; nervures silver-tipped; hindwings with two disco-cellular silver spots surrounded externally by a reddish line; the discoidal cell surrounded by a series of silver markings, nervures silver-tipped.

Localities—♂, ♀, Brazil, B.M.; Peru, Coll. Druce.

This species seems to be still rare in Collections. I have generally found it represented by males of *C. Virgo*, which closely resemble it. The present group is one of the illustrations occurring throughout the genus of similarity in males of allied forms, with dissimilarity of females.

C. Cipris was confounded by Hübner, Cramer, and others with the *C. Larra* of Fabricius. Hübner, moreover, showed a want of care in naming his new and allied species *C. Neocypris* (*sic*). I can scarcely think the alteration in the spelling intentional.

GENUS HESPEROCHARIS. *Felder.*

P L A T E X X V I I I .

Hesperocharis Idiomatica, *fig. 2.*

♀ *Heliochroma Idiomatica*, *Butler*, *Cist. Ent.* 1, p. 15 (1869).

Alæ supra aureo-flavæ, apice anticarum tenuissime fusco; corpus thoracæ nigrescente pilis sericeo-cinereis, abdomine flavido: subtus clariores; antica area interna albicante; posticæ maculis duabus costalibus unaque interna apud venæ medianæ medium: corpus fuscum: exp. alar. unc. 2, lin. 6.

— ? Coll. Kaden in Coll. Druce.

Allied to *H. crocea* of Bates, from Costa Rica.

The genus *Heliochroma* will, I think, have to sink into a section of *Hesperocharis*; I can find no constant structural characters by which to separate it. There is a remarkable undescribed species in Mr. Hewitson's Collection, which, at first sight, I took to be a *Megmastoma*: the under surface of this insect somewhat resembles a leaf.

GENUS EUCHLOË. *Hübner*

Euchloe Limonea, *fig. 1.*

♂ *Euchloë Limonea*, *Butler*, *Trans. Ent. Soc. Lond.*, p. 172 (1871).

Affinis *F. Geuntia*, alæ anticæ falcatæ, supra flavo-albidæ; apice flavæ fascia marginali ad apicem olivacea, introrsum a fascia subapicali aurantiaca, limitata; macula disco-cellulari nigra; basi nigrescente; posticæ flavæ, basi

nigrescente; alæ subtus fundo velut supra; antice apice olivaceo fuscoque irrorato; fascia superna aurantiaca per alas conspicua, venis nigro acuminatis; postice velut in *E. Genutia* olivaceo marmorate; corpus albidum, abdomine flavescente: exp. alar. unc. 2.

Mexico. Coll. W. W. Saunders.

This is the fourth described species of the little section *Midea*, which, though it differs only from *Euchloë* in the falcate form of the frontwings, has been erected into a distinct genus by Dr. Herrich-Schäffer. His own observation will certainly apply here—"Dass ohne scharf abgegrenzte Gattungen die Aufstellung und Beschreibung neuer Arten gar keinen Werth hat." *E. Linonia* is intermediate between *E. Genutia* and *E. Scolumus*.

GENUS PEREUTE. *Herrich-Schäffer*.

Pereute Latona, fig. 3.

♂ Euterpe Latona, *Butler*, Cist. Ent. i. p. 13 (1869).

Affinissima *P. Leucodrosyme*; alæ supra nigro-fuscæ, area interno-basali anticarum et area basali posticarum albido-cinereis; antice fasciola obliqua media, a vena mediana interrupta, coccinea; striga subcostali albida; corpus cinereo-albidum, capite nigrescente: subtus pallidiores, venis nigris; antice fasciola superna coccinea; vena costali alba; postice punctis duobus basalibus coccineis: corpus, thorace nigro-fusco, abdomine albo: exp. alar. unc. 2, lin. 10.

—? Coll. Kaden in Coll. Druce.

Nearly allied to *Leucodrosyme*, but with the frontwings more elongated, the ground colour deeper; the basal grey colouring extending farther into the wing and the red band broken up into two spots. The flower introduced into our plate is the *Salvia patens* of Bentham, from the mining districts of Mexico.

FAMILY NYMPHALIDÆ.

SUB-FAMILY NYMPHALINÆ. *Bates.*

GENUS ATERICA. *Boisduval.*

PLATE XXVIII.

1. *Aterica Zonara*, *figs. 1, 2.*

♂, ♀ *Aterica Zonara*, *Buller*, Proc. Zool. Soc. Lond., p. 81 (1871).

♂ Alæ supra fulvæ, characteribus discoideis, basi posticarum, seriè tribus macularum, margine externo costaque anticarum, linea submarginali undulata et altera marginali posticarum, nigro-fuscis; posticæ costa et margine interno pallidioribus; corpus fulvum: subtus pallide rosco-fuscæ vel ochraceæ characteribus basalibus irregularibus pallide brunneis, nigro-cinctis; punctis inter venas discalibus nigris; linea tenuissima dentato-undulata fusca; antiea stria squamosa pone medium obliqua nigra; posticæ punctis tribus brunneis nigro-cinctis discoideis; area media brunnea, a plaga lata fusco limitata ochracea interrupta: corpus pallide ochraceum: exp. alar. unc. 2, lin. 4.

♀ Alæ supra sordide ochraceæ, maculis velut in mare sed multo latioribus; posticæ fascia lata pallide ochracea ad marginem internum decrecente: corpus fuscum: subtus griseæ fasciis maculisque velut in mare, sed fuscis: corpus sordide flavidum: exp. alar. unc. 2, lin. 6.

Fantee, Cape Coast (*Ussher*). Coll. Swanzy.

Owing to a most unfortunate accident, which has occurred since the completion of my plate, this is the only species figured on Plate xxvii. which remains in a cabinet condition: it belongs to the *Absolon* group of the genus.

2. *Aterica Felicia*, fig. 3.

♀ *Aterica Felicia*, *Butler*, Proc. Zool. Soc. Lond., p. 80 (1871).

Alæ supra olivaceo-fuscæ; anticæ characteribus annularibus basalibus, stria postmedia octolunata, luna quinta reversa, pallide ochraceis; punctis quatuor subapicalibus in serie arcuata positis, albidis; fascia maculas nigras includente annulari discali, altera tenuiore submarginali, et tertia marginali, ochraceo-fuscis; posticæ fascia lata media angulata ochracea, cum fascia maculas hastatas includente partim confusa; stria undulata hanc fere attingente ochraceo-fusca, discali; venis ochraceis; corpus fuscum: alæ subtus griseæ, pallidiores; anticæ fascia obliqua alba; fasciis annularibus minus distinctis: exp. alar. unc. 2, lin. 11½.

Fantee, Cape Coast (*Ussher*). Coll. Swanzy.

This fine species is allied to *A. Opis* of *Drury*; it is probable that the male is of a blue or purple colour above, as in that species.

GENUS HARMA. *Westwood*.

Harma Lurida, fig. 4.

Harma Lurida, *Butler*, Proc. Zool. Soc. Lond., p. 80 (1871).

Alæ supra flavo-fulvæ, basi saturatiores; margine externo nigro; anticæ apicæ, costa apicali et punctis subtribus apicalibus, nigris; area media dilutiore; posticæ ad basin obscure, fuscæ; margine introrsum angulis alternis undata; stria discali undata, apud apicem desinente: corpus fuscum: subtus fusca, characteribus basalibus paululum brunneis, nigro-cinctis; fascia discali indistincta obscuriore, introrsum a linea undata rufescente limitata; area

externa griseo-albida. fusco partim obscurata (ad apicem anticarum autem alba) puncta nigra inter venas includente et a striis duabus undatis fuscis plus minus intersecta: corpus griseum: exp. alar. unc. 3, lin. 3.

Fantee, Cape Coast (*Ussher*). Coll. Swanzy.

This handsome *Hurma* is allied to *H. Hesiobus* of Hewitson; it, however, differs considerably from all the described species.

GENUS EURYPHENE. *Westwood.*

Euryphe Mardania, *figs. 5, 6.*

♀ *Papilio Mardania*, *Fabricius*, Ent. Syst. 3, p. 249, n. 776 (1793).

♂ *Papilio Cocalia*, *Fabricius*, Ent. Syst. 3, p. 250, n. 777 (1793).

♂ "alis dentatis fuscis, anticis nigro, flavoque maculatis, subtus omnibus griseis, striga punctorum alborum." (*Fabr.*)

♀ "alis dentatis fulvis; anticis apice nigris, fascia alba; posticis punctis quatuor ocellaribus flavis." (*Fabr.*)

Fantee, Cape Coast (*Ussher*). Coll. Swanzy.

The male of this species is wretchedly figured in Donovan's *Insects of India* (pl. 36, fig. 1) as *P. Cocalia*, and I am glad of an opportunity of figuring the two sexes together. The Fabrician diagnosis of the female, given above, is somewhat vague; the "punctis quatuor ocellaribus flavis" probably refers to the four indistinct ocellations nearest to the apex of hindwings. The fuller description says, "Posticæ fulvæ punctis quatuor oblongis flavis pupilla nigra, versus marginem striga obsoleta, fusca," &c. It is possible that these ocellated markings were better defined in the Fabrician type. We have a poor specimen of the female in the Collection of the British Museum from Ashanti; I formerly supposed the male to be the *E. Theognis* of Hewitson, which now proves to be a distinct, but nearly allied species; the first words of the Fabrician description, "Statura omnino præcedentis," show the near relationship between his *P. Cocalia* and *P. Mardania*.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PIERINÆ. *Bates.*GENUS CALLIDRYAS. *Boisduval.*

PLATE XXX.

[Monograph Continued.]

21. *Callidryas Virgo*, figs. 1—4.♂, ♀ *Callidryas Virgo*, *Butler*, Tr. Ent. Soc. Lond., p. 9, n. 1 (1870).

Male. Wings above sulphur-yellow; frontwings with central area to mealy border pale golden-yellow; nervures black-tipped; hindwings with outer area except mealy patch pale golden-yellow; nervures black-tipped; below golden-yellow irrorated here and there with reddish brown, nervures black-tipped; frontwings with silver-centred sub-geminate disco-cellular red-brown spot and greyish brown zigzag series of sagittate spots; internal area pale yellow; hindwings with two disco-cellular silver spots enclosed in a red-brown patch; a short red-brown band at base and a circular series of sagittate markings between nervures, all greyish-brown.

Female. Wings above rosy-white, a large disco-cellular spot, the apex and points terminating the nervures, all black-brown; below greenish or bluish-white irrorated with red-brown, the margins slightly ochre-tinted; frontwings with rosy silver-centred disco-cellular spot, and a zigzag discal series of eight silver spots bounded externally by a rosy line; the marginal spots surrounded by rosy scales and bounded internally by diffused silver scales; a red spot at base; hindwings with two rosy silver-centred disco-cellular spots, surrounded by a circular discal series of rosy-bounded silver sagittate markings; a red spot at base.

Localities—♂, ♀, Mexico, Coll. Saunders. ♂, Oaxaca, Coll. B.M. ♀, Mountains of Oaxaca, E. Side; San Geronimo, Vera Paz. ♂, Apolobamba, Coll. Salvin. ♂, Volcano of Chiriqui, Panama (*Bridges*), Coll. B.M.

Differs from *C. Cipris* in the more arched outer margin of frontwings, more pronounced tails to hindwings, white colour of the female and several other minor characters; it is generally rather larger than *C. Cipris*, although not so in my figures, which are taken from small Mexican specimens.

22. *Callidryas Rurina*, figs. 5—8.

♂, ♀ *Callidryas Rurina*, *Felder*, Wien. Ent. Mon. v., p. 82, n. 36 (1861); *Reise der Novara*, 2, p. 194, n. 193, pl. xxvi., figs. 9—11 ('1865').

Male. Wings above sulphur-yellow, frontwings with central area to mealy patch and outer margin bright golden-yellow; nervures black-tipped; hindwings with outer area including mealy patch bright golden-yellow; nervures black-tipped: below sulphur-yellow irrorated with red-brown; margins golden-yellow; nervures of hindwings black-tipped; frontwings with two unequal diamond-shaped red-brown disco-cellular spots with pale centres; a grey zigzag discal series of sagittate markings, some of them confluent; internal area pale yellow; hindwings suffused with reddish scales at base; two disco-cellular silver spots enclosed in a red-brown patch, an irregular band crossing basal half of cell and a circular series of spots between nervures, all red-brown, those on discal area placed in the centres of greyish sagittate markings.

Female. Wings above sulphur yellow; frontwings with a large double disco-cellular brown spot; five squamose points upon disc, three forming a triangle near apex, and two between median branches; nervures terminated by conspicuous black spots greatly increasing in size at apex where they are interrupted by the nervures, all these spots are bounded within by red scales; hindwings with outer area golden yellow, nervures terminating in conspicuous red patches; costal and abdominal areas white; below bright sulphur yellow; outer margin pale rosy-lilac, broadest on hindwings; frontwings with large disco-cellular grey-brown patch; a zigzag series of silver markings, bounded externally by purplish; hindwings with two disco-cellular silver spots upon a large red-brown patch; two short bands within cell and a semicircular discal series of markings, all silver, bounded externally by purplish-brown; base and interno-basal area speckled with red scales.

Localities—♂, Venezuela (*Dyson*); Bogota (*H. Strens*), Coll. B.M. ♀, ♂, New Granada, Coll. Kaden in Coll. Druce. ♀, Coll. Hewitson.

The most remarkable of the tailed species of *Callidryas*.

FAMILY ARCTIIDÆ.

GENUS PERICOPIS. *Hübner**P L A T E* XXX.*Pericopis Rosina*, fig. 1.♀ *Pericopis Rosina*, *Butler*, Proc. Zool. Soc. Lond., p. 82 (1871).

Alæ supra fusæ; anticæ fasciis tribus latis subhyalinis, prima ad basin, secunda media, tertia subapicali; puncto basali coccineo; posticæ nigrescentes, fascia anali, submarginali, maculari, rosea, maculisque subtribus ejusdem coloris in serie continua ad costam decreescentibus; punctis quatuor antemarginalibus, analibus, albidis; ciliis fuscis: corpus nigrescens.

Alæ subtus pallidiores; anticæ area basali obscuriore; fasciis duabus exterioribus supernis, albis; posticæ puncto basali coccineo; macula extrema submarginali rosea desinente; aliter velut supra: abdomen fascia ventrali fusca utrinque punctis lacteis squamosis limitata et a maculis duabus aureo-flavis terminata: exp. alar. unæ. 2, lin. 8.

Eggs (*Bates*). Colls. B. M. and W. W. Saunders.Allied to *P. leucopygia* of Walker.

FAMILY SATURNIIDÆ.

GENUS BRAHMEEA. *Walker.**Brahmeea Swanzii*, fig. 2.♂ *Brahmeea Swanzii*, *Butler*, Proc. Ent. Soc. Lond., p. 41 (Jan. 1871).

Affinis *B. Lucinae*, differt alis anticis brevioribus, latioribus, minus arcuatis; fascia centrali alba magis continua, angustiore; fasciis areæ basalis anticarum multo latioribus; fasciis apud apicem solum fuscis, aliter omnibus nigris; macula tertia anticarum hand elongata, gradatim obscurata, quasi elevata; macula ultima, anali, haud geminata vel oviformi, et a fascia centrali interrupta: exp. alar. unc. 6, lin. 2.

Fantee, Cape Coast (*Ussher*). Coll. Swanzy.

This magnificent species is intermediate between *B. Lucina* and *B. lunulata*; it belongs to the most elaborately ornamented genus of the *Saturniidae*, and in many of its markings forcibly reminds one of the Argus pheasant among birds; the disposition of the bands on the basal area of the frontwings produces an effect very similar to that seen on the feathers of many pheasants, whilst the submarginal spots, delicately shaded so as to resemble shells of the genus *Cypraea*, and bounded internally by a series of wavy black bars, produce an effect scarcely surpassed by the ball-and-socket feathers of the Argus pheasant (See Darwin's *Descent of Man*, and *Selection in Relation to Sex*, Vol. ii., p. 113, fig. 56). Speaking of the probable development of the ball-and-socket ocelli through the agency of sexual selection, Mr. Darwin remarks,—“No one, I presume, will attribute the shading, which has excited the admiration of many experienced artists, to chance—to the fortuitous concurrence of atoms of colouring matter.” “In order to discover how the ocelli have been developed, we cannot look to a long line of progenitors, nor to various closely allied forms, for such do not now exist. But, fortunately, the several feathers on the wing suffice to give us a clue to the problem, and they prove to demonstration that a gradation is at least possible from a mere spot to a finished ball-and-socket ocellus.”

Now, as with the Argus pheasant, the wing of my *Brahmeea*, in its several internervular divisions, exhibits a gradation which is a complete key to the development of the egg-like spots near the outer margin; the anal spots of the frontwings and the apical spots of the hindwings remain

almost in their primitive condition, and prove that the beautifully shaped ocelli are the result of the modification of three of the discal bands with their interspaces; the central band is widened and toned down in colour, and the irregularities of the two outer bands modified into a regular arch, and then we get ocelli such as the fourth on the frontwings; now comes the most difficult point—the introduction of light, but looking at the third ocellus of the hindwings we see the internervular fold of a whitey-brown colour which becomes white in the fourth ocellus, is modified into a small white spot in the fifth, and into a large elongate spot in the sixth; thus we see that, if necessary, the three black bands with their interspaces, immediately following the central white band, could as easily be modified into a second series of oviform ocelli.

But now the question arises—Is there any *Brahmosa* entirely destitute of these remarkable ocellations? To this I can only reply that at present I do not know of any; it is however an important fact that *B. Swanzii* and *B. Lucina* are the only species that have brought them to perfection, whilst in *Brahmosa lanulata* they are entirely wanting to the hindwings; in *B. Certhia* and *B. Whitei* they appear to have been produced by the modification of two only of the discal bars, and therefore more nearly resemble drops of dirty water than oviform ocelli.

Supposing that the above ocelli have been produced by sexual selection, as I am inclined to believe, from the fact that there are slight differences between those of the male and female in *B. Certhia* (the only species of which I have seen both sexes), I can conjecture how this action may have come into play: it will be clear, at least to every artistic eye, that the ocelli upon the opposite wings are lighted up from opposite directions, and therefore, taken together, are incorrectly shaded; it is also manifest that, not only would some of the ocelli be hidden when the moth was at rest, but in that condition it could never charm its partner; however, the habits of many of the day-flying moths, to which this genus in all probability belongs, have guided me to what I think may be the correct solution of the difficulty—the females of many of these moths when fresh remain motionless, whilst their admirers, sometimes in numbers, fly round them; very many moths when approaching the female swing up and down with a pendulum motion behind her, gradually shortening the movement as they near the prize; in this kind of flight the female would only see two wings perfectly at the end of each swing, and it would be desirable that these wings should be correctly shaded, as would be the case with *Brahmosa Swanzii*.

I am doubtful about the accuracy of the white markings in the central black patch of the frontwings, the specimen from which I took my figure being somewhat rubbed.

A curious coloured ocellus in course of formation may be seen in fig. 3 of the same plate, whilst on pl. xxxi. fig. 1, an interesting aberration of *Romuleosoma Ceres*, in which most of the usual black spots are converted into glossy blue, has retained two of these spots in a transitional state, and thus given us a clue to the probable development of the ordinary ocelli so common on *Satyrilian* butterflies, and to the origin of the ring-like markings in the discoidal cell so universal in the allied genera *Euryphe Aterica*, *Horma*, *Abolius*, &c.

GENUS JANA. *Boisduval.*

Jana Rosacca, *sp. nov. fig. 3.*

♂ Alæ anticæ supra pallidæ, ochraceo-fuscæ; punctis tribus subbasalibus triangulum formantibus, nigris; lineis subtribus, quarum interna solum continua, parallelibus obliquis nigro-fuscis, interstitiis brunneo-tinctis, de apice ad marginis interni medium eurrentibus, area externa et plaga adhaerente anali roseo-fuscis; posticæ ochraceæ, venis nigrescentibus; area tota basali rosea; area anali roseo-tincta; striis duabus mediis et duabus irregulariter interruptis angulatis abdominalibus cinguloque subocellari ovali media, nigro-fuscis. corpus pallide ochraceo-fuscum, fronte albido, collo antennisque nigro-fuscis.

Alæ anticæ subtus ochraceæ, marginibus late ochraceo-fuscæ; lineis duabus obliquis parallelibus fuscis; posticæ ochraceo-fuscæ, lineis duabus transversalibus apud apicem divergentibus fuscis; ciliis fuscis; corpus pallide fuscum, pedibus anticis rosaceis, posticis ochraceis: exp. alar. unc. 3, lin. 7.

Fantee, Cape Coast (*Ussher*). Coll, Swanzy.

The name of this moth was suggested by the colouring of the hindwings which resembles that of a fading rose.

FAMILY NYMPHALIDÆ.

SUB-FAMILY NYMPHALINÆ. *Bates.*GENUS ROMALEOSOMA. *Blanchard.*PLATE XXVI.1. *Romaleosoma Ceres*, var. *fig. 1.*

Papilio Ceres, *Fabricius*, Syst. Ent. p. 504, n. 257 (1775).

Papilio Lucille, *Cramer*, Pap. Exot. 2, pl. 156, figs. A, C (1782).

var. *Papilio Medon*, *Cramer*, Pap. Exot. 3, pl. 205, figs. C, D (1782).

Romaleosoma Zeuxis, *Westwood*, Gen. Diurn. Lepid. p. 284, n. 11 (1850).

var. *Najas hilaris* *Themis*, *Hübner*, Samml. Exot. Schmett (1806-1816).

Kinsebo (*Ansell*). Six Specimens.

This interesting variety only differs from the normal form in the colour of the spots on the under-surface, which in the typical *R. Ceres* are all black, whilst in this form they are mostly blue or green. These spots occupy precisely the same positions that they do in the normal form, which proves, notwithstanding the number of specimens (three of each sex), that this is nothing more than an aberration.

2. *Romaleosoma Sarcoptera*, sp. nov. *fig. 2.*

♂ *Simillima R. Janetta*, differt forma alarum anticarum et subtus margine externo integro nigro; maculis submarginalibus minoribus; serie discali regulariter increcente, cum serie submarginali continua; area anali vix purpurascete; fascia subbasali posticarum nigra tenuiore, cum maculis disci et celke discoidalis haud confusa; macula costali obsoleta: exp. alar. unc. 3. lin. 3.

Gold Coast. Colls. Swanzy and R. Trimen.

This pretty species might almost be taken for the male of *R. Janetta*, did we not already know the male of that species; a specimen was given to Mr. Trimen, two or three years ago, by Mr. Swanzy.

3. *Romaleosoma Viridinota*, sp. nov., fig. 3.

Affinis *R. Medoni*, differt magnitudine ejus minore; fascia anticarum fulva magis dentata; area media fasciolarum viridi, haud cœruleo-argentea: alae subtus fere velut in *R. Medone*: exp. alar. unæ, 3, lin. 3.

Gaboon (*Du Chaillu.*) Coll. B. M.

Nearly allied to *R. Medon* and *R. Agnes*. Like the latter the central area forms a band, but it is of a yellowish-green colour, not lilac-blue: in *R. Medon* this area is widely diffused and of a silvery-blue colour.

4. *Romaleosoma Janetta*, fig. 4.

♂, ♀ *Romaleosoma Janetta*, *Buller*, Proc. Zool. Soc. Lond., p. 80 (1871).

Alae antice cyaneo-nigræ; area interno-basali flavo-viridi; plaga magna subapicali fulva viridi tineta; posticæ virides; area apicali flavescente; macula subcostali basali coccinea; apice ad rannum secundum medianum late nigrescente; serie submarginali macularum nigrarum extrorsum viridi marginatarum; margine anali anguste nigro; area abdominali fusca: corpus nigro-fuscum; alae subtus fere velut in *R. Calone* maculis autem nigris aliter dispositis; alae omnes ad basin rufæ: exp. alar. unæ, 3, lin. 8.

Fantee, Cape Coast (*Ussher.*) Colls. Swanzy and B. M.

Allied to *R. Cato*, but readily distinguishable from that species.

5. *Romaleosoma Velusta*, sp. nov., fig. 5.

♀ Affinis *R. Janetta*, differt supra area subapicali fasciam viridem formante; subtus maculis discalibus aliter dispositis; maculis submarginalibus bilobatis; fasciola media cellæ discoidalis anticarum bipartita; maculis discoideis posticarum obsoletis; macula postocellulari nigra: exp. alar. unæ, 4.

West Africa. Coll. B. M.

I found one imperfect example of this handsome species in an old duplicate case, where it had probably been for many years.

FAMILY ERYCINIDÆ.

SUB-FAMILY NEMEOBIINÆ. *Bates.*

GENUS MESOSEMIA. *Hulmer.*

PLATE XXXII.

1. *Mesosemia Jezicla*, *fig. 1.*

♂ *Mesosemia Jezicla*, *Butler*, *Cist. Ent.* 1, p. 11, n. 1 (October, 1869).

Alæ supra basi nigræ, fascia media cærulea; anticæ fasciola discali, posticæ area apicali, nivea; area apicali anticarum apiceque posticarum nigerrimis: anticæ ocello discoideo, posticæ striolis interruptis mediis lineaque submarginali, nigris: corpus nigrum: subtus fuscæ, area basali obscurius strigatæ; anticæ ocello supremo nigro tripupillato; fascia postmedia nivea regulariter arcuata; posticæ area apicali nivea, linea submarginali et altera marginali fuscis: corpus fuscum: exp. alar. unc. 1, lin. 7.

Bogota. Coll. Druce.

Allied to *M. Philocles*, *Egabella*, &c.

2. *Mesosemia Veneris*, *sp. nov.*, *fig. 2.*

♂ Alæ supra obscure cæruleæ, nigro fasciatæ; fascia lata discali nigra; stria submarginali interrupta, macula mediâ, nigra; anticæ ocello discoideo nigro unipupillato: corpus nigrescens: alæ subtus cinereo-albidæ fusco lineatæ et fasciatæ; serie lunularum submarginalium nigrarum; lunula quinta anticarum et quarta posticarum expansis maculiformibus; anticæ ocello discoideo tripupillato nigro et macula nigra semiocellari infra eum interno-discoidea; margine fusco intus sinuato: corpus albidum, pedibus fusciscentibus: exp. alar. unc. 1, lin. 5.

Minas Geraes (*Rogers*). Coll. W. W. Saunders.

Allied to *M. Antaries*, of which it is probably the Brazilian representative.

3. *Mesosemia Isshia*, figs. 3, 4.

♀ *Mesosemia Isshia*, *Butler*, *Cist. Ent.* 1, p. 11, n. 2 (October, 1869).

Alæ supra fuscæ, posticæ at area basali anticarum obscurius strigatæ, anticæ oculo magno nigro fulvo-cincto tripupillato; fascia postmedia regulariter arcuata alba, aliquando utrinque cinereo limitata; posticæ dimidio apicali albo, striis late separatis nigro-fuscis: corpus fuscum: alæ subtus fere velut supra at pallidiores: exp. alar. unc. 1, lin. 5.

♀ Bogota, Coll. Druce; ♂, ♀ Ega, Colls. Saunders and B. M.

It is just possible that the Amazons form may prove to be distinct from the New Granadian one; it apparently differs in having the white band of frontwings bounded on both sides by grey: the male of the latter, which I have figured, is in Mr. Saunders' Collection, the female in the British Museum.

4. *Mesosemia Thymetina*, figs. 5, 6.

♂, ♀ *Mesosemia Thymetina*, *Butler*, *Cist. Ent.* 1, p. 12, n. 3 (October, 1869).

Affinis *M. Thymeto*, minor et fascia alba angustiore, striis basalibus magis regularibus, latius separatis: exp. alar. unc. 1, lin. 6½.

Bogota. Coll. Druce.

Allied to *M. Thymetus*, but quite distinct.

FAMILY NYMPHALIDÆ.

SUB-FAMILY NYMPHALINÆ. *Bates.*GENUS JUNONIA. *Hübner.*PLATE XXXIII.*Junonia Ixia*, *fig. 1.**Junonia Ixia*, *Butler*, Ent. Mo. Mag. 2, p. 227 (1866).

Alæ supra albæ, roseo certo situ tinctæ, area basali, costis, lineis duabus marginalibus (interspatio in anticis), linea submarginali, in posticis interrupta, omnibus brunneis; anticæ maculis duabus nigrocinctis cellam transeurrentibus fascia irregulari transversa sinuata et plaga geminata postocellulari brunneis; ocellis suboceto discalibus, primo et secundo macularibus fuscis (primo cum macula apicali confuso); tertio annulari incompleto, quarto et septimo conspicuis albo-pupillatis, aliis minutis late albo-cinctis fusco-circumcinctis, nigris; posticæ plaga subapicali ocellos ferente fusco; ocellis subquinque, primo et quarto parvis, tertio minutissimo nigris albo-pupillatis, flavo-cinctis: corpus brunneum.

Alæ subtus albæ marginibus venisque ochraceis; anticæ basi costaque pallide aurantiacis; fasciis duabus albis fusco-cinctis discoideis; tertia ad basin; fascia media obsoleta; maculis submarginalibus distinctis; fasciis marginalibus obsoletis; posticæ dimidio basali ochreo irrorato; striola subbasali fusca et altera submediana; plaga irregulari ochrea fusco-cincta discoidea; linea undulata discoidea ochrea; maculis quinque, prima secunda et quinta subocellatis, apud marginem externum; lineis duabus submarginalibus fuscis: corpus ochraceum; antennis clava nigro fasciata: exp. alar. unc. 2.

West Africa. B.M.

M

SUB-FAMILY DANAINÆ. *Bates.*GENUS AMAURIS. *Hübner.**Amauris Inferna*, fig. 2.♂ *Amauris Inferna*, *Butler*, Proc. Zool. Soc. p. 79 (1871).

Alæ anticæ supra fere velut in *A. egialea*, plagis autem duabus mediis latius separatis, maculisque duabus seriei subapicalis centralibus velut in *A. echeria*; alæ posticæ velut in *A. damocle* formatae, velut in *A. hecate* coloratæ; anticæ subtus area apicali dilutiore, punctis tribus ad medium marginis externi, submarginalibus albis: exp. alar. unc. 3, lin. 6½.

West Africa. Coll. W. W. Saunders.

Mr. Hewitson has a second specimen of this species, which he considers a variety of *A. egialea*, it is however, in my opinion, nearer to *A. damocle*, from which it differs, besides other characters of less importance, in having a distinct black basi-costal border on under surface of hindwings as in *A. hecate*.

SUB-FAMILY SATYRINÆ. *Bates.*GENUS PALEONYMPHA. *Butler.**Paleonympha Opalina*, fig. 3.*Paleonympha Opalina*, *Butler*, Trans. Ent. Soc. p. 401 (1871).

Alæ supra fuscae, anticæ ocello uno apicali albo-pupillato lineisque duabus marginalibus, nigris; posticæ ocellis quatuor nigris; primo apicali indistincto, secundo parvo inconspicuo, tertio magno, bipupillato, quarto anali parvo, inconspicuo; alæ subtus cineræ, striis duabus mediis lineisque duabus submarginalibus, olivaceis; linea marginali tenuissima nigra; anticæ ocellis tribus distinctis aliisque duobus obscuratis, primo apicali nigro, argenteo-bipupillato, aliis pyriformi-ovalibus argenteis fusco persectis, omnibus flavo-cinctis; posticæ ocellis quinque, primo, quarto et quinto nigris, aliis ovalibus olivaceo-cinctis: exp. alar. unc. 2, lin. 2.

Shanghai (*H. B. Pryer*). Coll. Druce.

This species is chiefly interesting as being the only known Old World representative of the Genus *Euptychia* (Sect. *Nonympha*).

GENUS LETHE. *Hübner.**Lethe Distans*, figs. 4, 6, 7.

♂ *Lethe Distans*, *Butler*, Trans. Ent. Soc. p. 188 (1870).

Allinis *L. Samioni*, differt costa anticarum magis arcuata et margine externo magis sinuato; posticis supra, area externa obscure ferruginea; maculis quinque discalibus nigrescentibus, secunda maxima; margine externo fuscescente; alis subtus pallidioribus quam in *L. Samione*, fundo pallide ochreco lilacino partim tineto; lineis mediis multo magis irregularibus et latius separatis; ocellis posticarum irregularibus, argenteo-roratis, quarto ex serie haud ejecto: exp. alar. unc. 2, lin. 9.

♀ Alar supra area basali ferruginea; anticæ fasciola postcellulari, macula geminata subapicali et tribus submedianis discalibus in serie angulari transversa, albis; posticæ ocellis fulvo diffuse cinetis; linea media angulata introrsum nigra extrorsum diffuse fulva; aliter fere velut in mare: exp. alar. unc. 3, lin. 1.

Darjeeling. ♂, Coll. H. Roberts; ♀, Coll. F. Moore.

I am much indebted to Mr. Frederic Moore, of the East India Museum, for giving me the opportunity of figuring both sexes of this species together.

Lethe Alberta, fig. 5.

♂ *Lethe Alberta*, *Butler*, Ann. & Mag. Nat. Hist. p. 283 (October, 1871).

Alar supra olivaceo-fusca; anticæ area apicali abrupta dilutiore; posticæ ocellis quatuor magnis nigris cæcis ferrugineo iridatis; margine externo nigrescente; linea valde indistincta submarginali fusca; corpus cinereo fuscum; alæ subtus castaneo-fusca; area apicali pallidiore; linea media nigra extus griseo marginata; altera discali aream basalem limitante, in posticis angulata; anticæ margine roseo-tincto; linea fusca, apice caerulecente; ocellis sex discalibus nigris, flavo-cinetis roseo zonatis; posticæ margine externo virescente; linea submarginali nigra; area discali introrsum ochraceo-fusca, extrorsum castanea nigrescente; ocellis septem in serie irregulari, quinto maximo, nigris, flavo-cinetis, viridi pallide zonatis: exp. alar. unc. 2, lin. 11.

Benares. Exeter Memorial Museum.

This species was lent to me for description by W. S. M. D'Urban, Esq., the Curator of the Albert Memorial Museum: it belongs to the *Samio* group. I have recently seen a female in Mr. Moore's collection.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PAPILIONINÆ. *Bates.*GENUS PAPILIO. *Linnaus.*

PLATE XXXIV.

Papilio Horribilis, sp. n. fig. 2.

Affinis *P. Hespero* (Westwood, Arc. Ent. pl. 48), alæ anticæ puncto apicali lunato; fasciola subapicali quinquefida; fascia media duplo latiore; alæ posticæ maculis quinque (nec tribus) minoribus submarginalibus lacteis, quarta majore; alæ subtus areis pallidioribus (i. e., apice anticarum et dimidio externo posticarum) pallide roseo-fuscis; posticæ maculis duabus apud costam obscuris; maculis submarginalibus velut supra sed minus distinctis: exp. alar. unc. 4, lin. 11.

Fantee, Cape Coast (*Ussher*). Coll. Swanzy.

This handsome species is nearly allied to *P. Hesperus* but differs considerably on both surfaces.

GENUS PARNASSIUS. *Fabricius.**Parnassius Glacialis, fig. 1.*

Parnassius Glacialis, Butler, Journ. Linn. Soc. Zool. ix. p. 50. n. 3 (1866).

Alæ supra sub-hyalinae, albæ, venis nigris; anticæ apice hyalino; macta discoidea et altera disco-cellulari cinereis; posticæ margine abdominali late nigro: corpus nigrum, thorace præ ferrugineo; abdomine cinereo pilosato, lateribus ferrugineis; antennæ nigre; alæ subtus nitentes; posticæ margine abdominali cinereo; aliter velut supra: corpus nigrum ferrugineo pilosatum: exp. alar. unc. 3, lin. 1.

Hakodadi, N. Japan (*Whitely*).

B.M.

A very constant and distinct species allied to *P. Mnemosyne*: I have seen specimens in the collections of the British Museum, Herbert Druce, Esq., H. W. Bates, Esq., &c., but have as yet observed no variation among them.

SUB-FAMILY PIERINÆ. *Bates.*GENUS COLIAS. *Fabricius.**Colias Pallens*, *fig. 3.**Colias Pallens*, *Butler*, *Journ. Linn. Soc. Zool.* ix. p. 52, n. 10 (1866).

Alæ supra flavæ, ciliis rufis: anticæ pallidæ; puncto disco-cellulari magno nigro; apice et margine externo cinereo-fuscis; maculis subtribus subapicalibus flavis, puncto submarginali inter nervulos medianos squamoso fusco; basi fuscescente; posticæ cinereo rorate basi et striga nebulosa interna nigris; margine apicali fusco, maculas quatuor flavas includente; macula disco-cellulari fulva; alæ subtus flavæ, anticæ margine interno pallido, apice fulvo, margine anali nigro tripunctato; macula disco-cellulari superna; alæ posticæ valde cinereo rorate, macula rufo-fusca costali; macula disco-cellulari argentea, fusco bicincta et puncto preposito fusco: exp. alar. unc. 1, lin. 9.

Hakodadi, N. Japan (*H. whitely*). B.M.

Allied to *C. Hydr*, but I think it can hardly be an aberration of that species; at any rate it is far more distinct from it than half the species of the Genus are from *C. Edusa*.

GENUS HESPEROCHARIS. *Felder.**Hesperocharis Fulvincta*, *fig. 4.*

♂ *Hesperocharis Fulvincta*, *Butler*, *Ann. & Mag. Nat. Hist.* p. 284 (October, 1871).

Alæ anticæ supra albæ, basi minime flavescentes; costa nigra; apice, stria obliqua subapicali et margine externo angulis alternis decrescente, nigris; posticæ lætissime flavæ, stria subcostali maculisque sex submarginalibus diffusis fulvis, vel pallide aurantiacis; subtus fere velut in *H. Irlandæ*; posticæ stria maculari submarginali aurantiaca: exp. alar. unc. 2, lin. 10.

Back of Rio (*Sir W. Smith*). B.M.

Allied to *H. Helvæ* and *Irlandæ*, and remarkable for the angulated character of the outer margin of anterior wings.

GENUS *APPIAS*. *Hübner*.

Appias Vacans, *figs. 5, 6*.

♀ *Appias Vacans*, *Butler*, *Trans. Ent. Soc.* p. 490 (1870).

Affinis *A. Hipponi*, differt area tota anticarum supra alba, venis laud nigrescentibus; margine nigro, profunde inter venas sinuato; alæ posticæ area submarginali cinereo nebulosa: alæ anticæ subtus albae, costâ et margine externo fuscis; apicæ griseo, basi flavescente; posticæ pallide aurantiacæ vel aurantiaco-flavæ; margine externo late fusco velut in *A. Eleonora* mare: exp. alar. unc. 2, lin. 6.

Darjeeling (*Major Roberts*). Coll. Lieut. Roberts.

Chiefly remarkable from the male character of its colouring. I have seen an *Appias*, apparently referable to this species, in Mr. Saunders' Collection.

GENUS *TERIAS*. *Swinson*.

Terias Reticulata, *fig. 7*.

Terias Reticulata, *Butler*, *Proc. Zool. Soc.* p. 539, n. 88 (1871).

♂ Alæ supra saturate flavæ; anticæ margine apicali-externo decrescente, undato, nigro; posticæ venis minutissime nigro acuminatis: anticæ subtus saturate flavæ, margine costali auro-flavâ; venis costalibus nigro distincte terminatis, costâ basali nigro conspersa; venis marginis externi nigro acuminatis; margine ipso rufescente; posticæ auro-flavæ, brunneo reticulatæ; maculis tribus griseis (prima basali, secunda costali, tertia interna), punctisque in area discali digestis vix conspicuis; corpus flavescens: exp. alar. unc. 2, lin. 4.

♀ Differt alis posticis angustioribus; anticis ad basin aurantiacis; apicæ irregulariter nigrescente: exp. alar. unc. 2, lin. 3.

♂ Archidona; ♀ Quito. B.M.

Belongs to the *Dera* group, and is the finest species in the Genus.

GENUS BELENOIS. *Hübner.**Belenois Ianthe*, fig. 8.

Pieris Ianthe, *E. Doubleday*, *Zool. Misc.* p. 77 (1831).

Alæ supra flavæ; anticæ costa anguste nigra; margine externo modice lato nigro introrsum irregulariter dentato-sinuato; puncto subapicali flavo; posticæ maculis quinque venas terminantibus nigris; alæ subtus aureo-flavæ, anticæ macula subapicali trifida; posticæ costa basali aurantiaca; punctis septem submarginalibus squamosis fuscis: exp. alar. unc. 2, lin. 8.

Sierra Leone (*D. F. Morgan*). B.M. type.

Intermediate between *B. Sabina* (*Felder*), and *B. Rheia* (*Doubleday*).

GENUS TERACOLUS. *Swinson.**Teracolus Loandicus*, sp. n. figs. 9, 10.

♂ Alæ supra albæ, basi grisea; anticæ area apicali aurantiaca fusco-cincta, extrorsum sinuato-dentata; posticæ punctis marginalibus nigro-fuscis: alæ subtus albæ; anticæ area apicali flavo tincta, macula subapicali diffuse aurantiaca; basi griseo-squamosa; posticæ flavo tinctæ; puncto disco-cellulari nigro, fulvo introrsum cincto; striola angulata discali squamosa fusca: exp. alar. unc. 1, lin. 7.

♀ Alæ supra albæ, area basali et margine interno-basali anticarum cinereis; anticæ puncto disco-cellulari nigro: fascia angulata subapicali extrorsum aurantiaco marginata, costa apicali venis et margine externo, nigris; maculis sub-septem sub-marginalibus aurantiacis; posticæ macula nebulosa costali, nebulaque discali media cinereo-fuscis: maculis sex punctoque marginalibus nigris; anticæ subtus area basali flava, apicali ochracea; macula subapicali nebulosa aurantiaca puncta quinque cinerea includente; puncto supremo disco-cellulari; posticæ roseo ochracea; costa basali aurantiaca; puncto disco-cellulari nigro, aurantiaco introrsum cincto; striola angulata discali squamosa fusca: exp. alar. unc. 1, lin. 7.

Loanda, Angola. Coll. R. Meldola.

I have been unable to find any described species agreeing with the above, it came in a small collection recently lent to me for determination by my friend Raphael Meldola, Esq.

GENUS CALLIDRYAS. *Boisduval*.

[Monograph continued.]

P L A T E X X X I V.

23. *Callidryas Philea*, figs 1, 2, 3, 4.♂ *Papilio Philea*, *Linnaeus*, Syst. Nat. 2. 764, n. 104 (1766).♀ *Papilio Aricie*, *Cramer*, Pap. Exot. 1. pl. 94, figs. A, B (1779.)*Papilio Melanippe*, *Cramer*, Pap. Exot. 4. pl. 361, figs. E, F. (1782.)♂ *Mancipium fugax* Argante ♀, *Hübner*, Samml. Exot. Schmett. 1, pl. 145, figs. 3, 4 (1806—16).*Colias Corday*, *Hübner*, Verz. bek Schmett. p. 99. n. 1053 (1816).♂, ♀ *Colias Lollia & Aricia*, *Godart*, Enc. Meth. IX, p. 94, n. 15, 16 (1819).

Male.—Wings above bright sulphur yellow; frontwings with the margin very slenderly blackish, expanded into points at the termination of the nervures; an elongate irregular oblique orange patch crossing discoidal cell; hindwings with external area including centre of disc bright orange, the mealy marginal border slightly paler; below golden yellow, frontwings with internal area broadly sulphur yellow; two irregular silver-centred brown disco-cellular spots and a biangulate series of discal brown spots, most distinct towards costa; hindwings with two brown encircled silver-spots at end of cell and a circular discal series of irregular brown markings completely surrounding them.

Female.—Wings above golden or ochraceous yellow; frontwings becoming gradually deeper coloured towards outer margin where it is slightly reddish; a conspicuous spot at end of cell, a biangulate series of nine discal spots, the apex and six marginal spots dark brown; hindwings with external area reddish orange diffused internally and interrupted by yellow nervures; costal and abdominal areas whitish; five conspicuous brown marginal spots: below dull opaque rosy orange, the marginal spots of upper surface replaced by squamose silvery ones; frontwings with pale internal area; a collection of closely packed silver-centred brown spots at end of cell; discal brown spots less distinct than above; hindwings with two silver spots encircled with brown at end of cell and a circular series of irregular brown markings completely surrounding them.

Specimens from the following localities have passed through my hands—♂, ♀ Brazil, Coll. Druce; Rio Janeiro (*Margillieray*) and Brazil, ♂, Bogota (*Stevens*), B. M.; ♀, Bahia, Coll. Saunders; ♂, ♀, Colls. Druce and E. Brown; ♂, Amazons, Coll. Wallace; ♂, Polechio Valley (*Saldin*) B. M.; ♀, Mexico, Honduras (*Dyson*), Coll. Saunders.

♂ var. almost spotless on under surface—Santa Martha (*Bouchelet*) Coll. Saunders.

♀ dwarfed—Bahia, Coll. C. Ward.

The caterpillar of *C. Philea*, according to Seba, is clothed with slender hairs and is of a dirty yellow colour, decorated with black spots and bands; the chrysalis varied with black and brown; the perfect insect, according to Erichson, in "Schomburgk's Reisen in Britisch Guiana," occurs near the coast on grass plots in gardens and in meadows. *P. Melanippe*, Cr. may prove to be a distinct race.

24. *Callidryas Thalestris*, figs. 5, 6, 7, 8.

♂ *Papilio* (Danaus) *Thalestris*, *Illiger*, *Mag.* 1, p. 207, n. 31 (1802).

♂, ♀ *Colias Thalestris*, *Hübner*, *Samml. exot. Schmett.* 2, pls. 132—134 (1806).

♀ var. *Callidryas Solstitia* ♀, *Butler*, *Ann. & Mag. Nat. Hist.* 4th S., vol. 4, p. 203, n. 3 (1869).

Male.—Wings above bright sulphur yellow; frontwings with black points at terminations of nervures; a broad elongate orange band from above costal to submedian nervure; a conspicuous black spot at end of cell; hindwings with disc golden yellow becoming orange towards margin; mealy border slightly paler; below golden yellow, markings as in *C. Philea*, but a submarginal nebulous streak of brown scales from costal nervure to below second median branch and the brown marking between second and third median branches enlarged.

Female.—Wings above dull orange red varying, in the frontwings especially, to yellow; frontwings with a large black spot at end of cell, a zigzag discal series and submarginal series as in *C. Philea*, but united into one patch at apex; hindwings with disc gradually redder to margin; six unequal diamond shaped black spots terminating nervures, the first, at apex, minute; three or four black spots on centre of disc; below golden yellow varied with rosy and lilac scales; frontwings with an irregular silvery-purplish, black edged purplish spot at end of cell, and a zigzag series of the same colour on disc; a submarginal series of lilac spots uniting into one patch at apex; hindwings with large elongated purplish patch, enclosing two silver spots at end of cell; a circular series of dark purple discal and basal spots and a broad submarginal externally dentate sinuate purple band, beginning narrow upon costa near

the middle, becoming suddenly broad from apex and terminating at first median branch, base and submedian area densely irrorated with rosy.

Localities—♂, ♀, Haiti, Colls. B. M., (*Troedia* and *Hecem*), Salvin; and ♂, E. Brown, ♂, ♀, Porto Rico, Coll. Saunders; Chili, Coll. Druce.

M. Lucas, in Ramon de la Sagra's "Hist. de l'Île de Cuba," remarks that—"This species has a male variety, in which the band of the upper wings is very broad, almost of a blood-red colour, as well as its posterior margin; the lower wings entirely of an almost blood-red colour." This is of course nothing more nor less than the *C. Arellanoæ* of Herrich-Schäffer.

GENUS CALLIDRYAS. *Boisbrun*.

[Monograph continued.]

PLATE XXVII.

25. *Callidryas Solstitia*, figs. 1, 2.

♂ *Callidryas Solstitia*, *Butler*, Ann. & Mag. Nat. Hist. 4th S., vol. 4, p. 203 (1869).

Male.—Wings above bright sulphur yellow; frontwings with interobasal area and mealy external area suffused with orange; outer margin inclining to reddish; a broad, somewhat lunate band crossing cell, and continued below median vein by a broad, irregular diffused patch, extending to mealy border, crimson interrupted by yellow nervures; a black spot on lower disco-cellular nervelet; hindwings, excepting a broad whitish patch above costal nervure, suffused with orange, the discal area crimson, becoming more intense towards mealy border; below dull orange, densely irrorated with minute rusty scales; brown markings and silver spots of hindwings almost as in *C. Philæa*.

Female.—Unknown.

Locality—♂, Chlfi, Coll. Kaden in Coll. Druce.

If the habitat of this species can be relied upon, it is certainly distinct from *C. Avellaneda*, from which it differs in shape and in the following colour characters:—Frontwings above with crimson area broader within cell and narrower below it, not encircling disco-cellular spot, and carried through centre of first median interspace to mealy border, the latter narrower and not so well defined; hindwings with broader external mealy area?; body clothed with yellow hairs, abdomen yellow, palpi and collar fulvous; in *C. Avellaneda*, the thorax is clothed with bright ochreous hairs, abdomen yellow, with ill-defined dorsal stripe of orange; anal segments orange; head red brown, palpi collar and mane orange.

26. *Callidryas Avellaneda*, figs. 3, 4, 5.

Callidryas Thalestris, var. *Herrich-Schäffer*, Correspondenzblatt, d. Zool. min. Ver. in Regensb. vol. 16, p. 119 (1862).

Callidryas Avellaneda (*Gundlach*) *Herrich-Schäffer*, l. c. vol. 18, p. 169 (1864).

¹ The anal margin is broken, and may turn out to be more like that of *C. Thalestris*; than it appears by my figure.

Male.—Only differs from preceding in the characters given above.

Female.—Frontwings above sulphur yellow, basal and internal areas irrorated with red scales; outer margin crimson; black spots arranged nearly as in *C. Philea*, but larger, and not filling up the apex of wing, all surrounded by dense crimson scales; hindwings rosy, the central area reddish orange, becoming gradually more intensely crimson to outer margin; four diffused blackish submarginal spots on nervures, and five forming a double zigzag between nervures on disc, the uppermost very indistinct; below orange, irrorated with crimson; frontwings with a discal series of nine blackish spots succeeded by a broad band of rosy lilac; outer margin orange; a large silver spot encircled by a black line, and split up into six unequal parts at end of cell; hindwings with two silver spots placed obliquely beyond cell, and surrounded by a series of diffused blackish spots, which externally form a semicircular band bounded internally by a reddish suffusion; succeeded on disc by a broad band of rosy lilac including ill-defined blackish lunules on second median and subcostal interspaces; outer margin orange.

Localities—♂, ♀, Cuba Coll. Ward; ♀, —? Coll. Hewitson. This, the finest of all the *Callidryades*, was at first characterised by Dr. Herrich-Schäffer as a variety of *C. Thalestris*. His description runs as follows:—"Nearly allied to *Thalestris*, same size and contour, black central spot of frontwings smaller, encircled with orange red, which circling is connected upon the subcostal with the larger, less sharply defined, glowing red central patch, which reaches as far as the broad orange margin.

The hindwings are glowing orange gradually becoming darker towards the suddenly brighter margin; no black spots on the margin.

Underside agrees better with *argente*, it is orange, finely and densely dusted with lake-red, the spots of similar more closely packed dustings, both the silver spots are as small as in Hübner's brighter figure."

In the above description I have only one fault to find—the circling of the black spot is connected with the larger central patch upon the lower disco-cellular, and not on the subcostal nervure. I merely mention this because it put me out considerably when determining the species.

"H. Gundlach found several examples of both species (*C. Arellaneda* and *C. Thalestris*), without intermediates, in some places more of one, in others of the other species. I have more accurately defined the male in Corubl. 1862, p. 119, under *Thalestris*. I am, however, sorry to say that I have not yet received the female." H. Sch. in Corubl. 1861.

FAMILY NYMPHALIDÆ.

SUB-FAMILY NYMPHALINÆ. *Bates.*GENUS CHARAXES. *Ochsenheimer.*

PLATE XXXIII.

1. *Charaxes Pleistoanax*, fig. 3.

♂, ♀ *Charaxes Pleistoanax*, *Felder*, Reise der Novara, Lep. 3, p. 443, n. 723 (1867).

♂, N. W. Himalayas; ♀, Darjeeling. Coll. Moore.

Specimens of this species are in most collections from Sikkim; as usual, the female is by far the rarer insect; there being nothing to add to Dr. Felder's excellent description, I have not thought it necessary to repeat it here.

2. *Charaxes Khimalara*, sp. n. fig. 1.

♂ *Affinis* precedenti, differt supra alis anticis acuminatis, multo obscurioribus, fascia media alba tenuiore, introrsum inter ramos medianos haud nigro limitata, extrorsum valde irregulari; maculis discalibus plerumque nullis; posticis fascia discali nigra fere duplo latiore introrsum magis regulari, haud albo-punctato; differt subtus alis magis sericeis; fascia media magis albicante, virgula anticarum pone cellam valde angulata; linea aream basalem limitante minus irregulari; area submarginali ochracea latiore: exp. alar. unc. 3, lin. 6.

♀ *Charaxes Hierax* ♀, *Felder*, Reise der Novara, Lep. 3, p. 442 (1867).

♂, N. W. Himalayas; ♀, Nepal. Coll. Moore.

This species may at once be distinguished from the preceding by its darker colouring, narrower white band, the straight inner edge of the broader discal band of hindwings, and the obsolescent character of all the discal white spots.

3. *Charaxes Khasianus*, sp. n. fig. 6.

♂, ♀ Affinis *C. Pleistoanaci*, differt supra area basali dilutiore extrorsum minime caerulecente; fascia media alba latiore; virgulis nigris tenuioribus, virgula interspatii interno-mediani anticarum in mare obsoleta; area externa nigra angustiore maculis discalibus minutis in mare fulvo-tinctis; fascia posticarum nigra ad apicem multo latiore; area externa clariore, latiore, cauda longiore, in femina latiore; subtus alis omnibus rufescentibus, fascia media multo angustiore, pallide ochracea haud albida; lineis omnibus nigris valde irregularibus, sinibus lineæ discalis perelongatis: exp. alar. ♂, unc. 3, lin. 9; ♀, unc. 4.

♂, Khasia Hills; ♀, N. E. Bengal. Coll. Moore.

Also allied to *C. Pleistoanac*, from which it may be easily separated by the paler basal area of wings, which exhibits externally a bluish shade peculiar to this species; also by the broader white band, which in the female is carried across the hindwings to abdominal margin; the slenderness of the transverse black lines and the peculiar reddish tint of the undersurface.

4. *Charaxes Jalinder*, sp. n. fig. 4.

♀ *C. Hipponax* ♀. *Felder*, Reise der Nov. Lep. 3, p. 443. n. 722 (1867).

♂, ♀ Affinis *C. Hipponaci*; alæ supra hætæ fulvæ, anticæ nebulis tribus strigosis discoideis, fasciola disco-cellulari, lineolis quatuor alæ medium oblique transerrante, sublumatis, et duabus pone cellam parvis indistinctis, nigris; fascia lata extrorsum irregulari alba, a vena subcostali ad venam submedianam currente, area externa late nigra, maculas, in mare sex fulvas, in femina albas includente; posticæ fere velut in *C. Khasiani* mare:

Alæ subtus simillimæ *C. Pleistoanacis* alis, at magis rufescentes, fascia media minus albicante ad costam alarum anticarum multo latiore: exp. alar. ♂, unc. 3, lin. 7; ♀, unc. 4, lin. 1.

♂, ♀, N. E. Himalayas. Coll. Moore.

This is not a rare species in Collections, and, exclusive of other characters, may be picked out at once by the white band of frontwings abruptly terminating upon the sub-median nervure; Major

Roberts took the female of *C. Jaloeer* at Darjeeling, but I have preferred to figure both sexes from one collection.

5. *Charaxes Hindia*, sp. n. fig. 5.

♂, ♀ Affinis precedenti, dilfert supra area basali clariore, fasciola disco-cellulari melius expressa, lituris medianis obsoletis; virgula in fasciam nulla; fascia alba latiore, infra ramum primum medianum anticarum fulvo-tincta; area externa anticarum latiore, maculis discalibus in mare majoribus, superioribus autem obsoletis, in fœmina fulvis vix conspicuis; fascia nigra posticarum magis maculari et multo angustiore: alæ subtus multo pallidiores; fascia media in anticis minus obliqua, area latiore ochracea; area discali multo latiore: exp. alar. ♂, unc. 3, lin. 7; ♀, unc. 4, lin. 2.

♂, Darjeeling (*Major Roberts*), Coll. Lieut. Roberts; ♀, Darjeeling, Coll. Moore.

Mr. Moore has two specimens of the female of this species, one of which is scarcely larger than the male; it is a conspicuous form and may be distinguished without trouble; the female has the external area of the wings much browner than in any other species with which I am acquainted, but this may be partially due to fading.

6. *Charaxes Lunarora*, sp. n. fig. 2.

♂ Affinis *C. Marmax*, minor; antice fasciola subapicali cum area marginali conflua latiore, lunulis discalibus obscurioribus; margine nigro (haud nigro-fusco); postice virgulis in mare tenuioribus in fœmina nullis; maculis fasciæ externæ nigris majoribus distincte albo-pupillatis: alæ subtus characteribus omnibus melius expressis; in mare area externa angustiore; fascia media posticarum ad marginem internum duplo latiore: in fœmina area externa latiore, fascia media posticarum ad marginem internum comparatim latiore; area discali multo magis sericea, cauda subanali duplo longiore; exp. alar. ♂, unc. 3, lin. 6; ♀, unc. 3, lin. 7.

♂, N. E. Bengal, Coll. Moore; ♀ — ♂ Coll. Herbert Druce.

Nearly allied to *C. Marmax*, *Aristojiton*, &c., but perfectly distinct.

PLATE XXXVIII.

7. *Charaxes Wallacei*, sp. n. fig. 2.

Affinis *C. Latona* differt alis anticis ad apicem magis productis, posticis cauda interiore multo brevioribus; alae supra maculis solum duabus pone cellam humatis nigris; maculis submarginalibus humilisque discalibus ad marginem magis approximatis; posticæ humilis subcostalibus distinctis nigris; maculis submarginalibus minoribus, albo notatis; alae subtus fascia mediâ valde irregulari; area externa anticarum angustiore, posticarum latiore et vix griseo suffusa; maculis ocellaribus minoribus, a maculis albis bene separatis: exp. alar. unc. 4, lin. 5.

Ménado, Celebes (*Dr. Meyer*). Coll. F. A. Walker.

Allied to *C. Latona* (which after all is probably identical with Felder's *C. Brunnus*), this species is kindly lent to me for description by the Rev. F. A. Walker.

Charaxes Aruanus, sp. n.

Charaxes Papuensis ♀, *Butler*, Lep. Exot. p. 15, n. 6, pl. vi. figs. 1 (1869).
Aru (*Wallace*).

This being a female of the *Marmoræ* group and the sexes of the tawny *Charaxes* being alike, it is evidently specifically distinct from *C. Papuensis* ♂: many of the above forms of *Charaxes* have doubtless long existed in Collections as supposed varieties of *C. Polyxena*, there being a prevailing prejudice in the minds of many Lepidopterists against the existence of nearly allied species in a group of such bulky butterflies as *Charaxes*; however, distinctions founded simply upon amount of difference are sure at times to mislead, they are doubtless productive of confusion in that they lead their advocates to unite several constant forms under one name, and in defence thereof to utter such vague Hibernianisms as the following—"it is very possible that varieties coming from Pará, Brazil, New Granada, Ecuador, &c. may be distinct species," they are also the cause of endless inconsistencies in that they have no limits: constancy therefore is the only sure guide, and since a species cannot be more than *distinct*, however different it may be, to ask why it is distinct is to wander out of the fields of nomenclature into those of nature and philosophy, a *local form* therefore is systematically a species; it is moreover a species *naturally*, for the best test of a species is its disinclination to hybridize with its allies, which a local form

cannot do, whilst what is called a true species might do it but will not, hence it follows that the local form is in this respect the better species of the two; in the present instance, I consider that the tawny *Charaxes*, which are locally constant, have a greater right to specific distinction than have many of the members of that variable Sub-family the *Heliconiinae* which are divided (perhaps rightly) by the tint of a wing or the colouring of an antenna. I have seen a vast number of *Charaxes Psephen*, collected by one gentleman in Bombay, and none of them exhibited any tendency to vary; Mr. Walker purchased the residuum of Mr. Lowe's Bornean Collection and obtained sixteen male specimens of *C. Horpae*, which I have examined and found all the characters constant; in many of the Chinese show-boxes one sees shattered specimens of *C. Polygona* exhibiting no variation; and lastly, all Felder's species are easily recognizable as soon as specimens are obtained from his localities.

GENUS PHILLOGNOMA. *Westwood.*

Phillognoma Falcata, sp. n. fig. 1.

Affinis *P. Lichari*; alæ supra fulvo-ferrugineæ; apice anticarum late nigro fulvo maculato; litura duplici disco-cellulari nigra; posticæ costa fuscescente; lineolis duabus subcostalibus, macula apicali fulvo-notata, puncto subapicali lunulisque subquatuor submarginalibus, nigris; corpus fuscescens: alæ subtus fusæ, linea media communi obliqua rufo-fusca introrsum albido-limitata; lineis duabus valde irregularibus transversis; anticæ costa albicante; areis costali, basali et externa nitentibus; punctis duobus apud basin, lineola basali, et duabus pone cellam, nigris; posticæ bitriente basali nitente; corpus dilute fuscescens; exp. alar. unc. 2, lin. 4.

Gold Coast. Coll. Swanzy. Ashanti. B.M.

Not uncommon in Collections; most nearly allied to *P. Lichas*, but very distinct.

GENUS HETEROCHROA. *Balslev.*

1. *Heterochroa Mephistopheles*, fig. 4.

Heterochroa Mephistopheles, *Butler*, Cist. Ent. i. p. 7 (1869).

Alæ supra nigro-fusæ, fasciis submarginalibus nigris; anticæ fascia obliqua fulva; posticæ macula magna mediâ rotundata et altera costali parva, albis; corpus nigrum: alæ subtus ferrugineæ, fasciis duabus cellas transversantibus violaceis nigro marginatis; anticæ maculis quatuor subapicalibus

margini externo parallelis aliisque diffusis marginalibus oclraceis, maculis duabus apud apicem albis; posticæ striis duabus mediis fuscis; maculis sex submarginalibus albis; margine nigrescente; corpus cinerescens: exp. alar. unc. 2, lin. 2.

Bogota. Coll. Kaden in Coll. Druce.

Differs from *H. L. oophthalmus* and its variety *H. Zinn* in the shape of the white spot of hind wings and in the absence of the subapical orange spots of frontwings.

2. *Heterochroa Lacina*, sp. n. fig. 5.

Affinis precedenti, differt fasciâ anticarum angulata ad marginem internum attingente; maculis subtribus subapicalibus fulvis; posticæ fasciâ (non macula) media in medio latissima, alba, fasciis submarginalibus nigris ad marginem magis approximatis; alæ subtus magis cinerescentes; anticæ maculis quatuor subapicali-discalibus diffuse albis, serie undulata macularum albidarum submarginalium; posticæ area externa cinereo fasciata, maculis septem fusco bisectis cinereo-albidis submarginalibus; fasciâ media longiore quam supra; aliter velut in *H. Mephistophele*: exp. alar. unc. 2, lin. 3.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Allied to *H. Justin* and the other forms mentioned under the preceding species.

3. *Heterochroa Tracta*, sp. n. fig. 6.

Alæ anticæ supra area basali nigro-fusca, lincis nigris fasciolisque pallidis consuetis discoideis, fasciola pone cellam pallide fusca, fasciâ lata undata discali fulva a venis interrupta; margine externo pallide fusco, nigro persecto; posticæ area basali nigro-fusca, externa pallide fusca nigro trifasciata; macula anali ferruginea; corpus nigrescens; alæ subtus pallide rufescentes cinereo variæ; area basali ferruginoso, albido et cinereo fasciolata, fasciolis nigro marginatis; fasciâ media anticarum apud costam fureata, posticarum tenui, albida introrsum ferrugineo limitata; fasciâ lata submarginali cinereo-albida, introrsum in anticis fulvo, in posticis ferrugineo-fusco, limitata, extrorsum ferrugineo limitata et a

fasciâ lunulata cinerea perssecta; corpus cinereo-albidum: exp. alar. unc. 2, lin. 6.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

4. *Heterochroa Demialba*, fig. 2.

Heterochroa Demialba, *Butler*, Cist. Ent. 4, p. 77 (Jan. 1872).

Alæ supra fuscæ nigro-fasciata, anticæ area apicali albo-maculata; ciliis albis; corpus nigrescens, capite albo-punctato: alæ subtus fuscæ, area basali cinereo fasciata: posticæ fusco cinereoque fasciata; margine externo albicante a strigis fulvis in venas interrupto: corpus albicans: exp. alar. unc. 2, lin. 11.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

The specimen for which my figure was made being defective, I have completed the posterior portion of the hindwings to the best of my ability.

GENUS CIRROCHROA. *Doubleton*.

Cirrochroa Satellita, fig. 7.

Cirrochroa Satellita, *Butler*, Cist. Ent. i. p. 9 (1869).

Alæ supra fuscæ, fasciâ media lunulisque in posticis submarginalibus fulvis; maculis duabus inæqualibus in fasciam rotundatis subanalibus nigris; subtus fulvis, fasciâ media subrecta fulvo-argentea, serieque duplici lunularum ejusdem coloris submarginalium: posticæ punctis quinque nigris conspicuis: exp. alar. unc. 2, lin. 6.

Hong Kong. Coll. Druce.

FAMILY LYCENIDÆ.

SUB-FAMILY LYCENINÆ. *Butler.*GENUS MIMACRÆA. *New Genus.*

Allied to *Pentila*, frontwing cell about $\frac{2}{3}$ length of wing; subcostal five branched, first and second branches emitted before end of cell, third half-way between cell and apex, fourth and fifth forming a long fork to apex; upper discoidal emitted from subcostal; upper disco-cellular short; lower three times as long and slanting inwards; median branches long, emitted at regular intervals; cell of hindwing about $\frac{2}{3}$ length of wing; costal nervure not reaching to apex, subcostal branches emitted from a footstalk; disco-cellulars nearly transverse, the upper shorter and slightly oblique; median branches emitted nearly at regular intervals; palpi of moderate length perfect, last joint projected slightly downwards; body moderately slender; legs very robust; type *M. Darwinia*.

Mimacræa Darwinia, *sp. n.* *fig. 8.*

Persimilis supra *Dyclidi Phegeæ* alis autem brevioribus minoribus: alæ subtus fere velut in *Acræa Cynthia*, dimidio costali anticarum, apice excepto, nigro; virgula mediana fulva: corpus subtus thorace nigro albo-punctato, abdomine fulvo nigro maculato: exp. alar. unc. 2, lin. 5.

W. Africa? Coll. Cornthwaite.

Probably mimics *A. Serena* of Fabricius, but is rather larger than that species; it has been kindly lent to me for description by the Rev. T. Cornthwaite.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PIERINÆ. *Bates.*GENUS CALLIDRYAS. *Boisduval.*

[Monograph continued.]

P L A T E X X X I X .27. *Callidryas, Editha, figs. 1, 2, 3, 4.**Callidryas Editha* *Butler*, Trans. Ent. Soc., p. 10, n. 4 (1870).

Male. Wings above sulphur-yellow, the outer margin and apex of frontwings exhibiting a broad mealy border; wings below golden yellow dusted with ferruginous; nervures terminating in black points; frontwings with whitish internal area; two black spots dusted with silver and encircled with red at end of cell; a zigzag discal series of eight diffused red spots; hindwings with two black silver centred and red zoned spots at end of cell placed upon a transverse lunated red band and surrounded inferiorly by a nearly complete circle of more or less distinct reddish markings.

Female. Frontwings above fulvous, the central area dull sulphur yellow; a large black spot at end of cell; a zigzag discal series of nine black-brown spots and a second series on outer margin; hindwings rosy reddish with paler abdominal area; a spot at end of cell and five on outer margin, black-brown; wings below reddish-fulvous dusted with red; markings almost as in male but purplish.

Localities—♂, ♀, Haiti, Coll. Salvin; ♀, Coll. E. Brown.

Intermediate in character between the *Philea* and *Hersilia* groups.

28. *Callidryas Fornax, figs. 5, 6.*♀ *Callidryas Fornax*, *Butler*, Trans. Ent. Soc., p. 170 (1871).

Male. Unknown.

Female. Wings above bright sulphur yellow; frontwings with apical and external areas densely dusted with dull crimson; a black spot at end of cell; apex and terminations of nervures brown; a zigzag series of blackish spots bounded externally on the disc by yellow spots, the two largest nearest to posterior angle; hindwings with external area to cell dull crimson, enclosing two or three yellow spots towards front margin; terminations of nervures blackish; fringe yellow; abdominal area paler yellow; wings below golden yellow, the external area orange tinted, the whole surface irregularly patched with red; all the markings (which are arranged as in *C. Philea* ♀) are broad and dull red; two silver spots at end of cell in both wings, but those of frontwings ill-defined.

Locality—'Chili', Coll. Kaden in Coll. Druce.

Intermediate between *C. Acclimata* and *C. Hersilia*; I thought at one time it might be the female of *C. Sabstia*, but it is very unlikely that the female of that species is so dissimilar to that of *C. Acclimata*, or so similar to *C. Hersilia* ♀, as *C. Fœnor*.

29. *Callidryas Hersilia*, figs. 7, 8, 9, 10.

♂ *Papilio Hersilia*, *Cramer*, Pap. Exot. 2, pl. 173, figs. C. D. (1779).

♂ ? *Papilio Marcellina* (part) *Cramer*, Pap. Exot. 2, pl. 163, fig. B (1779).

♂ *Papilio Larra*, *Fabricius*, Ent. Syst. suppl. p. 428, n.n. 653-654 (1798).

♀ *Papilio Cipris*, *Cramer* (nec *Fabr.*), Pap. Exot. 2, pl. 99, figs. E, F (1779), yellow form.

♀ *Phœbis Cypris* ♂, *Hübner*, Samml. Ex. Schmett. 2, pl. 131, figs. 1, 2 (1806).

♀ *Phœbis Cypris* ♀, *Hübner*, loc. cit. figs. 3, 4 (1806), white form.

Colias Cnidia, *Godart*, Enc. Meth. IX., p. 93 (1819).

♀ *Papilio Volcanica*, *Perry*, Arcana or Mus. Nat. Hist. 1, pl. 8 (Sept. 1811).

♀ *Papilio Xanthe*, *Sepp*, Surinamsche Vlinders 2, pl. 75 (1848).

Male. Wings above bright orange with broad mealy border, with front margins and abdominal area of hindwings sulphur yellow, frontwings with outer margin black, sinuated between the nervures, hindwings with five to six black spots at end of nervures on outer margin; wings below golden yellow sprinkled here and there with ferruginous scales; the nervures terminating in black points; frontwings with two red ring-spots at end of cell; a zigzag discal series of brown markings; apical margin reddish; hindwings with two silver-centred ring-spots and a brown dash at end of cell, surrounded by a circular series of brown markings dusted towards the base with red atoms.

Female. Wings above golden yellow or rosy white with large black spots at terminations of nervures; frontwings with a large irregular spot at end of cell, the apical costa and apex, two irregular submarginal spots adjoining apical patch, and two, of different sizes, between median branches, black-brown; hindwings with costal and abdominal areas rosy-whitish; wings below golden yellow hatched with ferruginous; nervures terminating in small red-brown points; frontwings with several dark purplish lines towards base of cell, a large subquadrate lilacine patch surrounded with purplish brown at end of cell; a partially connected zigzag series of violaceous spots on disc, confounded at apex with

a diffused red nebula; a series of silvery lilacine submarginal spots towards end of nervures; hindwings with two silver-centred ring-spots at end of cell upon a broad oblique purplish band and surrounded by a circular series of broad lilacine spots; central interno-median area densely irrorated with reddish scales; submarginal spots in frontwings.

I have examined specimens from the following localities—♂, ♀, Brazil, B.M. and Coll. Druce; ♀, Coll. Saunders; Rio Janeiro, Coll. Salvin; Rio Grande, Coll. Saunders; ♂, Demerara (*Borer*), B.M.; ♀, Cayenne, Coll. Hewitson; ♂, ♀, Para (*J. P. G. Smith*), B.M.; ♂, Santarem, Coll. Wallace; ♂, Cayali, Coll. Salvin; Peruvian Amazons (*Bartlett*), Coll. Saunders; ♂, ♀, Nicaragua (*Bell*), Coll. Hewitson; ♂, Ecuador, Coll. Buckley.

This very beautiful species was for many years confounded with *C. Argante*, the two males being very similar; the *P. Larra* of Fabricius was supposed to be the female of *C. Philea*, an insect to which the Fabrician description in no way applies; the diagnosis runs thus—"Papilio (D.) Larra. Alis rotundatis, integerrimis, fulvis, margine nigris; subtus pallidioribus, punctis duobus argenteis." M. Menétrics (Bull. Soc. Imp. de Mosc. 5, p. 296) remarks—"M. Godart in the supplement p. 805 has reunited this species to the preceding" (*Col. Philea*) "but I think wrongly, for in very many individuals that I have had to examine at one time, the characters of *C. Larra* have always been constant."

That *P. Hirsilia* is identical with *C. Larra* ♂ there can be no doubt, for Cramer says that it has "on the undersurface of the wings, two small silvery white spots" and Herbst adds "the upperwings have a very narrow black margin" (upperside), thus distinguishing it from *C. Argante* which he describes thus—"All the wings on the upper surface reddish yellow, the hind margin a little spotted with brown."

In Perry's *Arcana* there is a very amusing description of the female under the name of *Papilio Volcanica* which he states to be "a native of the Rio de la Plata in South America, and of Peru," he then adds—"The back is yellow, spotted with black and brown spots, irregularly placed. The underside coloured with the most splendid orange tints, mixed with red, and of a light brown; small and large circular pellets, of a pale brown, and scattered unequally with black netted lines which cover the skin. The whole texture of this curious fly exhibits to a fanciful and capricious mind the representation of a volcano or burning mountain, with balls of fire, and burning streams of lava, rising amongst the smoke. The lower fly* resembles a soil of sulphur tint of a brown and burnt appearance, with several orifices placed at intervals. If imagination can be indulged so far, we may call to mind the description of Sir William Hamilton, in his travels in the vicinity of Mount Vesuvius, at the time of an eruption. Balls of fire were seen spreading over the illuminated scene, mounting high in the air, and falling near to his feet. Rivers of red hot lava, running in red lines, were stopped for some time by a valley, then taking its course through lakes and pools, till it arrived at last at the sea, and buried its heat in the deep."

* Uppersurface figure

In Sepp's "Surinamse Vlinders" the following account is given of the transformations—"The Latin name of the tree which serves as food for these caterpillars is *Inga vera*, called in Surinam 'Zoetenbootjesboom.'" "We found it for the first time in the month of March, it is of a uniform green, adorned at the sides with a pale yellow stripe, its head is black, it retains this colour until the adult state.

"When the period of its change approaches, the green colour changes into yellow, spotted with brownish black, which we have not observed in any other species of this family: moreover a blue stripe becomes apparent above the yellow one.

"It was on the 7th April that the caterpillar attached itself, and the beautiful glowing chrysalis appeared on the next day."

NOTE.—The above species should by rights bear the name of *Cipris* given by Cramer to the female, but I prefer, to avoid confusion, to retain the name *Hersilia* given to the male the same year in the same work, Fabricius having described another species several years later under the name of *P. Cipris* by which it has ever since been known, the typical *C. Cipris* moreover having been supposed meanwhile to be a female variety of *C. Argandæ*.

FAMILY HESPERIDÆ.

GENUS GONIURUS. *Hübner.*

P L A T E X L.

G. Zilpa, sp. n. fig. 2.

Alæ supra fere velut in *G. Dorante*, caudis longioribus; subtus anticeæ area apicali cinerescenti, fusco maculata; macula sub-apicali costali (puncta hyalina extrorsum limitante) nigro-fusca: posticæ cinereo-fuscæ fasciis duabus interruptis ferrugineis; area costali albido irrorata; striga submarginali maculari, macula magna interno-mediana et altera interno-discalis nigro-fuscis; area magna has partim includente nivea fusco rorata: corpus fuscum, palpis albidis: exp. alar. unc. 2, lin. 5.

Cartago, Costa Rica (*Fan Patten*). Coll. Druce.

GENUS EUDAMUS. *Sraunson.*

E. Vectilucis, sp. n. fig. 6.

Affinis *E. Neo* differt supra magnitudine majore; fascia anticarum ochraceo-albo; ciliis posticarum analibus valde elongatis; alæ subtus fusca cinereo sparsim rorata; anticeæ fascia subhyalina et macula subapicali quadrifida, supernis; posticæ fasciis duabus apud costam interruptis nigro-fuscis: corpus cinereo-fuscum, palpis cinereis: exp. alar. unc. 1, lin. 11.

Cartago, Costa Rica (*Fan Patten*). Coll. Druce.

GENUS TELEGONUS. *Hübner.*

T. Imalena, sp. n. fig. 1.

Alæ anticeæ supra nigrae, ad basin olivaceo-cinereæ; maculis quinque in serie media obliqua, macula in medio disci, punctisque quatuor subapicalibus hyalino albis; posticæ olivaceo-cinereæ; apice et margine externo nigris; ciliis omnibus albis, nigro notatis: corpus cinereo-fuscum; alæ subtus fusca, anticeæ area basali nigra, apicali nigro-fusco maculata; posticæ seriebus quatuor

macularum plus minus nigrescentium; aliter velut supra; corpus cinereo-fuscum, palpis albicantibus: exp. alar. unc. 2, lin. 6.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

Telegonus Omphale, fig. 10.

Telegonus Omphale, *Butler*, Ann. & Mag. Nat. Hist. p. 284 (October, 1871).

Alæ supra nigro-fusæ, cupreo tinctæ; anticæ basi nitide æruleo-viridi micantes; fascia postmedia obliqua fulva hyalina, a venis intersecta; posticæ dimidio abdominali nitide virescente; margine interno fulvo tincto; corpus viride, abdomine certo situ grisescente; antennis nigris; alæ subtus fere velut supra; posticæ autem latius virescente: exp. alar. unc. 2, usque unc. 2, lin. 3.

Ega (*Bates*); Venezuela (*Dyson*). B.M.

The most beautiful species of the genus, and in some respects allied to the genus *Ethilla*.

GENUS *ETHILLA*. *Heritson*.

E. Larochrea, sp. n. fig. 4.

♂ Alinis *E. Coraciæ*; alæ supra nigro-fusæ, nigro indistincte fasciatæ; posticæ ciliis ochreis; alæ subtus picæ fusco fasciatæ; posticæ fascia lata anali-externo ochrea: corpus nigro-fuscum: exp. alar. unc. 2, lin. 4.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

The female of this species is in the British Museum, from Mexico, and excepting in its slightly greater size and less produced forewings, it does not differ from the male.

Ethilla Jaira, fig. 11.

Ethilla Jaira, *Butler*, Trans. Ent. Soc., p. 496, n. 4 (December, 1870).

Alæ supra sericeo-fusæ, area basali virescente: alæ subtus sericeo-fusæ; anticæ plaga anguli externi diffusa albida; fascia cellam transerrante valde diffusa, altera ramos medianos transerrante, tertia subapicali; margine nigro-fusco; posticæ fasciis duabus mediis indistinctis, una discali, altera marginali.

obscure fuscis; corpus fuscum, palpis albicantibus; pedibus posticis hirsutis: exp. alar, unc. 2, lin. 2.

West Indies. Coll. Druce.

Ethilla Jariba, fig. 3.

Ethilla Jariba, *Butler*, Trans. Ent. Soc., p. 496, n. 3 (December, 1870).

Alæ supra nigro-fuscae; anticæ fasciâ mediâ, lineâ indistincta discali et macula subapicali, piccis; posticæ, area basali excepta, piccæ; anticæ subtus pallidiores, apice nebulisque mediis piccis; posticæ velut supra: corpus nigro-fuscum, supra virescens: exp. alar. unc. 2, lin. 6.

Cuba. Coll. Kaden in Coll. Druce.

GENUS SPATHILEPIA. *Butler*.

S. Terranea, sp. n. fig. 8.

Alæ supra fuscæ, lineola indistincta discoidea albida, punctisque quatuor subapicalibus: alæ subtus pallidiores; anticæ apice nigrescente; plagis apicali et anali albicantibus, fusco notatis; posticæ dilute fuscæ, nigro fusco reticulatæ, fasciâ mediâ, altera discali et tertiâ marginali piccis, cinereo irroratis: corpus cinereo-fuscum, palpis albidis: exp. alar. unc. 1, lin. 9.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Somewhat resembles *Ugria Hassan* on the underside, and may prove to be distinct from *Spathilepia*, the antennæ being somewhat abnormal; there are specimens in the British Museum from Honduras, Para, Rio, &c.

GENUS TYPHEDANUS. *Butler*.

Typhedanus Evelinda, fig. 5.

Spathilepia Evelinda, *Butler*, Trans. Ent. Soc., p. 496 (December, 1870).

Alæ supra nigro-fuscæ; anticæ fasciâ mediâ obliqua subhyalina albâ; punctis tribus ejusdem coloris subapicalibus; corpus nigro fuscum; anticæ subtus pallidiores; striga interrupta discoidali a fasciâ mediâ interrupta; apice ferruginoso; posticæ pallide cinereo-fuscæ, macula magna nigro-fusca basali; lineâ ejusdem coloris de apice ad marginem analem currente et introrsum a

plaga geminata ferruginosa limbata: corpus obscure cinereum, pedibus pallide fuscis, palpis albis: exp. alar. unc. 1, lin. 8.

Rio Janeiro. Coll. Druce; Brazil, &c. Coll. B.M.

Typhedanus Zephus, fig. 12.

Typhedanus Zephus, *Butler*, Trans. Ent. Soc., p. 497 (December, 1870).

Alæ supra olivaceo-fuscæ, fasciis duabus mediis obscurioribus; anticæ macula elongata costali (in femina geminata), lineola masculina disco-cellulari, punctis duobus inter ramos medianos et quatuor subapicalibus, hyalinis; alæ subtus pallidiores, ad basin fusco nebulosæ, fasciis distinctioribus, profunde dentatis; margine obscure fusco; posticæ macula basali costali fusca: corpus fuscum: exp. alar. ♂, unc. 1, lin. 10; ♀, unc. 1, lin. 11.

Venezuela. Coll. Druce.

GENUS AUGIADES. *Hübner*.

Augiades Despecta, fig. 7.

Augiades Despecta, *Butler*, Trans. Ent. Soc., p. 497 (December, 1870).

Affinis *A. Criniso*, supra similiter colorata; anticæ maculis duabus inter ramos medianos oblique positis hyalinis; alæ subtus sordide ochraceæ; area externa fuscescente; maculis supernis hyalinis corpus pallide ochraceo-fuscum; palpis, prothorace et pedibus pallide ochraceis: exp. alar. unc. 1, lin. 10.

Para. Coll. Kaden in Coll. Druce.

Augiades Lemna, fig. 9.

Augiades Lemna, *Butler*, Trans. Ent. Soc., p. 497 (December, 1870).

Alæ anticæ supra fusæ; basi, fascia pone medium obliqua, et fasciola obliqua subapicali, aureo-flavis; posticæ aureo-flavæ, marginibus externo et interno fuscis: corpus aureo-flavum, striga dorsali nigra; alæ subtus velut supra: corpus flavum: exp. alar. unc. 1, lin. 11.

Minas Geraes. Coll. Kaden in Coll. Druce.

Belongs to the section *Pharos*.

FAMILY NYMPHALIDÆ.

SUB-FAMILY MORPHINÆ. *Butler.*GENUS MORPHO. *Fabricius.*

P L A T E X L I.

Morpho Aquarius, fig. 1.*Morpho Aquarius*, *Butler*, Cist. Ent. 4, p. 74 (January, 1872).

Affinis *M. Thebes*, differt alis brevioribus, area basali supra distincte cærulescente; anticæ margine externo paululum arcuato; fascia lata submarginali regulari nigra; maculis ochreis majoribus valde distinctis; striga alarum omnium duplici marginali fulva continua; posticæ caudis haud quadratis; alæ subtus dilutiores; anticæ striola inconspicua et fasciola lata dis-coideis cinereis; plaga pone collam costali pyramidata cinerea striolam fuscam includente; maculis submarginalibus diffusis subtriangularibus majoribus albidis; posticæ area basali quadrata; fascia pone eam cinerea multo magis regulari: exp. alar. unc. 5, lin. 3.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

Allied to *M. Thebes*, but no nearer to it than *M. Luna* is to *M. Polyphemus*; I find, however, that there are Lepidopterists, even in the present day, who question the propriety of separating such distinct species as these; I should be inclined to doubt whether they have ever had an opportunity of comparing typical specimens of the two forms. If there were any doubt as to the distinctness of the two species it would be at once removed by M. Oberthur's remarks (Pét. Nouv. Ent. n. 44, p. 176, Jan., 1872):—"I have received the two types from different Mexican localities. The type *Luna* comes from Puebla, the type *Polyphemus* from Chiapas."

Morpho Marinita, fig. 2.*Morpho Marinita*, *Butler*, Cist. Ent. 4, p. 75 (January, 1872).

† Affinis *M. Achilli*, supra fusca; alæ anticæ fascia lata pone medium

nitide cærulea, in costam albo diffuse quadrimaculata, et extrorsum puncta quatuor alba inter venas discoidales et ramos medianos gerente; macula magna pone cellam costali alba; seriebus duabus macularum albarum submarginalium, extrorsum nigro limitatis; ciliis albo variis; posticæ areola disco-apicali dilutiore; strigis duabus, partim maculiformibus, submarginalibus, interiore decrescente fusco-albida, exteriori paululum rufescente, extrorsum nigro-limitatis; ciliis inter venas albo binotatis; corpus fuscum; alæ subtus fere velut in *M. Achille*: exp. alar. unc. 5, lin. 4.

♀ Simillima mari, differt supra maculis costalibus et discalibus distinctioribus: fascia cærulea angustiore, maculam magnam subcostalem includente et a stria disco-cellulari interrupta; posticæ areola disco-apicali paululum cærulescente; alæ subtus velut in mare; exp. alar. unc. 6.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

 PLATE XLII.

Morpho Sulkowskyi, figs. 1, 1a.

♂ *Morpho Sulkowskyi*, *Kollar*, Denkschr. Akad. Wien. Math. Nat. Cl. 1, p. 355, n. 13, pl. 43, figs. 1, 2 (1850); *Hewitson*, Ex. Butt. 1, Morph., pl. 1, fig. 1 (1856).

Morpho Ganymedes, *Westwood*, Gen. Dinrn. Lepid. p. 339, n. 10, note, (1851).

New Granada.

I have refigured this species to show a curious aberration of the nervures; an abnormal structure, occurring in the upper discoidal nervure of the frontwings, is not uncommon in this species, and sometimes produces a post-discoidal cell as in fig. 1a, (taken from a specimen in Mr. Janson's possession), the average number of aberrant specimens is about 6 to 43 as evidenced by examples in the following collections—Mr. Janson 3 to 33 (2 as in fig. 1a); Mr. Butler 2 to 2 (both as in fig. 1); Mr. Jacoby 1 to 1 (on right hand side of wing); Mr. Druce 0 to 5; British Museum 0 to 2.

My remarks respecting *Aerpa Andromacha* (Proc. Zool. Soc. pp. 777, 778, 1870) are equally applicable to this species.

Morpho Hydorina, fig. 2.

Morpho Hydorina, *Butler*, Cist. Ent. 4, p. 76 (Jan., 1872).

var. *Morpho Limpida*, *Butler*, loc. cit. p. 75 (Jan., 1872).

♂ Affinis *M. Marinata*, major; anticae fascia caerulea latiore, serie inferiore macularum submarginalium minus conspicua; maculis humatis vix bisinuatis;

posticæ fascia lata vel tenui cærulea, ad ramum secundum medianum sæpius continuata : alæ subtus fasciis latioribus, ocellis latius zonatis : exp. alar. unc. 5, lin. 6.

‡ Simillima *M. Marinita* ♀, differt supra seriebus macularum submarginalium latius separatis, magis conspicuis ; maculis discalibus albis majoribus ; posticæ arcola disco-apicali magis cærulescente ; alæ subtus fasciis latioribus ; area pone ocellos dilutiore : exp. alar. unc. 6.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

• There are three examples of the variety *M. Limpida* in the Collection.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PIERINÆ. *Bates.*GENUS TERACOLUS. *Scinson.*

PLATE XLIII.

Teracolus Interruptus, *figs. 1, 2.**Teracolus Interruptus*, *Butler*, Proc. Zool. Soc. p. 724 (Dec., 1871).

♂ Alæ supra albæ, area apicali aurantiaca, a stria media vix conspicua interrupta, hac maculam distinctam in ramos medianos formante; venis apicalibus extrorsum nigrescentibus; margine externo nigro introrsum dentato-sinuato; area basali paululum ochraceo-tincta; posticæ maculis marginalibus fasciam angulis alternis formantibus; area interno-basali paululum ochraceo-tincta; aliter velut in *T. Loandico* (ante p. 91): exp. alar. unc. 1, lin. 7.

♀ Similis *T. Loandico*, differt area apicali anticarum dilutius aurantiaca; fascia subapicali tenuiore, introrsum sinuata; area basali ochraceo bene tincta; posticæ nebula discali obsoleta; area basali ochraceo tincta: exp. alar. unc. 1, lin. 6.

Loanda. Coll. R. Meldola.

Also from Kinsebo, collected by Mr. Ansell.

Teracolus Jobina, fig. 3.

Euchloë Jobina, *Butler*, *Cist. Ent.* 1, p. 14, n. 2 (Oct., 1869).

Alæ supra albæ: anticæ apice late nigro, maculis quatuor vel quinque, nari violaceis, feminae albis; posticæ venarum apices nigrae; alæ subtus albæ, maris apice oclreo, puncto disco-cellulari nigro: posticæ ochraceæ fusco strigosæ; puncto disco-cellulari nigro-fusco et stria interrupta obliqua fusca; costa basali aurantiaca; anticæ feminae apice brunneo, fusco introrsum limitato et maculas quatuor ochraceas includente; puncto disco-cellulari et duobus, inter venas medianas oblique positis, nigris; posticæ brunneæ fusco-strigosæ; puncto disco-cellulari albido et puncto adjuneto fusco; fascia pone eum fusca; costa basali aurantiaca, exp. alar. unc. 2.

Port Natal. Coll. Druce.

Teracolus Jalone.

Euchloë Jalone, *Butler*, *Cist. Ent.* 1, p. 14, n. 1 (Oct., 1869).

Anthocharis Ione, *Ferret & Galinier*, *Voy. Abyss.* pl. 30, figs. 1, 2 & 5, 8, also of *Hopffer*, in *Peters' Reise nach Mosambique*, pl. 21, figs. 1—6.

White Nile. Coll. Druce & B.M.

This species usually stands in Collections as the *A. Ione* of Godart, of which it is a local representative; it differs constantly in several important characters.

GENUS LEPTOPHOBLA. *Butler*.*Leptophobia Tenuicornis*, fig. 4.

Leptophobia Tenuicornis, *Butler & Druce*, *Cist. Ent.* 5, p. 110 (July, 1872).

Affinis *L. Casia*; ♂ differt supra cella discoidali anticarum nigra: margine

externo duplo latiore, nigro; anticæ subtus maculis quatuor apicalibus flavis; posticæ dimidio interno aureo-flavo; ? supra macula postmedia anticarum majore; margine externo posticarum latiore, nigro; anticæ subtus velut in mare; posticæ magis flavescentes quam in *L. Cæsia*; area externa late fusca in marginem flavo-maculata: exp. alar. unc. 2, lin. 4.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Belenois Meldolæ, fig. 5.

Belenois Meldolæ, *Butler*, Proc. Zool. Soc. p. 725, n. 1 (1871).

Affinis *B. Thyse*, minor; anticæ margine externo duplo angustiore, inter venas interrupto; punctis discalibus obsoletis; posticæ margine haud maculato; anticæ subtus haud nigro maculate; area basali rufescente; posticæ puncto minuto costali, altero indistincto subapicali, tertio indistincto et quarto vix distinguendo inter ramos medianos; aliter haud nigro maculate: exp. alar. unc. 2, lin. 2.

Loanda. Coll. R. Meldola.

GENUS CATASTICTA. *Butler*.

Catasticta Actinotis, fig. 6.

Catasticta Actinotis, *Butler*, Cist. Ent. 4, p. 80 (Jan., 1872).

Alæ supra nigre, anticæ macula magna media quadrifida flava; punctis quinque, in serie undata discali, indistinctis, flavis; subtus pallidiores, fusco-cinereo, flavo et albido variegatis: exp. alar. unc. 2, lin. 2.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Belongs to the *Sisamnus* group, and is an exact mimic of *Actinob. Novæ* ♀.

 GENUS PIERIS. *Boisduval*.

Pieris Noctipennis, fig. 7.

Pieris Noctipennis, *Butler & Druce*, *Cist. Ent.* 5, p. 111 (July, 1872).

Alæ supra fumato-fuscae: anticæ plaga lata media punctisque duobus subapicalibus albis: posticæ costa dilutiore, punctis duobus inconspicuis subapicalibus albidis: alæ subtus maculis submarginalibus albis; posticæ lobulis basalibus aurantiacis; striga interrupta subcostali flava; macula cuneiformi subapicali alba; disco, venisque nigrescentibus; corpus cinereo-fuscum, palpis collo et abdomine albo-squamosis: exp. alar. unc. 2, lin. 2.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

 GENUS CALLIDRYAS. *Boisduval*.

[Monograph continued.]

 P L A T E X L I V.

30. *Callidryas Rorata*, figs. 5, 6, 7, 8.

Callidryas Rorata, *Butler*, *Ann. & Mag. Nat. Hist. Ser. 4*, vol. 4, p. 202 (1869).

Male. Wings above nearly as in *C. Hersilia*; but larger and with black points at terminations of nervures in frontwings in place of the black border; below the red-brown markings are more scattered and less distinct.

Female. Wings above pale ochraceous, irrorated, excepting at base, with red scales; black markings as in *C. Thalestris* ♀; the larger markings of the underside visible through the wings; below

golden-yellow, hatched at base and upon nervures with red-brown specks and lines; frontwings with a large red-brown patch at end of cell; outer margin, a broad oblique irregular macular band from apex to inner margin, apical costa and three spots between subcostal branches, red-brown; the lower discocellular nervelet, a spot at apex, and four others terminating nervures on outer margin, silvery blue; hindwings with a broad red-brown patch at end of cell, enclosing two silver spots, and encircled by a series of broad irregular red-brown markings between nervures and uniting upon median nervure with a large patch of red-brown scales; nervures terminating in black spots.

Localities—♂, ♀, Haiti (*Troville*) Colls. B.M., E. Brown, Druce, Salvin, and Saunders.

31. *Callidryas Argante*, figs. 1, 2, 3, 4.

♂ *Papilio Argante*, *Fabricius*, Syst. Ent. p. 470, n. 116 (1775).

Mancipium fugax Argante (part) *Hübner*, Samml. Exot. Schmett. 1, pl. 145, figs. 1, 2 (1806).

Callidryas Agarithe (part) *Lucas*, in Ramon de la Sagra's Hist. Cuba, Articulata, pl. 15, figs. 4, 4a, (1856).

Male. Wings above nearly as in *C. Rorata* but darker, and size of *C. Hersilia*; below without silver spots in hindwings, otherwise as in *C. Hersilia*.

Female. Wings above orange-yellow: frontwings with a spot at end of cell, three submarginal placed somewhat obliquely, the first between discoidal and the others between median branches, the apex and outer margin irregularly blackish-brown; hindwings with costa pale; nervures terminating in black spots; wings below same colour as above, irrorated with red-brown; frontwings with a spot at end of cell, a zigzag discal series and spots terminating nervures, red-brown; a small bluish spot at apex; hindwings with a red-brown patch at end of cell, enclosing two silver spots and surrounded by a series of irregular squamose markings between nervures; black spots terminating nervures on outer margin. I have seen specimens from the following localities—♂, ♀, Brazil, Coll. B.M.; ♂, Rio Janeiro, Coll. Salvin; ♀, Bahia, Coll. Saunders; ♂, Panama, (*Salvin*) Colls. B.M. and Salvin; ♂, ♀, Oaxaca, Coll. B.M.; ♂, Honduras, Colls. B.M. and Saunders.

Dr. Theodor Thon, in his "Naturgeschichte der in-und ausländischen Schmetterlinge," p. 92 (1837), confounds *C. Argante* with *C. Hirsilia*, remarking that "in the centre of the hindwings there are, occasionally in the male and constantly in the female, a pair of silver-coloured brown-encircled spots;" M. Lucas, in the History of Cuba, confounds it with *C. Aparithe* figuring opposite sexes of the two species as *C. Aparithe* on his plate: both sexes of *C. Argante* are correctly figured on one plate in Swainson's Illustrations.

This species, according to Erichson, occurs along with *C. Macrellina* and *C. Eeolus* and, like them, migrates in vast hordes; the frequent mention made by travellers of innumerable hosts of individuals, all apparently journeying steadily onwards in one direction, will explain to some extent the wide range of several of the commoner forms.

32. *Callidryas Minuscula*, figs. 9, 10, 10a.

Callidryas Minuscula, *Butler*, Cist. Ent. 1, p. 16 (1869).

Male. Wings above as in *C. Argante*, but considerably smaller and somewhat paler: below paler, nearly as in *C. Argante*, but with all the markings paler and more diffused.

Female. Unknown.

Locality—Havannah, Coll. Kaden. in Coll. Druce.

The above is very probably a dwarfed form of *C. Argante*, but the difference in size is so great, and the males of the various species in this genus, are so much alike that I have thought it better to consider it provisionally a distinct species.

The chrysalis figured on our plate came with the perfect insect in the Kaden collection.

P L A T E X L V .

Callidryas Agarithe, figs. 1, 2, 3, 4.

Callidryas Agarithe, *Boisdural*, Sp. Gén. Lép. 1, p. 623, n. 16 (1836).

Male. Above very similar to *C. Arganté*, but paler, the frontwings more produced at apex; below differs from *C. Arganté* in the oblique band of frontwings which is continuous and not angulated as in *C. Arganté*.

Female. Above generally golden-orange, sometimes pinky-white; frontwings with diffused orange patch over end of cell; a brown spot at end of cell; apex, an oblique series of spots between the nervures on disc, and a marginal series terminating nervures black-brown; hindwings with costal and internal areas rosy-whitish; three or four blackish spots terminating the nervures on outer margin; wings below golden-yellow, irrorated with ferruginous atoms; frontwings with base and apex red; a bluish subapical nebula; a geminate pearly brown-zoned spot at end of cell; an oblique discal brown band and three spots between subcostal branches; hindwings with a red spot at base; a transverse streak crossing cell from costal nervure, a subcostal spot near base, and a semicircular discal series of markings, brown; two silver-centred ring-spots at end of cell.

Localities—♂, ♀, Brazil, Coll. Druce; ♀, Santa Martha, Coll. Saunders; ♂, Caracas, Coll. Hewitson; ♂, ♀, Yucatan (*Belcher*), Coll. B. M.; ♀, Texas (white var.), Coll. Druce; ♂, Nicaragua, Coll. Saunders; Panama, B. M.; ♂, ♀, Venezuela, Coll. Druce; ♀, Haiti, Coll. Salvin.

♂ var. spotless below, Santa Martha, Coll. Saunders.

This species has been confounded by M. Lucas and others with *C. Arganté*, and apparently with *C. Ophis* by Dr. Herrich-Schäffer, who says that "no other species has the remarkable orange basal half of the frontwings of the male."

The chrysalis figured came in the Kaden Collection, associated with *C. Agarithe*, attached to it, however, is a label bearing the following note—"Aricia nach 21 Tagen, auf *Cursia*"; from which I gather that the chrysalis was found upon a species of *Cassia*, and after 21 days produced *C. Aricyné* of Cramer, the female of *C. Phiba*; this, judging by the size of the pupa-skin, seems more probable than that it should belong to *C. Agarithe*.

Callidryas Trité, figs. 5, 6, 7, 8.

Papilio Trité, *Linnaeus*, Syst. Nat. 2, p. 763, n. 97 (1766).

Male. Wings above bright sulphur-yellow; frontwings with slight tint of golden-yellow at base; broad medial border; apical half of costal and outer margins generally black; hindwings with

costal margin paler; a broad mealy apical patch; below silky greenish yellow, frontwings with costal and external areas slightly rosy or ochraceous; base rosy; an oblique brown discal bar, and three or four spots between subcostal branches; hindwings with base rosy; subcostal area slightly rosy; submedian area slightly ochraceous; an oblique brown bar crossing end of cell from first subcostal branch, and four irregular discal markings between nervures beyond it.

Female.—Wings above sulphur yellow or white; external and basal areas rosy tined; frontwings with outer margin to centre of costal black; base golden yellow; below silky rosy white, with central and internal areas sulphur yellow; frontwings with external border visible through the wings; an orange spot at end of cell; otherwise as in the male.

Localities.—♂, Brazil, and ♀, Para (*Bates*), Coll. B.M.; ♂, ♀, Coll. Wallace; ♂, Maranhão, Coll. Salvin; Colombia (*Dyson*), Coll. Saunders; Venezuela (*Dyson*), B.M.; ♂, ♀, Coll. Druce.

One of the most striking of the *Callidryades*, the marking of the under-surface is evidently a rude imitation of the ribbing of a leaf.

Callidryas Wallacei, figs. 9, 10.

♂ *Callidryas Wallacei*, *Felder*, Wien. Ent. Monatschr. 6, n. 11 (1862).

Male.—Wings above sulphur-yellow, mealy border, and black margin of frontwings narrower than in *C. Teib*; hindwings with mealy apical border; wings below sulphur yellow; inner margin of frontwings slightly paler; basal area of hindwings darker than ground-colour.

Female.—Unknown.

Specimens examined from the following locality—♂, E. Peru (*Duguid*), B.M.—Dr. Felder gives the Rio Negro as the habitat of this species: It is closely allied to *C. Statira*.

GENE'S DISMORPHIA. *Hübner*.

P L A T E X L V I.

1. *Dismorphia Sororna*, figs. 1, 2.

Dismorphia Sororna, *Buller*, Cist. Ent. 4, p. 82 (Jan., 1872).

♂ Alæ anticæ supra nigro-fusæ; macula inter ramos medianos, tribus postcellularibus, duabus subcostalibus, duabus magnis discalibus et quatuor

minoribus apicalibus hyalino-flavis; venis areæ basalis plus minus flavis; posticæ dimidio costali sericeo-albo argenteo-cincto; dimidio anali apud apicem nigro, maculis tribus albis et una ferruginea; area anali ferruginea margine late nigro; alæ anticæ subtus dimidio interno albo, argenteo-cincto; posticæ dimidio costali fusco albo-maculato, anali ferrugineo, margine late nigro et maculis tribus geminatis submarginalibus albis: exp. alar. unc. 3, lin. 2.

♀ Fere velut in *D. Cordillera*; anticæ autem maculis nonnullis obsoletis; posticæ obscurius ferrugineæ, area apicali magis nigrescente; anticæ subtus fere velut supra, posticæ maculis tribus flavidis subapicalibus: exp. alar. unc. 3, lin. 3.

Cartago, Costa Rica (*Fan Patten*). Coll. Druce.

Closely allied to *D. Cordillera*, and nearly resembling *Eutypa Dismorphites*, another new species of the same Collection; they are both allies of *Tilborea leon*.

2. *Dismorphia Hagaresa*, fig. 3.

Dismorphia Hagaresa. *Butler*, *Cist. Ent.* 4, p. 82 (Jan., 1872).

♂ Alæ anticæ nigre, maculis duabus costalibus, una discoidali, una post-cellulari, tribus subapicalibus (prima quarum trifida), una inter ramos secundum et tertium medianos punctisque tribus apicalibus, flavis; stria interno-basali rufescente; posticæ rufo-ferrugineæ, fascia subcostali, apice, margine externo et venis apicalibus nigris, punctis tribus ad apicem flavis; alæ subtus dilutiores, anticæ area apicali rufescente, interna fuscescente; macula altera pone cellam et altera discali flavis; aliter velut supra: exp. alar. unc. 2, lin. 8.

Cartago, Costa Rica (*Fan Patten*). Coll. Druce.

Belongs to the *D. Euxoa* section of the genus, but nearly resembles the female of *D. Sordana*.

3. *Dismorphia Viridifascia*, figs. 4, 5.

Dismorphia Viridifascia. *Butler*, *Cist. Ent.* 4, p. 83 (Jan., 1872).

Alliis *D. Nemesi*, ♂ autem alis anticis magis productis striolis internis obsoletis; maculis areæ apicalis virescentibus; posticis fascia interno-media

duplo angustiore et sordide virescente; alæ subtus vix flavo adspersæ; maculis aliter dispositis: exp. alar. unc. 2, lin. 7—8.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

4. *Dismorphia Lubina*, figs. 6, 7.

Dismorphia Lubina, *Buller*, Cist. Ent. 4, p. 83 (Jan., 1872).

♂ Alæ supra nigerrimæ; anticæ plaga interna, maculis tribus postmediis et duabus subapicalibus minoribus (superiore bifida) albis; posticæ dimidio costali sericeo-hyalino, ad basin et apicem fusco obscurato; fascia lata alba, a vena interna ad aream sericeam currente; alæ subtus margaritacæ griseo maculatæ, maculis supernis albis; anticæ plaga magna mediana alba; striga late arcuata subcostali chalybeo-argentea: exp. alar. unc. 2, lin. 6.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

5. *Dismorphia Lumina*, figs. 8, 9.

Dismorphia Lumina, *Buller & Druce*, Cist. Ent. 5, p. 111 (July, 1872).

♀ Alæ supra fuscæ; anticæ fascia obliqua postmedia venas disco-cellulares extrorsum limitante et ad ramum secundum continuata, maculari, alba; maculis tribus (prima bifida) subapicalibus albis; posticæ area media et costa albis; basi virescente; anticæ subtus area basali et margine interno albidis; margine externo et apice brunneis argenteo roratis; posticæ brunneæ, argenteo maculatæ et punctatæ; maculis duabus basalibus flavis: exp. alar. unc. 2, lin. 6.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

Allied to *D. Virgo* of Bates.

FAMILY NYMPHALIDÆ.

SUB-FAMILY BRASSOLINÆ. *Bates.*GENUS DASYOPHTHALMA. *Westwood.*

PLATE XLIII.

Dasyophthalma Vertebralis, *fig. 2.*

Dasyophthalma Vertebralis, *Butler*, *Cist. Ent.* 1, p. 2, n. 1 (Oct. 1869).

Affinis *D. Crensa*, fascia albida anticarum multo tenuiore, fascia autem posticarum lata albida: exp. alar. unc. 4, lin. 4.

Parâ. Coll. Kaden in Coll. Druce.

Allied to *D. Crensa*, but with the relative width of the bands on the front and hindwings reversed.

GENUS DYNASTOR. *Westwood.**Dynastor Stygius*, *fig. 1.*

Dynastor Stygius, *Butler*, *Cist. Ent.* 4, p. 73 (Jan., 1872).

¶ Affinis *D. Davio*, duplo major; alis anticis apice rotundato; margine externo fere recto; maculis longioribus: subtus multo pallidioribus, griseiscentibus; maculis multo majoribus; apice anticarum fusco, macula ocellari bipupillata; stria ocellum discalem introrsum cingente ad marginem externum (haud ad apicem) attingente; maculis ocellaribus posticarum majoribus, a margine magis remotis, tertia extrorsum profunde indentata; macula una discoidea nigra, macula subcostali obsoleta: exp. alar. unc. 5, lin. 1.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Seems quite distinct from *D. Davius* to which it is allied.

GENUS PALEONTINA, *Butler (1866)*.

PLATE XLVIII.

Forewing ovate triangular; costal nervure much swollen at base; subcostal four branched, the first two branches emitted about half way between discoidal cell and apex; the third emitted abnormally just beyond the cell, and therefore springing from beneath the nervure; the fourth emitted in a still more unusual manner from the third; so that the third and fourth branches might be described as springing together from a footstalk emitted from beneath the subcostal; discocellular and discoidal nervures precisely as in *Caligo*; median branches nearer together than in *Caligo*; submedian nervure following the same direction as the median nervures, but even more distinctly inarched, so that the internal area is considerably widened; hindwing and body wanting.

Type *Paleontina Oolitica*.

Paleontina Oolitica, *sp. n.*, *figs. 1, 2.*

♂: Alar antice costa bene producta, apud apicem arcuata; margine externo perlongo paululum arcuato; margine interno brevissimo arcuato; venis ferrugineis; coloribus obsoletis; exp. alar. circ. unc. 5, lin. 3.

Stonesfield Slate (Oxfordshire). Coll. Edward Charlesworth.

Though a British insect this species belongs to a group so completely tropical that I do not hesitate to describe and figure it in the present work; its nearest allies are the genera *Caligo*, *Dasygordalium*, and *Brassolis*, all three essentially tropical American genera.

P. Oolitica is especially interesting, as being the oldest fossil butterfly yet discovered; the most ancient previously known to Science having been found in the Cretaceous series (white sandstone of Aix la Chapelle), whilst the bulk of the known species are from the Lower Miocene beds of Croatia; it is also interesting as belonging to the highest family of butterflies, and to a sub-family intermediate in

character between two others, namely the *Satyrinae* and *Nymphalinae*, whilst the latter (recently described fossils) are referable, with one exception, to the two latter groups. The nervous system to have been impregnated with iron, which will partly account for their well-defined condition. I have thought it well to fill up my plate by representation of two fossils from the Cretaceous and Miocene series, not only to show the remarkable state of preservation, as regards pattern and colour, which they exhibit when compared with the Jurassic, but in order that I may render more definite certain remarks respecting them in my Catalogues of Eocene and Satyridian Lepidoptera.

GENUS NEORINOPSIS, *Butler (Satyrinae)*.

Neorinopsis Sepulta, fig. 3.

Cylo sepulta, *Boisdural*, Ann. Soc. Ent. France, p. 371, pl. 8 (1840).

Vanessa sepulta, *Lefebvre*, Ann. Soc. Ent. France, p. 71, pl. 3, figs. A-C (1851).

Aix-la-Chapelle. White Sandstone.

I have discussed the position of this species in my Catalogue of Satyridæ, pp. 189, 190; showing that its nearest ally is *Neorina Loricæ*, a common Bornean species, but that it also has a slightly more distant relationship to *Anticarsa Philoctetes* and *Aechiphlebia Archæa*, two common Tropical American forms, the amount of affinity, as regards the two first of these species, may be seen on my plate, figs. 4 and 5; the resemblance to *Aechiphlebia* is less striking, and the affinity more doubtful, it has nothing to do with *Cylo*.

GENUS JUNONIA, *Hubner (Nymphalinae)*.

Junonia? Pluto, fig. 7.

Vanessa Pluto, *Heer*, Nouv. Mem. Soc. Helv. xi., p. 181, pl. 14 (1850).

Marlestone of Radaboj.

I have noticed this species at p. 109 of my Catalogue of Eocene Diurnal Lepidoptera. Mr. W. H. Edwards of W. Virginia having decided in his *Butterflies of N. America* that it is unquestionably an *Argynnis* allied to *A. Diana*, notwithstanding the important discrepancies which Heer points out.

That it may bear some distant relationship to *A. Diana* is quite possible, but that it as "plainly an *Argynnis*" is quite another thing; to my mind it is plainly a *Caussid*, probably a *Jannina* near to *J. Hedonia* (see fig. 6); and I think some points in Heer's description (of which Mr. Edwards takes no notice) are very important, as evidencing its near relationship to *J. Hedonia* rather than to *A. Diana*. He says—"längs des Randes bemerken wir ein Reihe (nemlich 6) von runden, hellen Flecken und zwar liegt je zwischen zwei Längsadern ein solcher Fleck, welche das ganze Feld zwischen den Adern ausfüllt. Es reicht dieser helle Fleck nicht bis zum Flügelrande, welcher wieder dunkler graubraun gefärbt ist. In der Mitte jedes Fleckens legt ein schwarzer, runder Punkt; ob dieser noch einen weissen Augenpunkt besessen habe oder nicht, ist nicht mit Sicherheit zu ermitteln, doch ist es wahrscheinlich, indem wenigstens bei zwei dieser Punkte in der Mitte eine kleine, hellere Stelle wahrzunehmen ist. Diese hellen Augenflecken scheinen von keinem schwarzen Ring eingefasst zu sein."

The ocelli are well shown in Heer's figure, but in the woodcuts by Lyell and Edwards, which have in other respects been made much darker than the original, the indication of the lower edge of the ocelli has been omitted altogether, and, consequently, the resemblance to the species of *Jannina* is rendered less evident. I think it just possible, from the great resemblance which *A. Athalia* of Heer bears to the undersurface of *J. Hedonia*, that it is the reverse of *J. Pluto*.

In concluding my observations on these three butterflies, I would express my thanks to Mr. Charlesworth for the use which he has permitted me to make of his highly interesting novelty, and for the opportunity which he has thus given me of illustrating my previous remarks on the two species described by Boisduval and Heer.

SUB-FAMILY SATYRINÆ. *Bates.*

PLATE XLIX.

GENUS ANTIRRHEA. *Westwood.*1. *Antirrhœa Phasiana*, figs. 3, 4.

♂, ♀ *Antirrhœa Phasiana*, *Butler*, Cist. Ent. 2, p. 22, n. 1 (1870).

Allis *A. Geryoni*, anticæ autem apice truncato, ocellis majoribus fulvo-cinetis, apicali geminato; posticæ ocellis quatuor duplo minoribus cæcis fulvo-cinetis; subtus obscuriores, fascia lata communi media distincta, diffuse fusca; posticæ ocello subanali distincto: exp. alar. unc. 3, lin. 9.

Maracaiho. Coll. Kaden in Coll. Druce.

Allied to *A. Geryon* of Felder.

2. *Antirrhœa Scoparia*, figs. 1, 2.

♂ *Antirrhœa Scoparia*, *Butler*, Cist. Ent. 2, p. 22, n. 2 (1870).

Alæ supra fere velut in *A. Philoctetis* feminibus; posticæ autem fasciâ quadrimaculata interno-discalî cærulea; subtus fasciâ alba ad angulum antiætarum introrsum oblique currente: exp. alar. unc. 3, lin. 8.

—? Coll. Kaden in Coll. Druce.

Very like the female of *A. Philoctetes*, but with the blue band of hindwings double, and the lines upon the undersurface different.

GENUS DRUCINA. *Butler.**Drucina Leonata*, fig. 5.

♂, ♀ *Drucina Leonata*, *Butler*, Cist. Ent. 1, p. 72 (1872).

Alæ supra nigro-fuscae: dimidio apicali feminae paululum dilutiore: anticæ maculis sex submarginalibus, in femina nebula indistincta discoidali, macula

pone cellam, altera subtriangulari in nervulum secundum medianum et lunula venam inferiorem disco-cellularem transeunte, lacteis; posticæ maculis duabus subapicalibus et fasciâ lata discali inerescente, in femina nebula discoidali et fasciâ discali continuata, ferrugineo-fulvis; strigis tribus in femina diffusis pone cellam inter venas, albidis: anticæ subtus nigro-fuscae, area apicali dilu-
tiore, cinereo-rorata; punctis tribus subapicalibus et maculis quatuor submarginalibus inerescentibus albis; macula discoidali, altera pone cellam, et tertia in nervulum secundum medianum, sordide albidis; posticæ pallide cinereo-fuscae, venis nitidis nigris; fasciâ lata media biangulata fusca; margine externo irregulariter fusciscente; ocellis septem incompletis submarginalibus fuscis, albo pupillatis: exp. alar. ♂, unc. 3, lin. 5; ♀, unc. 3, lin. 11.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

A very beautiful and entirely new form allied to *Pronophila*.

SUB-FAMILY DANAINÆ. *Bates*.

GENUS OLYRAS. *Doubleday*.

P L A T E L.

Olyras Montagui, fig. 1.

♂ *Olyras Montagui*, *Butler*, Trans. Ent. Soc. p. 490 (1870).

Alæ anticæ supra nigre, fasciola cellam transeunte, maculis septem discalibus seriem transversam angulatam formantibus, aliisque tribus subapicalibus, hyalino-luteis; posticæ ferrugineo-fulvae, costa albicante; margine late nigro, indistincte fusco punctato; fasciola nebulosa pone cellam subhyalina albida; alæ subtus fere velut supra, serie autem marginali macularum albarum; posticæ area costali nigra, ferrugineo partim nebulosa: exp. alar. unc. 3, lin. 9.

Bogota (*Sterens*). B.M.

Resembles *Dircenna Olyras* and *Ceratinia cæcisa*, also from Bogota.

GENUS DIRCENNA *Bates*1. *Dircenna Louera*, fig. 2.

♂ *Dircenna Louera*, *Butler & Druce*, Cist. Ent. 5, p. 95 (1872).

Persimilis *D. Olyrate*, alis latioribus; anticæ dimidio basali oblique nigrescente; venis nigris; maculis flavis minus conspicuis; posticæ area mediana subhyalina albida, subtus macula nulla costali alba, octo parvis submarginalibus; exp. alar. unc. 3.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Alloed to *D. Olyras*.

2. *Dircenna Relata*, fig. 3.

♂ *Dircenna Relata*, *Butler & Druce*, Cist. Ent. 5, p. 95 (1872).

Allinis *D. Olyrate*, minor; anticæ persimiles; posticæ fulvæ subhyalinæ; area anali opaca; margine externo et apicæ nigrescentibus; alæ subtus fere velut in *D. Olyrate*; exp. alar. unc. 2, lin. 6.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Nearly allied to *D. Olyras*.

GENUS ITHOMIA *Hübner*.*Ithomia Plaginota*, fig. 4.

Ithomia Plaginota, *Butler & Druce*, Cist. Ent. 5, p. 95 (1872).

Allinis *I. Iphianassa*, major; alæ supra fulvæ, anticæ dimidio apicali nigro; fascia pone cellam maculari, macula in serie eadem obliqua, subapicalibus, maculis septem submarginalibus decreescentibus, et fasciola apud cellæ finem, flavis; macula magna discoidali et altera bifida (in rannum secundum medianum posita et cum area apicali confluyente) nigris; posticæ margine externo decreescente nigro, flavido maculato; alæ subtus fere velut supra; exp. alar. unc. 2, lin. 8.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

GENUS PTERONYMIA. *Butler & Druce*.1. *Pteronymia Fulvimargo*, fig. 5.

Pteronymia Fulvimargo, *Butler & Druce*, Cist. Ent. 5, p. 97 (1872).

Affinis *P. Obscurata*, anticæ supra fasciola discoocellulari nigra; cella discoidali immaculata; aliter velut in *Dircenna Marica* colorata; posticæ marginibus costali et externo nigris; venis et fascia submarginali-externa fulvis; alæ subtus marginibus fulvis; anticæ macula postmedia et duabus apicalibus, hyalinis, flavis; posticæ fasciâ subcostali nigra; maculis quinque externis submarginalibus albis, nigro-cinctis: exp. alar. unc. 2, lin. 6.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

2. *Pteronymia Olyrilla*, fig. 6.

Pteronymia Olyrilla, *Butler & Druce*, Cist. Ent. 5, p. 96 (1872).

Affinis *D. Donilla*, coloribus maculisque *Dircenna Olyrralis*, alæ posticæ autem albido hyalino haud fasciata; alæ subtus maculis marginalibus albis, aliter velut supra: exp. alar. unc. 2, lin. 2.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

Allied to *P. Donilla* and *P. Latilla*.

3. *Pteronymia Notilla*, fig. 7.

Pteronymia Notilla, *Butler & Druce*, Cist. Ent. 5, p. 96 (1872).

Persimilis *P. Latilla*, pallidiores; anticæ autem area tota submediana nigra; cella discoidali immaculata, nigro terminante; posticæ area externa distincte fulva, margine nigro: alæ subtus fere velut in *P. Latilla*, costa autem posticarum latius fulva: exp. alar. ♂, unc. 2, lin. 4; ♀, unc. 2, lin. 7.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

Nearly allied to *P. Latilla*.

GENUS NAPEOGENES. *Butler*.*Napeogenes Flossina*, sp. n., fig. 8.

Alæ hyalino-albæ, marginibus venisque areæ externæ nigro-fuscis; anticea supra striga subcostali ferruginea; macula pone cellam costali flavâ; striga disco-cellulari nigra; area interno-media fuscescens; margine interno late nigrescente; posticæ costâ basali lutea; vena subcostali et costâ apicali fuscescens; area externo-basali ochraceo tineta; corpus fuscum, cinereo strigatum; alæ subtus fere velut supra, sed lineâ continuâ submarginali ferruginea, et maculis duabus in alis omnibus, apicalibus, albis; posticæ vena subcostali crassa, nigra: exp. alar. unc. 2, lin. 6.

Colombia. Coll. Druce.

A very interesting and entirely new form.

GENUS LEUCOTHYRIS.* *Butler & Druce*.*Leucothyris Rubescens*, fig. 9.

Leucothyris Rubescens, *Butler & Druce*, Cist. Ent. 5, p. 97 (1872).

Persimilis *L. Phenomoe*, major, anticea margine externo latius nigro, ferrugineo squamoso, inter ramos secundum et tertium medianos sinuato; posticæ area submarginali-externa ferruginosa; margine nigro: alæ subtus fere velut in *L. Phenomoe*, sed marginibus latius et pallidius ferruginosis: exp. alar. unc. 2.

Cartago, Costa Rica (*Fan Palten*). Coll. Druce.

Closely allied to *L. Phenomoe* and *L. Flora*.

* I consider the genera named by Dr. Boisduval in his Guatemalan paper to be nothing more than *MS.* (questioned as *synonymi*) characters, by which *abna* genera can be defined, are entirely omitted; several of Hubner's genera would have to be treated in a similar manner, but for the fact that the rule was not universally recognized in his days.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PIERINÆ. *Bates.*GENUS CALLIDRYAS. *Boisduval.*

[Monograph continued.]

PLATE LI.

36. *Callidryas Statira*, figs. 1, 2, 3, 4.♀ *Papilio Statira*, *Cramer*, Pap. Exot. 2, pl. 120, figs. c, d (1779).♂ *Papilio Alceone*, *Cramer*, Pap. Exot. 2, pl. 144, fig. e (1779).*Colias Evadne*, *Godart*, Enc. Méth. 9, p. 98, n. 28 (1819).*Callidryas Zulema*, *Poey*, Hist. Nat. de Cuba, 1, pp. 197, 198 (1851).White var. ♀ *Papilio Fabia*, *Fabricius*, Ent. Syst. Suppl. p. 426, n. 587, 588 (1798).♂, ♀ *Callidryas Evadne*, var. *Boisduvali*, Sp. Gén. Léop. 1, p. 629 (1836).*Callidryas Boisduvalii*, *Felder*, Wien. Ent. Monatschr. 5, p. 82, n. 37 (1861).

Male. Wings above sulphur-yellow, mealy area nearly white, very broad on frontwing, so as distinctly to enter discoidal cell; margin generally narrowly black, but sometimes without black border; below sulphur yellow, becoming whitish towards inner angle of frontwings and outer margin of hindwings, the latter tinted with golden yellow towards base, a silky white spot at end of cell.

Female. Wings above sulphur yellow, whitish towards outer margin of frontwings and apex of hindwings; frontwings with a small black spot at end of cell, the apical half of costa, apex, and outer margin somewhat broadly black; hindwings with five elongated partly confluent black spots at end of mealy area on outer margin; below sulphur yellow becoming silvery whitish towards outer margin; frontwings with a rosy circled silver spot at end of cell; a rosy spot at base; an irregular waved discal bar running from second median branch to costa; apex and outer margin somewhat broadly lilacine;

crossed near apical margin by a darker wavy line; hindwings with silvery spot at end of cell, a rosy spot at base; an orange nebula spreading from base into the interno-median interspace, an irregular arched series of angular rosy markings beyond cell, outer margin narrowly rosy.

Localities—♂, ♀, Para, Coll. Wallace; Guiana, Coll. B.M.; Bahna, Coll. Ward; ♂, Pebas, Coll. Salvin; E. Peru (*Whitby*), Coll. B.M.; ♂, ♀, Coll. Druce; Ucayah; Maranhão, Coll. Salvin; ♂, Panama (*Salvin*), Colls. B.M. and Salvin; ♀, Guatemala, central valleys, Coll. Salvin; ♂, Venezuela, Coll. B.M.

♂ var. intermediate, paler, and with scarcely any black margin to frontwings—Pacific Slope, Coll. Salvin.

♂ var. intermediate between last and *C. Boisduvalii*—Panama, Coll. Salvin.

var. *C. Boisduvalii*—♀, Brazil; ♂, Quito (*Bourcier*), Coll. B.M.; ♀, Bogota*; Costa Rica; †, Isabel, Coll. Salvin; ♂, Panama (*Salvin*), Coll. B.M.; ♀, Coll. Salvin; ♂, Oaxaca, Coll. B.M.; Oueas, Coll. Salvin.

Much confusion formerly arose between this species and the Indian *C. Cecobis*, on account of the strange resemblance between them; Swainson (Zool. Ill. 1st Ser. pl. 5) figures the female, and remarks: "I have no doubt this is the *Pap. Statira* of Cramer; it is found only in Brazil, and has been erroneously considered by Godart and Latreille as a variety of *C. Jugurthina*, an Indian insect, and which in fact is not in itself a species, being no other than the female of *C. Alenon*,† as an attentive examination of both, collected in Java by Dr. Horsfield, enabled me to ascertain."

Herbst says (Natursystem 5—7, p. 161)—"The habitat is according to Fabricius E. Indies, it strikes me, however, that I have received it from America."

The form *C. Boisduvalii* cannot rank as a species, a complete transitional series in Mr. Salvin's Collection proves it to be simply an albino form of *C. Statira*.

Dr. Theodor Thon in his "Naturgeschichte der Schmetterlinge," says that *C. Statira* "varies so much in colouring, that scarcely two examples resemble one another."

Erichson remarks (Hesern in Britisch-Guiana) that this species occurs in the same situations as *C. Acopis* and *C. Murellina* (*C. Sont.*)

* Specimen labelled by Dr. Felder.

† The *C. Cecobis* of Horsfield is nothing more nor less than *C. Cecobis*.

37. *Callidryas Jaresia*, figs. 5, 6.

♂ *Callidryas Jaresia*, *Buller*, Trans. Ent. Soc. p. 171 (1871).

Mat. Unknown.

Embd. Wings above, orange-yellow; margin and disco-cellular spot black as in *C. Statira*; abdominal area pale ochreous; wings below satiny ochraceous, becoming pearly towards outer margin; markings nearly as in *C. Statira*, but more distinct and rosy; the discal bar broken up and not confounded with the apical nebula; two distinct rosy-encircled silver spots at end of cell.

Locality—♂, Para, Colls. Hewitson, Saunders and Wallace; ♀, Coll. Druce.

This species is nearly allied to *C. Statira*, from which it chiefly differs in colour and form, it appears to be confined to the Lower Amazons, and therefore there is no reason to suppose it to be an extreme variety of that species.

38. *Callidryas Jada*, figs. 7, 8, 9, 10.

♂, ♀ *Callidryas Jada*, *Buller*, Trans. Ent. Soc. p. 11, n. 5 (1870).

Mat. Wings above orange-yellow, with the mealy area sulphur-yellow; no black margin to wings; below golden-yellow, becoming orange-yellow towards base; frontwings with inner angle whitish.

Embd. Sulphur-yellow, becoming orange-yellow towards base; apical half of costa, a patch at apex, interrupted by an oval spot, a moderately broad, internally sinuated, marginal border, and a large spot at end of cell, black; four orange spots running from second median branch to apical patch; wings below pearly tinted with yellow towards base; frontwings with inner half of discoidal cell sulphur yellow; an irregular geminate rosy-encircled silver spot at end of cell; apical half of costa, apex, outer margin and five nearly confluent spots between nervures on disc, rosy; hindwings with an irregular marking at end of cell, an arched series of markings beyond it, and the outer margin rosy.

Locality. ♂, ♀ Central Valleys of Guatemala. Coll. Salvin.

Another interesting species with a somewhat restricted range.

P L A T E L I I I .

39. *Callidryas Neleis*, figs. 1, 2, 3, 4.

Callidryas Neleis, *Boisduval*, Sp. Gen. Léop. 1, p. 629, n. 23 (1836); *Lucas*, in Ramon de la Sagra's Hist. Cuba, Articulata, pl. 15, figs. 5, 5A, 5B (1856).

Male. Wings above sulphur-yellow, with broad, slightly paler mealy area, beginning in the frontwings immediately beyond cell; below pale sulphur-yellow, the costal margin and cell of frontwings bright sulphur-yellow, the bases of all the wings orange-tinted.

Female. Wings above sulphur-yellow; frontwings with base and outer margin golden-yellow and large black spot at end of cell, and seven small hastate spots terminating the nervures on outer margin; hindwings with base and anal area golden-yellow; the costa and inner margin rosy whitish; five small black spots terminating the nervures on outer margin; below pearly whitish, with median area of frontwings, from centre of discoidal cell to external angle, bright sulphur yellow; outer margin rosy tinted; frontwings with pearly lake-encircled spot at end of cell; an angular series of six indistinct purplish spots on disc, and six to seven similar spots terminating the nervures on outer margin; a rosy spot at base; hindwings with costal area ochre-tinted; two silver-centred lake-encircled spots placed obliquely from end of cell, and beyond them an irregular series of discal purplish spots; a rosy spot at base.

I have examined specimens from the following localities:—♂, ♀, Havannah (*Bosk*). Coll. Ducee; ♂, Table-land of W. Mexico, Coll. B.M.; ♂, Central Valleys of Guatemala, Coll. Salvin.

This species is interesting from its odd resemblance to *C. Eubule*, to which, however, it is not structurally allied.

40. *Callidryas Godartiana*, figs. 5, 6, 7, 8.

♀ *Colias Godartiana*, *Swainson*, Zool. Ill. 1st S., pl. 34 (1820).

Callidryas Orbis ♀, *Boisduval*, Sp. Gén. Léop. 1, p. 630 (1836).

Male. Frontwings above with basal half sulphur-yellow tinted with golden-yellow at base;

external half (forming mealy area) white, tinted with sulphur-yellow on the costal margin and with ochre on outer margin; hindwings greyish ochreous, becoming sulphur-yellow above median nervure; mealy border white; below greenish ochreous, the anal area of frontwings being whitish and the basal half of discoidal cell sulphur-yellow; a rosy spot at base; hindwings with two small silver-centred purple-ringed spots placed obliquely from end of cell; five grey discal dashes, placed above first subcostal, radial and median branches; a rosy spot at base, and a few scales of same colour near base and between costal and subcostal nerves.

Female. Wings above ochreous, deepest at base, the frontwings becoming gradually paler externally; a large black spot at end of cell, and a small angulated marking between second and third median branches; apical half of costa a broad apical patch and an irregularly dentated broad border to outer margin black; hindwings with costa pale; five well-defined unequal black spots terminating nervures on outer margin; below, basal area pale ochreous, the discoidal cell and costa of frontwings deeper coloured; external area pearly; frontwings with a large rosy purplish zoned spot at end of cell; a series of seven more or less connected purplish discal spots placed irregularly beyond cell; outer margin broadly rosy becoming purplish internally; a few rosy scales at base; hindwings with two silver-centred spots from end of cell; surrounded externally by a discal series of seven purplish markings, six diffused purplish spots terminating nervures on outer margin; a rosy spot at base.

Localities—♂, ♀. Haiti (*Tweedie*), Colls. B.M., E. Brown, and Salvin; ♀. Porto Rico, Coll. Saunders.

Dr. Boisduval's premature conclusion respecting this species has been the cause of considerable confusion. Poey (in the *Hist. Nat. de Cuba*, 1, p. 196, 1851) publishes the following remarks:—"Mr. Boisduval has referred to the female of this species (*C. Orbis*) the *Colias Godartiana* of Swainson; he, however, retains my name, which is later, placing that of Swainson in the synonymy; the authority of Mr. Boisduval is of the greater weight because he is one of those who have, in our time, been most indefatigable in the study of the Lepidoptera, and I suspect good reasons have not been wanting for his acting as he has done; the following have occurred to me. There are many species of the *Eubule* and *Orbis* group whose females do not exhibit any difference, and the species can only be satisfactorily distinguished when one knows the male;* I myself, if unable to shew the male, female, caterpillar, and chrysalis, could not separate *Orbis* from *Eubule*. This may be seen in the *Pomona*, which Swainson

* No statement more surprising than this could have been made; the *Eubule* and *Orbis* groups being quite distinct, and the males throughout the genus being far more similar than the females.—A. G. B.

figures in his Lepidoptera of Asia, since it in no respect differs from the female of *Orbis*. The figures of Swainson, though brilliant in hue, are not much like the natural colouring; this is what Boisduval justly observes in the 618th page of his History of Lepidoptera, and one may notice it in the manner in which the curved lines of atoms are shewn on the under-surface of his *C. Gobarthiana*. If indeed we could have a guarantee that the original is like what Mr. Swainson has painted, we should be able to assert that it is a distinct species.

"I am ignorant of the habitat of *Gobarthiana*, and if the author did mention it I forgot to make a note of it when his work was at my disposal; if it should turn out to be Asiatic like his *Pamona* we should then have another reason for doubting its identity with *C. Orbis*."

I have quoted the above remarks to shew how carelessly and unfairly an author may be criticised by those who are ignorant of his species; I suppose few more accurate draughtsmen ever existed than Swainson. Dr. Thon, in a highly commendatory notice of the "Zoological Illustrations" (Entom. Arch., Vol. I., p. 89, 1829), justly remarks that this work is "splendid auf schönstes Velinpapier gedruckt und mit Farbe, wie wir Deutsche wenig sehen, rein und lebhaft sorgfältig colorirt, keinem deutschen Werke vergleichbar, ausser einem Exemplar der Insekten belustigungen von *Rissls* Hand."

Dr. Boisduval's supposition has been boldly adopted by Dr. Herrich-Schäffer (Corr.-blatt, p. 169, n. 3, 1864).

41. *Callidryas Hartonia*, figs. 9, 10, 11, 12.

♂, ♀ *Callidryas Hartonia*, *Butler*, Trans. Ent. Soc. pt. 1, p. 10, n. 3 (1870).

Male. Wings above sulphur-yellow, tinted with orange at base; frontwings with mealy area, which occupies apical half of wings nearly white, tinted with sulphur-yellow at the margins; hindwings with costa, inner margin, and mealy area whitish; below sulphur-yellow, the external angle of frontwings and the external area of hindwings becoming gradually whitish to margin; base of wings golden-yellow with orange sealing at base; frontwings with a small silver-centred orange spot at end of cell and seven orange dots forming an irregular series beyond cell; hindwings with an impressed silvery spot near end of cell; a silver-centred orange spot at end of cell and three orange dots below the median branches.

* Donovan.

Female.—Wings above sulphur yellow, the basal area of frontwings golden yellow, the hindwings delicately ochre tinted; frontwings with a large black spot at end of cell; a moderately broad undulate black border to outer margin; hindwings with four black dots at terminations of nervures on outer margin; wings below pale sulphur yellow, the costa of frontwings and basal two thirds of hindwings deeper coloured; frontwings with a large lilacine spot at end of cell, seven spots beyond it, and marginal border as on upperside, rosy lilacine; a rosy spot at base; hindwings with external area pearly, two silver-centred purplish spots from end of cell, surrounded externally by a series of seven irregular purplish discal markings, a rosy spot at base.

Locality—♂, ♀, Jamaica, Colls. B.M., Hewitson and Saunders.

A very constant local representative of *C. Godartiana*.

FAMILY NYMPHALIDÆ.

SUB-FAMILY SATYRINÆ. *Bates.*

PLATE LIII.

GENUS TAYGETIS. *Hübner.*1. *Taygetis Incerta*, fig. 1.

Taygetis Incerta, *Butler & Druce*, Cist. Ent. 5, p. 98 (1872).

Alæ supra fusæ; posticæ ocello medioeri subanali nigro, albo pupillato, ferrugineo cineto: alæ subtus pallidiores, roseo tinctæ; lineis duabus mediis ferrugineis intus ochraceo marginatis; tertia dentato-sinuata submarginali, et quarta marginali, indistinctis; anticæ area externa multo dilutiore; ocello subapicali minuto; posticæ ocellis subsex, quinto medioeri superno, aliis punctiformibus albis: exp. alar. unc. 2, lin. 3.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Possibly the *T. Cælio* of Boisduval.

2. *Taygetis Umbræa*, fig. 2.

Taygetis Umbræa, *Butler & Druce*, Cist. Ent. 5, p. 98 (1872).

Alæ supra fusæ: subtus pallidiores; lineis duabus angulatis mediis, tertia undata submarginali, quarta antemarginali et margine ipso, nigro-fuscis; anticæ punctis tribus minutis subapicalibus albis; posticæ ocellis sex, quatuor punctiformibus albis, quinto permagno, nigro, albo-pupillato: exp. alar. unc. 2, lin. 5.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

3. *Taygetis Leuctra*, fig. 3.

♂ *Taygetis Leuctra*, *Butler*, Cist. Ent. 2, p. 19, n. 3 (1870).

Alæ supra fusæ, fascia lata media obscuriore: subtus fundo pallidioræ;

anticæ lineis duabus mediis nigro-fuscis; area disco-cellulari triangulariter picea, a lineis mediis limitata; linea externa media albedo marginata, pone quam areola albida nebulosa; ocellis quinque discalibus, secundo et quinto parvis nigris, aliis fuscis, omnibus albo-pupillatis, flavo-cinetis; area externa late et obscure fusca; posticæ lineis duabus mediis piceis; area intermedia extrorsum picea; linea externa media albedo marginata; area discali albedo squamosa; ocellis quatuor inerescentibus, primo et quarto nigris, intermediis subfuscis, omnibus albo-pupillatis, flavo-cinetis: exp. alar. mnc. 2, lin. 10.

—: Coll. Kaden in Coll. Druce.

4. *Taygetis Xantippe*, fig. 4.

Taygetis Xantippe, *Butler*, Fabr. Cat. p. 11 (1869); *Cist. Ent.* 2, p. 17 (1870).

♂ Affinis *T. Ypthima* sed major; alæ supra fuscae, anticæ subtus pallidiores plus minus fusco striolatae; margine externo, fascia discali et fasciola discoidea late fuscis; punctis quatuor apud marginem apicalem ocellaribus albinotatis fuscis: posticæ nigro-cinereæ fusco striolatae et ochreco variegatae; lineis duabus mediis undatis parallelis, et linea submarginali irregulariter dentata, fuscis; cella et area apicali partim ochraceis; ocellis quinque inerescentibus nigris albo-pupillatis, brunneo-cinetis; vena discoidali plus minus castaneo nebulosa: exp. alar. mnc. 2, lin. 11.

Brazil. Colls. Kaden in Coll. Druce and B.M.

Formerly supposed to be the *Papilio Chelys* of Fabricius.

5. *Taygetis Ophelia*, fig. 5.

Taygetis Ophelia, *Butler*, *Cist. Ent.* 2, p. 18 (1870).

Alæ supra fuscae, ciliis ochraceis; margine externo, venis, et plaga in anticis disco-cellulari, nigrescentibus; anticæ subtus fusco-cinereæ nigro-irrorate; regionibus disco-cellulari, discali, et apicali, albicantibus; fasciola irregulariter lunata discoidea et fascia discali denticulata, late fuscis; fascia apud angulum externum, aream discalem albidam limitante nigra; ocellis tribus submarginalibus fuscis albo-pupillatis; posticæ fusco-ochraceæ nigro irrorate;

serie irregulari media macularum albidarum; ocellis quinque discalibus indistinctis, primo et secundo minutissimis, nigris, aliis majoribus, ochreis, punctisque tribus infra eos quasi ejectis minutissimis nigris; margine externo introrsum albido crenulato: exp. alar, unc. 3, lin. 2.

--? Coll. Kaden in Coll. Druce.

Most nearly allied to the preceding species.

SUB-FAMILY NYMPHALINÆ. *Bates.*

PLATE LIV.

GENUS ARGYNNIS. *Fabricius.*

Argynnis Vorax, fig. 1.

Argynnis Vorax, *Butler*, Trans. Ent. Soc. p. 403 (1871).

Affinis *A. Adippe*, sed alæ antiæ costa multo longiore, margine externo magis arcuato; posticæ margine interno longiore, omnes supra maculis submarginalibus fulvis angustioribus; subtus characteribus discoideis minus conspicuis; antiæ maculis discalibus majoribus; posticæ pallidiores, area basali viridiore; maculis argenteis vix nigro marginatis; serie ocellorum minus angulata; lunulis submarginalibus viridibus: exp. alar, unc. 3, lin. 2.

Shanghai (*W. B. Pryer*). Coll. Druce.

Nearly allied to *A. Adippe*, but in some respects more like *A. Paphia* above.

GENUS TERINOS. *Boisduval.*

1. *Terinos Fulminans*, fig. 2.

♂ *Terinos Fulminans*, *Butler*, Cist. Ent. 1, p. 9 (1869).

Alæ supra cupreo-fusæ, violaceo micantes; antiæ margine costali et

externo, posticæ area externa, fulvis, plus minus roseo-tinctis et fusco nebulosis; alæ subtus velut in *T. Teuthra*: exp. alar. unc. 3, lin. 3.

Sarawak (*Lore*). Coll. Druce.

There is a series of this fine species in Mr. Druce's Collection.

2. *Terinos Lucilla*, fig. 3.

♂, ♀ *Terinos Lucilla*, *Butler*, Trans. Ent. Soc. p. 189 (1870).

Allinis *T. Clarissæ*, sed supra obscurior; alæ posticæ area externa magis restricta, saturatiore, a seriibus duabus lunularum fuscæ purpurascensium interrupta: alæ subtus fere velut in *T. Clarissa* sed obscuriores rufescenti-violaceæ, fulvo-fusco fasciatæ: exp. alar. ♂, unc. 3, lin. 1.

Luzon, Philippines (*Seaver*). B.M.

GENUS EPIPHILE. *Doubleday*.

Epiphile Grandis, fig. 4.

♀ *Epiphile grandis*, *Butler*, Cist. Ent. 4, p. 76 (1872).

Alæ supra nigro-piceæ; anticæ fascia lata obliqua fulva, introrsum inter ramos secundum et tertium medianos sinuata; maculis tribus subapicalibus, media quarum alba, aliis ferrugineis, prima in costam albo rorata; posticæ costa et apice late fulvis; margine externo anguste ferruginoso; alæ subtus pallide rufo-fusæ; anticæ fascia superna dilutiore; striola disco-cellulari nigra; area interno-mediana diffuse nigra; area apicali cinereo rorata; macula subapicali alba et ocellis duobus in serie eadem obliqua nigris inæqualibus; posticæ macula cuneiformi costali et striga angulata subcostali argenteis; serie ocellorum subseptem brunneorum valde indistinctorum cinereo diffuse cinetorum: exp. alar. unc. 3, lin. 3.

Cartago, Costa Rica (*Von Patten*). Coll. Druce.

The largest species of *Epiphile* yet described.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PIERINÆ. *Bates.*GENUS CALLIDRYAS. *Boisduval.*

[Monograph continued.]

P L A T E L V.

12. *Callidryas Orbis*, *figs. 1, 2, 3, 4.*♂, *Callidryas Orbis* (part), *Poey*, Cent. Lep. Cuba, p. 196, 5 (1852).

Male. Wings above sulphur-yellow, mealy area whitish, clouded with sulphur-yellow towards costa of frontwings; frontwings with a large circular patch covering basal three-fourths of cell and thence extending to inner margin; below golden-yellow; frontwings with external area whitish; a spot at base, a second at end of cell, seven forming an irregular discal series beyond cell, and a squamose submarginal band, reddish; hindwings with a spot at base, two silver-centred from end of cell, five beyond them on disc, and a squamose submarginal streak, reddish.

Female. Wings above orange; frontwings with a black spot at end of cell; seven indistinct discal brown spots beyond cell; seven squamose black spots terminating nervures on outer margin; hindwings with costa and inner margin whitish; wings below pale ochreous with outer margin more or less rusty, bounded internally by lilacine; frontwings with rosy spot at base; a silver-centred reddish spot at end of cell and seven beyond it; hindwings with rosy spot at base; a short reddish irregular band at end of cell enclosing a silver spot and surrounded by a series of reddish markings.

Localities—♂, Haiti, Coll. Salvin; ♀, Havannah, Coll. Kaden in Coll. Druec.

This beautiful species is one of the most remarkable in the genus.

The following species arrived in England during the progress of the present paper, it should follow *C. Virgo*.

13. *Callidryas Intermedia*, *figs. 5, 6, 7, 8.*♂, ♀ *Callidryas Intermedia*, *Buller*, Cist. Ent. 4, p. 81 (Jan., 1872).

Male. Chiefly differs from *C. Neocypris* ♂, in having a linear black spot at end of frontwing cell on upper-surface.

Boisduval, 1873.

Eubule. Chiefly differs from *C. Virgo* ♀, in having the marginal red patches of *C. Rucina* on upper-surface of hindwings.

Locality—♂. ♀, Cartago (*Van Patton*), Coll. Druce.

The following additions may be made to the synonymy:—

1. *Callidryas Crocale*.

♂ *Papilio Lalage*, *Herbst*, *Natursyst. Schmett.* 5, p. 163, pl. 106, figs. 1, 2 (1792).

3. *Callidryas Catilla*.

Papilio nigro-punctatus, *Goeze*, *Beitr.* 1, p. 185, n. 96 (1779).

9. *Callidryas Pyranthe*.

♀ *Papilio flavo-cinereascens*, *Goeze*, *Beitr.* 1, p. 183, n. 86 (1779).

15. *Callidryas Eubule*.

Papilio Eubule, *Brown*, *Book of Butt. and Moths*, p. 46, pl. 5 (1843).

16. *Callidryas Senne*.

Papilio kete-flavus, *Goeze*, *Beitr.* 1, p. 184, n. 92 (1779).

31. *Callidryas Argante*.

Faded. *Papilio pallide-flavus*, *Goeze*, *Beitr.* 1, p. 185, n. 97 (1779).

HAVING now completed the Monograph of this beautiful group, bringing the number of species up to forty-three; it will be necessary, in order to establish the name *Callidryas*, to look into the structural characters of the various species, we then discover that they divide readily into four well marked groups, which I propose to separate as distinct genera.

1. CATOPSILLA. *Hübner* (*part*).

Syn. *Murtia*. *Hübner*.

Males with a well-developed brush of silky hairs towards base of inner margin of *forewings*:

scales above subcostal nervure; of hindwings distinctly thickened; palpi of both sexes short, thickened. Type *C. Crocale*, Cramer.

All the species from the Old World—*C. Crocale*, *Flava*, *Catilla*, *Thaurana*, *Florilla*, *Gyama*, *Pycnolte*, *Chrysis*, *Evangelina*, *Lactea*, *Pyrene*, *Hinda*, *Goryphom*, *Scylla*. 14 species.

2. * PHEBUS. *Hübner* (part).

Males with a well-developed brush of silky hairs, above subcostal nervure, towards base of hindwings; palpi of both sexes short and thickened. Type† *P. Cipris*, Cramer.

All the species from the New World:—

SPECIES WITH TAILS. Sub-gen. *Matura*.

P. Rurina, *Irrigata*, *Intermedia*, *Virgo*, *Bracteolata* (*Cipris*, Fabr.), *Neocypris*. 6 species.

SPECIES WITHOUT TAILS. Sub-gen. *Phæbis*.

P. Cipris (*Hersilia*, Cr.), *Rorata*, *Argente*, *Minuscula*, *Agathis*, *Trite*. 6 species.

3. CALLIDRYAS. *Boisduval*.

Males without brush of hairs on any of the wings; hindwings with more or less defined patch of thickened scales, above subcostal nervure, towards base of hindwings; palpi of both sexes short and thickened. Type *C. Eubale*, Linnaeus.

All the species from the New World:—*C. Eubale*, *Drya*, *Sennæ*, *Editha*, *Philea*, *Thalotris*, *Avellana*, *Substitia*, *Formax*. 9 species.

4. APHRISSA. *n. gen.*

Males without brush of hairs; hindwings with more or less defined patch of thickened scales, above subcostal nervure, towards base of hindwings; palpi of male moderately short, thickened, of female long, with terminal joint well exposed; antennæ moderately slender. Type *A. Stalira*, Cr.

All the species from the New World:—*A. Wallacci*, *Stalira*, *Jurisia*, *Jaba*, *Neleis*, *Gudartiana*, *Hartonia*, *Orbis*. 8 species.

In all probability, when we know more of the early stages of the above four genera they will be found to differ considerably; a comparison of the pupa of *C. florilla* with those of *C. Philea*, *P. minuscula* and *A. Orbis* reveals sufficient differences to suggest non-affinity.

* The genus *Phæbe*, used in *Coleoptera*, is more recent.

† This genus not having been previously adopted, it is allowable to take any of the species cited as the type; I therefore take one from the centre of the genus.

FAMILY NYMPHALIDÆ.

SUB-FAMILY MORPHINÆ. *Butler.*GENUS MORPHO. *Fabricius.**PLATE LVI.**Morpho Zephyritis, figs. 1, 2.*

Morpho Zephyritis, *Butler*, Ann. & Mag. Nat. Hist., s. 4, vol. 12, p. (1873).

Affinis *M. Sulkowskyi*, minor: ♂ supra margine externo nigro multo angustiore; costa alarum anticarum fuscescente; macula nigra anali posticarum minore; maculis rubris minus rubescentibus; subtus fasciis aliter dispositis magis nigrescentibus; ocellis quinque in anticis, connectis; ocellis in posticis latioribus; exp. alar. unc. 3, lin. 9.

♀ Supra magis fuscescens, area externa alarum posticarum angustiore ochracea; subtus fasciis omnibus fuscis nigrisve, aliter dispositis; ocellis quinque in anticis; maculis analibus in posticis minus rubescentibus; exp. alar. unc. 3, lin. 11.

Huaspilla, Peru (*Whitely*). B.M.

Allied to, but quite distinct from *M. Sulkowskyi*.

Morpho Lympharis, sp. n., figs. 3, 4.

♂ Affinis *M. Egea*; differt alis longioribus, supra maculis subcostalibus albis magis approximatis; subtus omnino differt, alis alternatim argenteo et fusco-ferrugineo vel ochraceo fasciatis; area interna alarum anticarum pallide ochracea; antica striga lata apud basin discoidali ferruginosa; maculis apud apicem costalibus argenteis; fascia medio-discalis decrescente, roseo-ochracea, ocellos duos et puncta alba gerente; hæc in posticis ocellos tres decrescentes gerente; fasciis omnibus alarum posticarum magis ochraceo-tinctis; costa alba; area anali pallide virescente, nigro fasciolata et maculata; plicis internervularibus analibus ochreis; exp. alar. unc. 4, lin. 1.

Pucartambo, Peru (*Whitely*).

A beautiful new species allied to *M. Egea* and *M. Cytharis*.

FAMILY LYCENIDÆ.

SUB-FAMILY LYCENINÆ. *Butler.*GENUS LAMPIDES. *Hübner.*

PLATE LVII.

Lampides Zachæina, fig. 1.

♂, ♀ *Lampides Zachæina*, *Butler & Druce*, *Cist. Ent.* 5, p. 104 (July, 1872).

Affinis *L. Cerauno*, ♂ differt supra margine fusco tenuiore; maculis posticarum nigris, obsoletis; subtus obscuriores, posticæ ocellis duobus medio-submarginalibus, magnis, nigris, ochreo-albido cinctis, et chalybeo irroratis: exp. alar. lin. 9.

♀ Supra area basali cærulea latiore; posticæ ocellis subquinque anali-submarginalibus, nigris albo-cinctis; subtus obscuriores, anticæ maculis sex in serie undata discali, magnis, nigris albo-cinctis; posticæ ocellis marginalibus paululum minoribus: exp. alar. unc. 1.

Cartago, Costa Rica (*Fan Patten*). Coll. *Druce*.

SUB-FAMILY THECLINÆ. *Butler.*GENUS STRYMON. *Hübner.*1. *Strymon Pastor*, fig. 5.

Strymon Pastor, *Butler & Druce*, *Cist. Ent.* 5, p. 105 (1872).

Affinis *S. Romulo*, supra cyanea, costis et marginibus externis late nigris; alæ posticæ angulo anali ferrugineo; area abdominali albicante; alæ subtus virides, margine tenuissime rufescente; anticæ margine interno cinereo; posticæ lunulis marginalibus rufo-fuscis; linea media punctiformi argentea.

introrsum rufo marginata; macula apud caudam longiorem submarginali rufa; angulo anali lobato, pieco: exp. alar. unc. 1, lin. 6.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Allied to *S. Romulus* and *S. Menelaus*.

2. *Strymon Agricolor*, fig. 4.

♂ *Strymon Agricolor*, *Butler & Druce*, Cist. Ent. 5, p. 105 (1872).

Alæ supra lilacino-cyanææ, nitentes; costis et marginibus externis medio-criter nigris; basi virescente; posticæ area abdominali dilute fusca; angulo anali paululum rufescente; subtus virides, cupreo nebulosæ; anticæ dimidio interno cinereo; strigula basali mediana nigrescente; lunulis quatuor pone cellam rufis; punctis submarginalibus cinereis; maculis triangularibus marginalibus brunneis; posticæ plaga quadrata basali nigra; linea indistincta media undulata rufescente; lunulis submarginalibus et linea irregulari, aream latam marginalem cupream limitante, rufescentibus: exp. alar. unc. 1, lin. 4.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

3. *Strymon Cælicolor*, fig. 6.

Strymon Cælicolor, *Butler & Druce*, Cist. Ent. 5, p. 106 (1872).

Affinis *S. Aphacæ*, supra cyanææ, costis et marginibus externis late nigrescentibus; posticæ maculis tribus anali-submarginalibus nigris, extrorsum albido-cinctis; macula anali aurantiaea; alæ subtus dilute fuscæ; anticæ lineis tribus albis, prima cellam transerrante, abbreviata; secunda discali, infra ramum primum medianum angulariter interrupta; tertia submarginali lunulari diffusa, maculis griseis extrorsum limbata; posticæ lineis tribus albis, prima media, apud marginem internum litteram W., nigro et rufo indistincte marginatam, formante; secunda discali, aream externam limitante, interrupta, extrorsum nigro marginata, tertia marginali; ciliis fuscis; areola submarginali diffuse albida; macula magna inter caudas, coccinea nigro punctata; secunda subanali, cinerea; tertia anali, nigra, introrsum albo et fulvo cinctis: exp. alar. unc. 1, lin. 4.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

GENUS MITHRAS. *Hubner*.*Mithras Augustinus*, fig. 8.

Mithras Augustinus, *Butler & Druce*, Cist. Ent. 5, p. 106 (1872).

Affinis *M. Monica*, major; alæ supra cyaneo-virides; antice dimidio apicali nigro; postice apice et margine externo nigris; striolis tribus anali-submarginalibus ceruleo-albidis; caudis nigris, albo-acuminatis; alæ subtus fusce, area basali obscuriore; margine externo obscure fusco, introrsum colore dilutiore limbato; antice punctis septem in serie obliqua, aream basalem pone cellam limitante, albis; postice punctis sex in serie sigmoidea, mediis; serie altera subangulata increcente, discali; maculis duabus subanalibus et lineolis duabus anali-submarginalibus, omnibus viridibus; ciliis analibus albo-variegatis: exp. alar. unc. 2.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

GENUS BITHYS. *Hubner*.1. *Bithys Azurinus*, fig. 11.

♂ *Bithys Azurinus*, *Butler & Druce*, Cist. Ent. 5, p. 107 (1872).

Affinis *B. Farentia*, major; alæ supra cyaneæ, costis, apicibus et marginibus externis late nigris; antice macula magna subpyriformi discoidali fulva; postice area abdominali albida; subtus virescenti-cinereæ, linea undulata discali alba, in posticis interrupta; maculis submarginalibus cinereis albo-cinetis; margine externo tenuissime dilutiore, posticarum albo; ciliis caudisque nigrescentibus; macula inter caudas submarginali nigra, introrsum aurantiaco et ochreo-albido cineta; altera anali nigra, squamis albis late cineta: exp. alar. unc. 1, lin. 8.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

2. *Bithys Hesperitis*, fig. 14.

Bithys Hesperitis, *Butler & Druce*, Cist. Ent. 5, p. 107 (1872).

Affinis *B. Stagira*, supra nigro-fusce; postice plaga subpyriformi dimidii

interni subanali, cærulea; area abdominali pallide fusca; macula anali rufa; subtus velut in *B. Stagira*: exp. alar. unc. 1, lin. 6.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

GENUS TMOLUS. *Hübner*.

1. *Tmolus Crolinus*, fig. 13.

Tmolus Crolinus, *Butler & Druce*, Cist. Ent. 5, p. 107 (1872).

Affinis *T. Croto*; alæ supra cyaneæ, anticae dimidio apicali nigro; posticae costa et linea marginali nigris; area abdominali fusco; subtus albidae; antica striga postmedia rufo-fusca; altera discali cinereo-fusca; ciliis griseis; posticae seriebus duabus macularum rufescentium, valde irregularibus, mediis; linea discali nigrescente et altera marginali nigra; macula inter caudas coccinea, nigro notata; aliis submarginalibus griseis; puncto anali diffuse ochreo: exp. alar. unc. 1, lin. 4.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

2. *Tmolus Invisus*, fig. 12.

Tmolus Invisus, *Butler & Druce*, Cist. Ent. 5, p. 108 (1872).

Alæ supra cinereo-fuscae; posticae ocellis marginalibus nigrescentibus albido cinctis; ciliis longissimis albis; alæ subtus pallidiores; area externa albicante; litura disco-cellulari alba; linea discali angulata fusca (aream externam limitante); fascia submarginali, lunulata, decrescente, fusca; posticae dimidio basali fusco alboque maculato, a linea media irregulari nigra limitato; area apicali albicante; fascia submarginali, lunulata, decrescente, fusca; lunulis antimarginalibus pallide fuscis; macula inter ramos primum et secundum medianos ochracea, nigro notata; strigula anali aurantiaca, nigro alboque notata: exp. alar. unc. 1, lin. 3.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

3. *Tmolus Halciones*, fig. 9.

♂ *Tmolus Halciones*, *Butler & Druce*, *Cist. Ent.* 5, p. 108 (1872).

Alæ supra caruleæ; antice dimidio apicali nigro; posticæ costa nigra; linea tenuissima marginali, nigra; area abdominali ochracea: alæ subtus cinereo albide; antice stria discali, extrorsum albo marginata; posticæ stria obscuriore discali, ad marginem internum biangulata; stria maculari, margini externo propiore, albida; maculis duabus subanalibus aurantiacis, nigro notatis, macula grisea interjecta: exp. alar. unc. 1, lin. 2.

Cartago, Costa Rica (*Fan Patten*). Coll. Druce.

4. *Tmolus Isobeon*, fig. 2.

♂, ♀ *Tmolus Isobeon*, *Butler & Druce*, *Cist. Ent.* 5, p. 108 (1872).

Alæ supra chalybeo-fuscæ; posticæ maris plaga magna, femine dimidio interno cyaneo; area abdominali grisea; maculis duabus subanalibus nigris, interna albido cineta; macula anali aurantiaca vel coccinea; alæ subtus ochraceo-fuscæ; antice linea discali fusca, extrorsum dilutius marginata; posticæ linea discali fusca, ad marginem internum biangulata, introrsum coccineo, extrorsum albo marginata; maculis septem submarginalibus, introrsum nigro cinetis, quarta, quinta, sexta, et septima coccineo variis; quinta, sexta, et septima nigro notatis, sexta griseo irrorata, aliis fuscis; linea antemarginali alba; margine nigro: exp. alar., ♂, unc. 1, lin. 1; ♀, unc. 1, lin. 4.

Cartago, Costa Rica (*Fan Patten*). Coll. Druce.

5. *Tmolus Vespasianus*, fig. 7.

♀ *Tmolus Vespasianus*, *Butler & Druce*, *Cist. Ent.* 5, p. 109 (1872).

Alæ supra fuscæ; area basali anticarum et bitriente posticarum lilacinis; posticæ puncto anali coccineo; linea antemarginali albida; alæ subtus fusco-albide; antice linea discali fusca, extrorsum albo marginata; posticæ linea discali tenuissima fusca, introrsum aurantiaco, extrorsum albo marginata; linea margini propiore alba lunulata, extrorsum partim nigro limitata; maculis sex marginalibus ocellaribus, tribus quarum superioribus et quinto, fuscis, albo-

cinctis, aliis aurantiacis, nigro notatis, infima cum striola interno-anali aurantiaca confluenta: exp. alar. unc. 1, lin. 3.

Cartago, Costa Rica (*Fan Patten*). Coll. Druce.

5. *Tmolus Charichlorus*, fig. 10.

Tmolus Charichlorus, *Butler & Druce*, Cist. Ent. 5, p. 109 (1872).

Alæ supra purpureæ; antica costa et plaga quadrata apicali nigris; posticæ area costali et linea marginali nigris; area abdominali cinerea: alæ subtus olivaceo-fuscae; anticæ linea discali nigra, albo marginata; posticæ linea discali nigra, extrorsum albo marginata, ad marginem internum biangulata; maculis marginalibus velut in *T. Isobeone*: exp. alar. unc. 1, lin. 2.

Cartago, Costa Rica (*Fan Patten*). Coll. Druce.

7. *Tmolus Denarius*, fig. 3.

Tmolus Denarius, *Butler & Druce*, Cist. Ent. 5, p. 109 (1872).

Alæ supra cupreo-fuscae; posticæ macula anali sordide rufa, albido cincta; alæ subtus fuscae; anticæ litura disco-cellulari, linea discali et altera submarginali nigro-fuscis, albido plus minusve marginatis; posticæ litura disco-cellulari, velut in anticis; linea discali ad marginem internum biangulata, nigra, introrsum brunneo, extrorsum albo marginata; linea, margini externo propiore, nigra; ocellis septem plus minusve brunneis, quinto et septimo nigro notatis, sexto griseo; linea antemarginali albida: exp. alar. unc. 1.

Cartago, Costa Rica (*Fan Patten*). Coll. Druce.

The Genus *Tmolus* will doubtless eventually have to be subdivided: many of the species being evidently not strictly typical: however, as I have not time at present to examine critically the whole of the *Theclid* group of the *Theclinae*, I have provisionally contented myself with the few genera created by Hubner, some of which differ so strikingly in venation, palpi, and other important generic characters, that it is strange that they should ever have been placed together.

Genera so apparent to the eye, both in marking and form, as *Pantliodes*, *Allides*, *Theritas*, and *Miltheus* are easily separated: the most curious thing, however, is that our British Lepidopterists have never discovered the palpable structural difference between *Thecla* and *Stegmon*, whilst at the same time they have kept as distinct such genera as *Vaessa* and *Grapha*.

FAMILY PAPILIONIDÆ.

SUB-FAMILY PAPILIONINÆ. *Bates.*GENUS PAPILIO. *Linnaus.*

PLATE LVIII.

Papilio Orabilis, fig. 1.*Papilio Orabilis*. *Butler*, Cist. Ent. 4, p. 84 (Jan., 1872).

Alæ supra pallide virescentes vel sulphureo-albæ; anticae fasciola lata submedia cellam transerrante, area apicali et margine externo, nigris; maculis tribus vel subquatuor subapicalibus albidis; posticae area anali et margine externo late nigris; fasciola apud marginem analem coccinea; macula anali triangulari albida, lunulis submarginalibus cæruleo-albidis; cauda albido acuminata: alæ subtus virescentes; anticae macula basali et costa, nigris; fasciola superna longiore; fascia decrescente, aream externo-apicalem introrsum limitante; hæc fusco-grisea, a venis interrupta, extrorsum nigrescente, maculas supernas includente; posticae fascia lata sub-apicali nigra, a costa ad aream externam nigræ attingente; area externa introrsum picco-tincta et a venis nigris persecta; lineolis tribus brunneis angulatis et squamis nonnullis cæruleiscentibus submarginalibus; macula alba et lunulis duabus coccineis albo-rosatis subanalibus; margine abdominali late picco-nigro, extrorsum albido hirtio: exp. alar. unc. 4, lin. 6.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.This fine species is allied to *P. Scylli* and *P. Salvini*.*Papilio Clusoculis*, fig. 2.*Papilio Clusoculis*, *Butler*, Cist. Ent. 4, p. 85 (Jan., 1872).

Alæ supra nigrae, anticae macula rotundata media albida; posticae plaga quinquefida postmedia et macula squamosa subanali, coccineis; macula apicali

et ciliis albis: alæ subtus pallidiores, anticæ macula rotundata media bifida alba; posticæ fuscæ, area externa nigrescente, maculis tribus ovalibus postmediis et quarta parva subanali roseis; maculis sex subluatis submarginalibus coccineis; puncto apicali albo; maculis duabus basalibus coccineis: exp. alar. unc. 3, lin. 4.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Allied to *P. Hippison*.

GEXUS PYRRHOSTICTA. *Butler*.

Pyrrhosticta Lætitia, *fig. 4.*

Papilio (*Pyrrhosticta*) *Lætitia*, *Butler*, *Cist. Ent.* 4, pp. 84 & 86 (Jan., 1872).

♂ Alæ supra nigerrimæ; anticæ fasciola discoidali ochreo-flavida; striolis angustissimis costalibus, fascia macularum angulata discali, et maculis novem cordiformibus submarginalibus, ochreo-flavidis; posticæ fascia discali a venis persecta et maculis submarginalibus lunatis ochreo-flavidis; ciliis albidis: alæ subtus area apicali fusca, maculis quatuor superioribus submarginalibus obsoletis; fasciola discoidali latiore, striolis costalibus latioribus; aliter velut supra; posticæ dimidio basali fusca; maculis fasciæ postmedianæ extrorsum rubro-notatis; lineolis submarginalibus rubris: exp. alar. unc. 4, lin. 6.

♀ Similis mari, major, supra maculis fasciarum minoribus pallidioribus, magis ovalibus; anticæ fasciola discoidali maculisque pone cellam obsoletis; posticæ interspatio discali latiore, squamis discalibus cærulescentibus; maculis anali-submarginalibus rufescentibus: alæ subtus fasciis mediis paullo magis arcuatis; anticæ fasciola lata cellulari; posticæ lunulis submarginalibus majoribus; aliter velut in mare: exp. alar. unc. 4, lin. 6—7.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Closely allied to *P. Phaeton*, but without the tails to hindwings, and with narrower bands.

Pyrrhosticta Vulnerata, fig. 3.

Papilio (*Pyrrhosticta*) *Vulneratus*, *Butler*, *Cist. Ent.* 4, pp. 85 & 86 (Jan., 1872).

♂ *Allinis* precedenti, supra maculis omnibus duplo minoribus; anticae fasciola nulla discoidali et maculis nullis inter venas discoidales; posticae serie macularum discalium multo magis arcuata; anticae subtus fere velut in *P. Laelilie*; posticae macula solum una subanali ochreo-albida rubro-tincta, aliis omnibus rubris, parvis: exp. alar. unc. 4, lin. 8.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

Allied to *P. Victoria*.

FAMILY HESPERIDÆ.

GENUS HESPERIA. *Fabricius**

P L A T E L I X.

1. *Hesperia Onara*, fig. 11.*Hesperia Onara*, *Butler*, Trans. Ent. Soc., p. 498 (Dec., 1870).

Alæ antice fuscæ; maculis tribus mediis hyalinis; posticæ oclraceæ, area basali pallide fusciscente; arcis apicali et costali nigro-fuscis; alæ antice subtus plaga medio-costali flavescente; aliter velut supra: posticæ oclraceæ, apud costam albicantes, arcis basali et apicali nigro-fuscis: exp. alar. unc. 1, lin. $9\frac{1}{2}$.

East Indies: Coll. Kaden in Coll. Druce.

2. *Hesperia Hurama*, fig. 10.*Hesperia Hurama*, *Butler*, Trans. Ent. Soc., p. 498 (Dec., 1870).

Alæ supra picco-fuscæ; antice area basali pallidiore; posticæ area interna pallidiore: alæ antice subtus fuscæ, area media obscuriore, a linea pallida extrorsum limitata; arcis apicali et costali purpureo nitentes; posticæ fuscæ,

* My reasons for adopting *Isone* as the *Hesperia* of Fabricius having been misunderstood, I take this opportunity of explaining them.

Fabricius described the genus in his *Entomologia Systematica*, vol. iii., Gloss. 1, p. 325 (1793) and gave *no type*, but used the following words in his description: "Antennæ clava elongata, sæpius uncinata"; these words at once fix the type as somewhere amongst the *Hesperia arbicole*, (notwithstanding the fact that, in his *Systema Glossatorum*, Fabricius refers it to the *rurales*); the *Hesperia* of Cuvier has for its type *H. Malva* (as Mr. Crotch has pointed out *Cat. Ent.* p. 62); but *Pægus Malva* (of all the *Hesperia arborole*) is about the worst to have chosen as the type, for it *does not fit* the Fabrician description; therefore it is clear that *P. Malva* could not have crossed the mind of Fabricius when he penned his description, and *cannot* be his type: later authors have referred the dark coloured species of *Psephenella* and *Cirystus* to *Hesperia*, evidently taking *H. Eclatationis* as the type, it being the first species which he describes under his *arbicole*, but as *H. Eclatationis* turns out to be an *Isone* and not, as formerly supposed, a *Psephenella* I have taken *H. Eclatationis* as the type.

The first of the *Hesperia Rurales* is a species of the family *Erycinidae*.

purpureo nitentes; plaga anali magna, nigra; fascia lata discali alba: exp. alar. unc. 2, lin. 1.

Cape York, Coll. Druce; Champion Bay. Aru Islands. B.M.

The most beautiful species of the *Abasis* group, and more nearly allied to *H. Discolor* than to any other described form.

3. *Hesperia Vitta*, fig. 9.

Hesperia Vitta, *Butler*, Trans. Ent. Soc., p. 498 (Dec., 1870).

Alæ supra velut in specie præcedente, sed pallidiores; alæ anticæ subtus fusca, macula disco-cellulari cæruleo-albida; area media nigra, a fascia diffusa pallida extrorsum limitata, posticæ area basali virescente; fascia postmedia alba cæruleo marginata, ad angulum analem a plaga nigra interrupta; ciliis obscure cinereis a linea pallida intersectis; exp. alar. unc. 2, lin. 2.

Sarawak (*Lowe*). Coll. Druce.

This species belongs to the *Abasis* group.

GENUS PYRRHOPYGA. *Hübner*.

Pyrrhopyga Jamina.

Pyrrhopyga Jamina, *Butler*, Trans. Ent. Soc., p. 499 (Dec., 1870).

Pyrrhopyga Zimra, *Hewitson*, Ex. Butt. iv., Pyrrh. pl. ii., fig. 11 (Oct., 1871).

This pretty species having been well figured by Mr. Hewitson, I have not thought it worth while to repeat it upon my plate.

GENUS LEUCOCHITONEA. *Wallengren*.

Leucochitonea Paradisea, fig. 8.

Leucochitonea Paradisea, *Butler*, Trans. Ent. Soc., p. 499 (Dec., 1870).

Alæ supra nigra, anticæ fulvo et hyalino albo maculata; posticæ plaga

uagna media alba a venis late nigris perceta: corpus nigrum, capite albo-punctato; thorace rubro-maculato; abdomine a latere fulvo maculato; alæ subtus fere velut supra; anticæ autem maculis omnibus albis; posticæ vena mediana haud nigrescente; striga abdominali alba: corpus nigrum, capite et prothorace fulvis, abdomine strigis ventrali et laterali albis: exp. alar. unc. 1, lin. 9.

Port Natal. Coll. Druce.

This is the third described species of *Leucochitona*, the species described by recent authors being referable to the genera *Pyrgus*, *Achlyoptes*, *Antigonus*, *Helias*, *Tajiales* and other Hesperidian groups: the female of *P. Paradisea* was in Mr. Saunder's Collection, and has now passed into the hands of Mr. Druce.

GENUS ERYCIDES. *Hübner*.

Erycides Yokhara, fig. 6.

Erycides Yokhara, *Butler*, Trans. Ent. Soc., p. 500 (Dec., 1870).

Alæ supra chalybeo-nigræ; anticæ fascia obliqua media; fasciola a nervulo tertio mediano perceta, punctisque duobus subapicalibus, subhyalinis rufo-fulvis; strigis nonnullis ejusdem coloris interno-basalibus; posticæ fasciis tribus decrescentibus, prima cellule basim transerrante secunda postcellulari, tertia submarginali apud angulum analem maculari, et strigula interna, rufo-fulvis; ciliis albo-variis; corpus nigrum, thorace quadrifasciato; abdomine fulvo lateraliter fasciato; alæ subtus fere velut supra: corpus nigrum: exp. alar. unc. 2, lin. 9.

Peru. Colls. Druce and B.M.

Allied to *E. Pitala* and closely resembling *Pyrrhopyga Pitypsa*.

GENUS CARYSTUS. *Hübner*.

1. *Carystus Ozota*, fig. 3.

Carystus Ozota, *Butler*, Trans. Ent. Soc., p. 500, n. 1 (Dec., 1870).

Alæ supra nigro-fusæ; anticæ maculis duabus hyalino-albis; posticæ

fasciola media hyalino-alba: alæ subtus fere velut supra; antice rufo-fusce, macula interna alba; postice obscure rufo-fusce, area abdominali pallidior: fascia media alam transerrante, alba; corpus thorace pallide fusco, abdomine albo; palpis flavidis: exp. alar. unc. 1, lin. 7.

Venezuela. Coll. Kaden in Coll. Druce.

Nearly allied to *C. Odvina*.

2. *Carystus Jabesa*, fig. 2.

Carystus Jabesa, *Butler*, Trans. Ent. Soc., p. 501, n. 2 (Dec., 1870).

Alæ supra nigre; antice puncto elongato medio albo; postice macula media irregulari alba, et strigula interna alba; corpus fuscum: alæ subtus rufo-fusce; antice puncto medio elongato; postice fascia lata media flavescens, apud marginem internum a puncto et macula triangulari, nigris, signata: corpus pallide fuscum: exp. alar. unc. 1, lin. 2.

Tocantins River. Coll. Druce.

There is a species, allied to the above, in the British Museum, from Para.

3. *Carystus Jaconia*.

Peleus Gentius, *Swainson*, Zool. Ill. Ins. ii., pl. 75, fig. 1 (1833).

4. *Carystus Canente*, fig. 5.

Carystus Canente, *Butler*, Trans. Ent. Soc., p. 501, n. 4 (Dec., 1870).

Alæ supra velut in *C. Luca*; subtus antice macula costali fulva; margine externo cinereo; postice puncto medio albo; fascia subapicali alba; margine externo cinereo; aliter velut supra: exp. alar. unc. 1, lin. 10.

—? Coll. Kaden in Coll. Druce.

Closely allied to *C. Luca* of Fabricius.

5. *Carystus Obeda*, fig. 4.

Carystus Obeda, *Butler*, Trans. Ent. Soc., p. 502, n. 5 (Dec., 1873).

Alæ supra fusce; maculis duabus inter nervulos medianos, punctisque tribus apud apicem hyalino-albis; posticæ ciliis albis; alæ subtus rufo-fusce; posticæ punctis duobus plus minusve distinctis pone cellam albis; corpus fuscum: exp. alar. unc. 2.

Venezuela. Colls. Kaden in Coll. Druce and B.M.

Allied to the preceding species, but very distinct.

6. *Carystus Ladana*, fig. 1.

Carystus Ladana, *Butler*, Trans. Ent. Soc., p. 502, n. 6 (Dec., 1870).

Alæ supra rufo-fusce; anticæ fascia lata aurantiaca; corpus rufo-fuscum; alæ anticæ subtus pallidiores, fascia elongata; posticæ rufo-fusce, arcis basali et abdominali pallidioribus; venis disco-cellularibus et macula subanali diffusa aurantiacis; corpus fulvum: exp. alar. unc. 1, lin. 8.

Borneo. Coll. Druce.

Allied to the preceding and to *C. Celsus* of Cramer, but differing from the latter in the form of its wings, and the opacity of the orange band.

GENUS PROTEIDES. *Hübner*.*Proteides Xarippe*, fig. 7.

Proteides Xarippe, *Butler*, Trans. Ent. Soc., p. 502, n. 1 (Dec., 1870).

Alæ supra rufo-fusce, obscure, area basali virescente; anticæ macula discoidali hyalina et serie angulata macularum quinque hyalinarum; posticæ macula submedia hyalina bifida; ciliis apicalibus et analibus fulvis; anticæ subtus fusce, area apicali rufescente, maculis velut supra hyalinis; striola obliqua apicali aurea et altera costali ad basim eurrente; posticæ obscure rufo-fusce; costa et margine externo aureis, linea arcuata postmedia maculas hyalinas includente; striga media reticulata et altera cum ea connecta et ad

basim currente, aureis: corpus griseo-fuscum, abdomine palpisque pallidioribus, flavidis: exp. alar. unc. 1, lin. 7.

—? Coll. Kaden in Coll. Druce.

Nearly allied to *P. Lutitia* of Hewitson, but (as anyone may see by comparing the figures of the two species), quite distinct. I have compared examples of *P. Lutitia*, in Mr. Druce's Collection, and named by Mr. Hewitson, with examples of *P. Xarippe*, and find them very different in pattern and coloration.

GENUS PLASTINGIA. *Butler.*

Plastingia Hieroglyphica, *fig. 12.*

Plastingia Hieroglyphica, *Butler*, Trans. Ent. Soc., p. 511, n. 2 (Dec., 1870).

Alæ supra nigre fulvo maculatæ: corpus fuscum fulvo maculatum: alæ subtus fere velut supra: corpus cinerescens, striga ventrali fulva: exp. alar. unc. 1, lin. 6.

Sarawak. (*Lowe.*) Coll. Druce.

The most remarkable of the species of this genus.

FAMILY NYMPHALIDÆ.

SUB-FAMILY NYMPHALINÆ. *Bates.*GENUS MYSCELIA. *Doubleday.**PLATE LX.**Myscelia Pattenia*, *fig. 1.*

Myscelia Pattenia, *Butler & Druce*, *Cist. Ent.* 5, p. 101 (1872).

Affinis *M. Ethusa*, differt supra fasciis omnibus cyaneis, (quarum duæ in cella anticarum sunt), angustioribus, secunda et tertia posticarum confluentibus: alæ subtus fere velut in *M. Cyanathe*: exp. alar. unc. 2, lin. 8.

Cartago, Costa Rica (*Fau Patten*). Coll. *Druce*.

Allied to *M. Ethusa* of Boisduval, below almost exactly like *M. Cyanathe* of Felder, of which it may possibly be the female.

GENUS MEGALURA. *Blanchard.**Megalura Valetta*, *fig. 2.*

Megalura Valetta, *Butler & Druce*, *Cist. Ent.* 5, p. 101 (1872).

♀ Alæ supra fuscæ, striis duabus mediis æquidistantibus nigro-fuscis; anticæ lineis discoideis apud basim nigrescentibus; area apicali, a fascia transversa decrescente alba introrsum limitata, nigro-fusca; fascia alba extrorsum crenata, maculis subtribus submarginali-analibus, punctisque duobus subapicalibus albidis; posticæ apice diffuse ochreo; fascia submarginali, apud arcum analem maculari et nigrescente, albido maculata; apud apicem nigro-fusca, ochraceo trimaculata; stria antemarginali nigra, ciliis albis; cauda inferiore fulvo-rorata: corpus fuscum, palpis fulvo-squamatis: alæ subtus ochraceo-albidæ; striis duabus basalibus ochreis, fascia ejusdem coloris, in medio pallescente, introrsum in posticis diffusa; fascia mediâ brunnea, extrorsum lilacino limitata, apud angulum analem recurvata et ad angulum internum eurrente; fascia pone eam fusca, in posticis duplo latiore, lilacino

persecta; area externa fuscescente; maculis submarginalibus albis, subtriangularibus, apud marginem posteriorem posticarum intus nigro-lunatis; margine late brunneo, extrorsum ochreo, et in regione anali posticarum nigro, squamato; puncto subanali nigro; corpus albidum: exp. alar. unc. 2, lin. 9.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Nearly allied to *M. Marcella* and most like the white banded form of the female of that species, but the hindwings differ above and the bands on the under-surface are differently arranged.

GENUS PAPHIA. *Fabricius*.

Paphia Herbacea, fig. 3.

♂ *Paphia Herbacea*, *Butler & Druce*, Cist. Ent. 5, p. 100 (1872).

Alæ supra cyaneo-nigræ; area basali late viridi; anticæ macula sesqui-altera ejusdem coloris subapicali; posticæ arcis costali et abdominali fuscis; macula ovali subcostali aurantiæa; punctis tribus submarginalibus albis; corpus fuscum: alæ subtus griseæ, fusco reticulatæ; fascia lata inæquali, in posticis angulata et abbreviata, castanea; anticæ costa pone fasciam albo-punctata; lineolis duabus fuscis; area externa diffuse ferruginosa; area anali albida; posticæ punctis duobus subcostalibus argenteis; fasciola submarginali, ad angulum analem oblique currente, diffuse ferruginosa; punctis quinque submarginalibus, secundo maximo, hoc et tercio nigro-notatis, albis; corpus cinereo-fuscum: exp. alar. unc. 2, lin. 8.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

Belongs to the *Argiolissa* group.

GENUS APATURA. *Fabricius*.

Apatura Plesaurina, fig. 4.

Apatura Plesaurina. *Butler & Druce*, Cist. Ent. 5, p. 102 (1872).

♂ Alæ supra fusce, characteribus cellularibus nigris; fasciis duabus submarginalibus nigris; fascia lata regulari media, in anticis ochreo-albida, (plaza

aurantiaca et macula costali cum ea nexis), in posticis alba, in venam internam abrupte terminata; fasciola anali ferruginea; lunulis duabus analibus cinereis; corpus piccum; alæ subtus velut in *A. Laura* et affinibus: exp. alar. unc. 2, lin. 6.

Cartago, Costa Rica (*Van Patten*.) Coll. Druce.

Not unlike *Heterochrou Pleasure* on the upper-surface.

GENUS ADOLIAS. *Boisduval*.

Adolias Laverna, *fig. 5*.

Adolias Laverna, *Butler*, *Cist. Ent.* 2, p. 29 (Jan., 1870).

♂ Affinis *A. Salia* et *Romada*; alæ supra fusca, characteribus consuetis basalibus nigris; fascia lunulari a venis interrupta albida; linea lunulari fusca fasciam albam persectante; area externa pallide fusca; posticæ area externa introrsum violacea, extrorsum pallide fusca, ad apicem albicante; lineolis septem hastatis discalibus nigris; margine fusco: corpus fuscum: alæ subtus ochrea; lineis supernis nigris; fascia discali communi hastato-lunulari, roseo-albida, fusco utrinque limitata; posticæ area abdominali virescente: corpus albidum: exp. alar. unc. 2, lin. 2.

♀ Omnino velut in *Tanaecia Palasara* colorata.

♂, Borneo, Coll. Druce; ♀, Peuang. Coll. B.M.

At once distinguished from its allies by the violet inner half of the external area of the hind-wings which in *A. Romada* is bright blue, and in *A. Salia* green; in *A. Decorata* it is also bright bronzy-green.

PLATE LXV.

FAMILY ZYGENIDÆ.

GENUS MASSAGA.* Walker.

Massaga virescens, n. sp., fig. 15.

Similis *M. Maritona*, differt colore viridiore, fasciis angustioribus, flavo-albidis; pilis analibus flavis, brevioribus: exp. alar. unc. 2, lin. 1.

Fantee, Cape Coast (*Ussher*). Coll. Swanzy.

GENUS GYMNELIA. Walker.

Gymnelia Jansonis, fig. 17.

Gymnelia Jansonis, *Butler & Druce*, Cist. Ent. v., p. 116 (July, 1872).

Cartago, Costa Rica (*Van Patten*). Coll. Janson.

This and the following moths will not be re-described, on account of our limited space.

GENUS EUCHROMIA. Hübner.

Euchromia scintillans, fig. 16.

Euchromia scintillans, *Butler*, Cist. Ent. iv., p. 87 (Jan., 1872).

Cartago, Costa Rica (*Van Patten*). Coll. Janson.

FAMILY LITHOSIIDÆ.

GENUS DIOPTIS. Hübner.

1. *Dioptis Ithomeina*, fig. 8.

Dioptis Ithomeina, *Butler*, Cist. Ent. iv., p. 87 (Jan., 1872).

Cartago, Costa Rica (*Van Patten*). Coll. Janson.

* This genus has been referred, in the Zoological Record, to the *Acridæ*, but the form of the antennæ seems to indicate a much greater affinity to the *Zygenidæ*.

2. *Dioptis noctiluces*, fig. 7.

Dioptis noctiluces, *Buller*, Cist. Ent. iv., p. 88 (Jan., 1872).
Cartago, Costa Rica (*Van Patten*). Coll. Janson.

GENUS CHRYSAUGE. *Hubner*.

Chrysauge lutescens, fig. 11.

Chrysauge lutescens, *Buller*, Cist. Ent. iv., p. 88 (Jan., 1872).
Cartago, Costa Rica (*Van Patten*). Coll. Janson.

FAMILY ARCTIIDÆ.

GENUS PERICOPIS. *Hubner*.

1. *Pericopis lucifer*, fig. 1.

Pericopis lucifer, *Buller*, Cist. Ent. vi., p. 126 (May, 1873).
Espirito Santo. Coll. Hope, Oxford.

This, and the other four species described in the same paper, were lent to me by W. Wilson Saunders, Esq., about a year ago.

2. *Pericopis Fantasma*, fig. 2.

Pericopis Fantasma, *Buller*, Cist. Ent. vi., p. 126 (May, 1873).
Bogota. Coll. Hope, Oxford.

3. *Pericopis Flora*, fig. 9.

Pericopis Flora, *Buller*, Cist. Ent. vi., p. 127 (May, 1873).
Guatemala. ♂, B.M., ♀, Coll. Hope, Oxford.

4. *Pericopis Leonina*, fig. 10.

Pericopis Leonina, *Butler*, Cist. Ent. iv., p. 89 (Jan., 1872).
Cartago, Costa Rica (*Van Patten*). Coll. Janson.

5. *Pericopis Irenides*, fig. 11.

Pericopis Irenides, *Butler*, Cist. Ent. iv., p. 88 (Jan., 1872).
Cartago, Costa Rica (*Van Patten*). Coll. Janson.

6. *Pericopis Sibylla*, fig. 12.

Pericopis Sibylla, *Butler*, Cist. Ent. vi., p. 127 (May, 1873).
Espírito Santo. Coll. Hope, Oxford.

GENUS EUCYANE. *Walker*.*Eucyane Hystaspes*, fig. 6.

Eucyane Hystaspes, *Butler*, Proc. Zool. Soc., p. 82 (Jan., 1871).
Venezuela (*Dyson*). B.M.

GENUS GYARA. *Walker*.*Gyara Clara*, fig. 13.

Gyara Clara, *Butler*, Cist. Ent. vi., p. 128 (May, 1873).
Espírito Santo. Coll. Hope, Oxford, and B.M.

FAMILY REMIGIIDÆ.

GENUS REMIGIA. *Günther*.*Remigia impressa*, fig. 19.

Remigia impressa, *Butler & Druce*, Cist. Ent. v., p. 117 (July, 1872).
Cartago, Costa Rica (*Van Patten*). Coll. Janson.

FAMILY LARENTIIDÆ.

GENUS SCORDYLIA. *Gutwies.**Scordylia mortipax*, fig. 18.

Scordylia mortipax, *Butler & Druce*, Cist. Ent., v., p. 118 (July, 1872).
Cartago, Costa Rica (*Van Patten*). Coll. Janson.

FAMILY EMPLOCIIDÆ.

GENUS EMPLOCIA. *Herrich-Schäffer.**Emplocia primulina*, fig. 3.

Emplocia primulina, *Butler & Druce*, Cist. Ent. v., p. 118 (July, 1872).
Cartago, Costa Rica (*Van Patten*). Coll. Janson.

FAMILY TORTRICIDÆ.

GENUS ATTERIA. *Walker.*1. *Atteria Volcanica*, fig. 4.

Atteria Volcanica, *Butler*, Cist. Ent. iv., p. 90 (Jan., 1872).
New Granada. Coll. Janson.

2. *Atteria Leopardina*, fig. 5.

Atteria Leopardina, *Butler*, Cist. Ent. iv., p. 89 (Jan., 1872).
Cartago, Costa Rica (*Van Patten*). Coll. Janson.
The Note in Cist. Ent. was wrongly referred to this species.

FAMILY NYMPHALIDÆ.

SUB-FAMILY SATYRINÆ. *Bates.*GENUS STIBOMORPHA. *Butler.*

P L A T E L A I I I.

1. *Stibomorpha decorata*, fig. 3.

Stibomorpha decorata, *Butler*, Ent. Mo. Mag. ix., p. 205 (Feb., 1874).

Alæ supra fusæ; anticæ area discoidali fulvescente; linea postmediana transversa obscura, extrorsum fulvo diffuse marginata; macula subapicali nigra; margine externo late nigrescente; ciliis sordide albidis, fusco maculatis; posticæ area basali fulvo hirta; maculis tribus quatuorve submarginalibus fulvis; margine externo ciliisque velut in alis anticis; alæ anticæ subtus ochraceo fulvæ; area apicali et strigula lineam postmedianam limitante pallide ochraceis; costæ medio et angulo anali fusciscentibus; ocello magno subapicali nigro, bipupillato; linea submarginali nigrescente; margine argenteo albicante; posticæ pallide ochraceæ; area interno-basali grisescente, fascia lata irregulari media fusciscente, argenteo extrorsum limitata; nebula discali ocellos quinque inæquales gerente; fascia submarginali undulata fusco-grisescente, nigro limitata; margine externo argenteo-albicante; ciliis velut supra; exp. alar. unæ. 2.

High Mountains of Santiago (*E. C. Reed*). Colls. *Butler & Reed*.

2. *Stibomorpha Monachus*, fig. 2.

Satyrus Monachus, *Blanchard* in *Gay's Fauna Chilena* vii., p. 35, n. 5 (1852).

Pedaliodes lugubris. *Butler*, *Cist. Ent.* ii., p. 25, n. 4 (1870).

"Venezuela." Coll. *Kaden* in Coll. *Druce*; *Chili*, Colls. *B.M. & Reed*.

3. *Stibomorpha tristis*, fig. 1.

Argynnis tristis, *Guérin*, Voy. Coq. pl. 15, fig. 5 (1829).

Satyrus tristis, *Guérin*, Voy. Coq. ii., p. 281 (1832).

Pedaliodes Oaxes, *Butler*, Cist. Ent. ii., p. 25, n. 3 (1870).

“Cuba.” Coll. Kaden in Coll. Druce; Chili, Colls. Reed & Butler.

The incorrect localities appended to the two preceding species have been the cause of their being re-described; with such localities and without examples of the Chilian species to compare with them, it was impossible to guess that they could be the species described by Blanchard & Guérin: *Satyrus tristis* of Blanchard is a distinct species and may be named *S. Reutili*.

The genus *Stibomorpha* is intermediate in character between *Elina* and *Pedaliodes*, from the former it differs in having the lower disco-cellular of secondaries oblique, with a slight central angle: in *Elina* it is transverse and has a very acute angle in the centre: in *Pedaliodes* it is carried straight across transversely without any angle, consequently this veinlet is in *Pedaliodes* considerably shorter than in the two others.

GENUS PEDALIODES. *Butler*.1. *Pedaliodes rapha*, fig. 4.

Pedaliodes rapha, *Butler*, Cist. Ent. ii., p. 24, n. 2 (1870).

Alæ supra fuscae; area apicali cupreo-tincta; antice fasciola fere recta introrsum diffusa, extrorsum dentata; postice angulo anali ferrugineo; subtus pallidiores; postice areis abdominali et anali ferruginosis, nigro striolatis; punctis quatuor ocellaribus in serie undulata, apicali-discalibus argenteis; maculis tribus anali-discalibus pyramidatis aureo-flavis; punctis subtribus valde indistinctis, subanalibus, nigris; linea indistincta undata submarginali; corpus cinereo-fuscum: exp. alar. unc. 1, lin. 10.

—? Coll. Kaden in Coll. Druce.

2. *Pedaliodes Japhleta*, fig. 5.

‡ *Pedaliodes Japhleta*, *Butler*, Cist. Ent. ii., p. 24, n. 1 (1870).

Alæ supra fuscae; antice subtus fuscae; fascia perlata media, irregulari, obscuriore, ferrugineo utrinque diffuse limitata; costa et area externo-apicali

pallidioribus nigro-striolatis; macula subapicali costali punctisque quatuor discalibus albis; posticæ fere velut in *P. piletha*; exp. alar. unc. 2, lin. 4.

—? Coll. Kuden in Coll. Druce.

GENUS OXEOSCHISTUS. *Butler.*

Oxeoschistus Euriphyle, fig. 6.

Oxeoschistus Euriphyle, *Butler*, Cist. Ent. iv., p. 73 (1872).

Alæ supra fuscæ, anticæ puncto pone cellam subcostali et maculis quinque submarginalibus fulvis, primo geminato, quarto nigro pupillato; posticæ fascia lata discali extrorsum irregulari fulva, ocellos septem nigros gerente; lineola anali submarginali fulva; corpus nigrum; alæ subtus pallidiores, anticæ area apicali cinereo et ferrugineo rotata; stria media et macula costali pone cellam triangulari sordide albis; macula trifida subapicali, extrorsum punctis quatuor ocellaribus albis limitata; maculis quatuor supernis, majoribus, increscentibus, ochreis; puncto apicali, humilisque duabus marginalibus ochreis; posticæ pallide fuscæ, stria irregulari cellam transerrante, et striola ad cellæ finem albidis; fasciâ superna multo dilutiore, extrorsum albida, in medio fuscescente; ocellis majoribus, pallide iridatis, albo pupillatis; striga marginali diffuse ochracea; corpus fuscum, palpis pallidis; exp. alar. unc. 2, lin. 6.

Cartago, Costa Rica (*Van Patten*). Coll. Druce.

GENUS CORADES. *E. Doubleday.*

1. *Corades laminata*, fig. 7.

♂ *Corades laminata*, *Butler*, Cist. Ent. ii., p. 27, n. 2 (1870).

Alæ supra fuscæ; anticæ macula pone cellam subcostali bisecta ochrea, plagisque quatuor discalibus pallide fuscis, introrsum ochraceo-atomariis et fasciam formantibus; posticæ fascia elongato-pyramidata ochraceo-fusca, a costa ad angulum analem currente; margine externo ciliisque ochreis; anticæ subtus fuscæ, pone medium obscuriores, area apicali late ferruginea argenteo

notata; plaga pone cellam costali et tribus discalibus in venas positis ochraceis; posticæ ochreæ argenteo notata; fasciâ lata mediâ ferruginea, argenteo utrinque marginata, et stria ejusdem coloris diffusa cellam autè medium transerrante; stria subapicali et margine externo-anali late ferrugineis; corpus fuscum: exp. alar. unc. 3. lin. 4.

Bogota. Coll. Kaden in Coll. Druce.

2. *Corades fluminalis*, fig. 8.

♀ *Corades fluminalis*, *Butler*, Cist. Ent. ii., p. 26. n. 1 (1870).

Alæ supra fusæ; anticæ apicè paululum pallidiore; maculis duabus pone cellam subcostalibus albidis, a vena subcostali bisectis; maculis tribus discalibus fulvis inter ramos medianos angulariter positis; posticæ striolis tribus inter venas ferrugineis; alæ anticæ subtus basi pallidiore, apicè multo pallidiore, introrsum a maculis duabus diffusis albidis limitato; macula pone cellam costali albida; tribus supernis discalibus pallidioribus; posticæ ochraceæ cupreo-fusco striolata; fasciâ lata mediâ, introrsum diffusa, extrorsum albido limitata, et margine externo-anali, cupreo-fuscis; punctis quatuor apicali-discalibus, valde indistinctis, et plurimis submarginalibus lilacino-albidis; corpus ochraceo-fuscum; exp. alar. unc. 3.

—? Coll. Kaden in Coll. Druce.

Allied to the preceding species.

SUB-FAMILY NYMPHALINÆ. *Bates*.

GENUS ERESIA. *Boisduval*.

PLATE LXIII.

Eresia Dismorphina, fig. 1.

Eresia Dismorphina, *Butler*, Cist. Ent. iv., p. 78 (Jan., 1872).

Alæ anticæ supra nigro-fuscæ; plaga magna cuneiformi interno-mediâ, a vena mediana late persecta, ferruginosa; seriabus tribus æquidistantibus obliquis et seriâ submarginali, macularum flavarum; posticæ ferruginosæ, basi,

costa apud apicem, et margine externo, nigris; maculis submarginalibus flavidis; ciliis albo maculatis; alæ subtus multo pallidiores; maculis alarum anticarum flavidis, elongatis; apice flavido; area interno-discoidea ferruginosa; posticæ costa ferruginosa, ad basin alba; fascia lata subcostali nigra; maculis submarginalibus majoribus albis; area centrali albida: aliter velut supra: exp. alar. unc. 2, lin. 4.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

GENUS PHYCIODES. *Hübner*.

Phyciodes fulviplaga, fig. 2.

Phyciodes fulviplaga, *Butler*, Cist. Ent. iv., p. 77 (Jan., 1872).

Alæ supra nigro-fuscae, anticæ fulvo-irrorata; punctis duobus discoideis, duobus pallidioribus subapicalibus, duobus squamosis medianis, uno submarginali et uno subanali, plaga quadrifida pone cellam subcostali, et macula apud marginis externi medium, fulvis; posticæ fulvo-sparsæ: margine late nigro; ciliis humilisque submarginalibus analibus fulvis; corpus nigrum; alæ subtus fuscae: anticæ area mediana nigra; punctis duobus basali-discoideis, striola discoidali, puncto disco-cellulari, plaga pone cellam, macula discali, et lunula submarginali, fulvis; maculis tribus pone plagam albis; humilis tribus subapicalibus pallide fuscis vel cinereis, extorsum nigro limitatis; posticæ ocellis discalibus, fascia valde irregulari media, characteribus nonnullis basalibus, et linea humulata submarginali cinereis; margine externo brunneo; corpus cinereum: exp. alar. unc. 1, lin. 3.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.

GENUS CATAGRAMMA. *Boisduval*.

Catagramma Latona, fig. 3.

? *Catagramma Latona* *Butler*, Cist. Ent. i., p. 16 (October, 1869).

Alæ anticæ supra *C. Sorana* ♀ simillimæ, plaga autem basali coccinea multo latiore, striola subapicali albida, haud fulva; posticæ nigra basi coccinea;

plaga permagna media cærulea nitida; ciliis albis; corpus nigro-fuscum; alæ subtus fere velut in *C. Sorana*, anticæ autem plaga basali latiore; posticæ lineis flavis latioribus, profundius dentatis; corpus flavum, nigro-strigatum: exp. alar. unc. 2, lin. 6.

—♂. Coll. Kaden in Coll. Druce.

Nearly allied to *C. Sorana*, but quite distinct.

GENUS NEPTIS. *Fabricius*.

Neptis Pryeri, fig. 4.

Neptis Pryeri, *Butler*, Trans. Ent. Soc., p. 403 (1871).

Alæ supra nigro-fuscæ, ciliis albis; anticæ vitta discoidali quinque maculari, serie macularum decem undulata discali, altera pone eam sex-maculari et tertia interrupta quadrimaenari submarginali, albis; posticæ fascia media, a venis interrupta, et stria sex-maculari discali, albis; alæ subtus albicantibus; anticæ maculis costali-discalibus, plagisque disco-cellulari, apicali, et marginali, brunneis; posticæ basi nigro-maculata; plaga costali cellam partim cingente, fascia media ad costam attingente, venis discalibus et area marginali (lunulos subseptem gerente) brunneis; corpus albidum: exp. alar. unc. 2, lin. 5.

Shanghai (*H. B. Pryer*). Coll. Druce.

GENUS PYRRHOGYRA. *Hübner*.

Pyrrhogyra Ophni, fig. 5.

♂ *Pyrrhogyra Ophni*, *Butler*, Ann. & Mag. Nat. Hist., s. iv., vol. 5, p. 362 (1870).

Alæ supra nigerrimæ; fascia communi media nivea, anticarum ad nervulum secundum medianum oblique disrupta; posticæ sinuata, ciliis albis; puncto subanali coccineo; area abdominali fuscescente; corpus nigro-fuscum; alæ subtus nivæ; area basali cinereo tineta; anticæ stria costali et disco-cellulari nigro limbata, coccinea; vena mediana nigro limbata; fascia postmedia bifurcata nigra, furea inferiore in nervulum secundum medianum posita,

superiore ad costam curvata et striam coccineam includente; serie submarginali macularum suboculo albarum; margine externo late olivaceo; stria obscuriore antimarginali; postice fascia disco-costali nigro-fusca, lineam sinuatam coccineam includente, hac apud angulum analem maculari, albo bipupillata; disco submarginali fusco tincto; maculis sex ovalibus albis, primo et quarto minimis; linea antimarginali nigra; corpus albidum: exp. alar. unc. 2, lin. 11.

Minas Geraes (*Rogers*). Coll. Druce.

Allied to *P. Tiphus* of Linnaeus, but perfectly distinct.

FAMILY HESPERIDÆ.

PLATE LXII.

GENUS CARYSTUS. *Hübner.*1. *Carystus Jeconia*, fig. 1.*Carystus Jeconia*, *Butler*, Trans. Ent. Soc., p. 501, n. 3 (1870).

Alæ supra nigro-fusæ; anticæ fascia submediana obliqua flava; posticæ area tota media flava; ciliis marginis externi aurantiacis, marginis interni flavis; corpus viridi-fuscum, flavo hirtum; anticæ subtus nigro-fusæ, basi apicæ, et macula media flavis; posticæ flavæ; corpus flavum: exp. alar. unc. 1, lin. 5.

Venezuela. Coll. Druce.

In consequence of the regulation which deprives us of our books of reference towards the end of December, I find that I have made a mistake in referring the *Peleus Gentius* of Swainson to this species (see p. 169, n. 3), it should have been referred to my *Angiodes Lenana*, p. 112.

2. *Carystus gemmatus*, fig. 2.*Carystus gemmatus*, *Butler*, Cist. Ent. iv., p. 86 (Jan., 1872).

Alæ supra piceæ; corpus nigrescens; alæ anticæ subtus dimidio apicali multo pallidiore; posticæ nigrescentes cupreo nitentes; punctis tribus vel quatuor pone cellam caeruleis; macula interno-media et aliis in serie arcuata discali obscure coccineis; corpus nigro-fuscum: exp. alar. unc. 2, lin. 2.

Cartago, Costa Rica (*Fau Patten*). Coll. Druce.GENUS PHELOBODES. *Hübner.*1. *Phebodes Koza*, fig. 10.*Phebodes Koza*, *Butler*, Trans. Ent. Soc., p. 507, n. 3 (1870).

Affinis *P. Rouæ*, differt alis posticis magis elongatis, subtus area abdominali margaritacea; fascia solum una media: exp. alar. unc. 1, lin. 8.

Capim River. Coll. Druce.

2. *Phlebodes Ittona*, fig. 11.

Phlebodes Ittona, *Butler*, Trans. Ent. Soc., p. 598, n. 4 (1870).

Alæ supra fuscae, punctis duobus medianis hyalinis, oblique positis; macula interno-mediana elongata testacea; corpus fuscum; alæ anticæ subtus area apicali dilutiore; maculis hyalinis velut supra; macula interno-mediana desinente; posticæ albæ, basi, areola interno-submediana, plaga magna discali eum ea nexa, ciliisque fuscis, basi plagaque fulvescentibus; corpus fuscum, abdomine albo: exp. alar. unc. 1, lin. 2.

Venezuela. Coll. Kaden in Coll. Druce.

3. *Phlebodes Unia*, fig. 12.

Phlebodes Unia, *Butler*, Trans. Ent. Soc., p. 507, n. 1 (1870).

Alæ supra nigro-fuscae; anticæ maculis duabus medianis hyalinis, oblique positis; corpus fuscum; alæ anticæ subtus areis costali et apicali dilutionibus, punctis tribus griseo pupillatis subapicalibus, oblique positis; punctis quinque submarginalibus similibus; margine externo nigro, ciliis griseis; posticæ pallide fuscae, area media fulva; serie semicirculari macularum sex nigrarum albo-notatarum, discali; ciliis griseis; corpus cinereo-fuscum: exp. alar. unc. 1, lin. 3.

Haiti. Coll. Kaden in Coll. Druce.

GENUS ERYCIDES. *Hübner*.*Erycides Vida*, fig. 4.

Erycides Vida, *Butler*, Cist. Ent. iv., p. 86 (Jan., 1872).

Persimilis, *E. Uronia*; differt alis anticis dimidio apicali nigro-fusco immaculato: exp. alar. unc. 2, lin. 5.

Cartago, Costa Rica (*Joa Patten*). Coll. Druce.

GENUS ARTEUROTTA. *Butler*.*Arteurotia tractipennis*, fig. 5.

Arteurotia tractipennis, *Butler and Druce*, Cist. Ent. v., p. 112 (1872).

Alæ supra fuscae cinereo irroratæ; anticæ macula subbasali diffusa:

fasciola medio-costali cellam transerrante; macula semicirculari apud apicem costali, maculas tres hyalinas gerente; stria submarginali pallida; ciliis nigro-fuscis; posticæ plaga permagna subcostali, subovali, extrorsum undulata sericea cinereo-fusca; punctis duobus diffusis interno-mediis, et tribus valde indistinctis submarginalibus, sordide albidis; corpus cinereo-fuscum; alæ subtus pallidiores; anticæ albidae, costa, vena mediana, et area apicali, castaneis; posticæ pallide rufo-fusca, albido irrorata; area basali cinereo maculata; area apicali castaneo fuscescente; punctis quatuor interno-mediis, et stria marginali albidis; corpus albidum, palpis niveis: exp. alar. unc. 1, lin. 7.

Cartago, Costa Rica (*Van Palleu*). Coll. Druce.

A very remarkable species.

GENUS PAMPHILA. *Fabricius*.

Pamphila Lotana, fig. 9.

Pamphila Lotana, *Buller*, Trans. Ent. Soc., p. 505, n. 5 (1870).

Alæ supra purpureo-fusca, ad basin nigrescentes; anticæ punctis tribus apud apicem subcostalibus, macula discoidea bifida, et tribus inaequalibus medianis oblique positis, hyalinis; posticæ punctis duobus pone cellam approximatis flavidis; ciliis pallide flavis; corpus fuscum virescenti-hirtum; anticæ subtus pallide griseo-fusca, area media nigro-fuscescente, maculis hyalinis velut supra, majoribus; posticæ sordide albidae, costa fuscescente; plagis duabus subanalibus pyriformibus rufo-fuscis; linea marginali fusca; plaga permagna media, maculam magnam (a maculis tribus niveis interruptam) circumcingente, et margine interno, fulvis; corpus album: exp. alar. unc. 1, lin. 11.

Tocantins. Coll. Druce.

A very beautiful species for the genus, resembling in pattern some of the species of *Phlebotus*.

GENUS CYCLOPIDES. *Hübner*.

Cyclopides argenteogutta, fig. 8.

Cyclopides argenteogutta, *Buller*, Trans. Ent. Soc., p. 512 (1870).

Alæ supra nigro-fusca; anticæ fasciis tribus irregularibus obliquis, punctis

nonnullis submarginalibus, ciliisque fulvis; posticæ puncto subbasali, fasciâ irregulari mediâ, maculis tribus submarginalibus, ciliisque fulvis; corpus nigrum: alæ anticæ subtus apicè, basî, et margine externo, rufo-fuscis; fasciis supernis fulvis pallidioribus; posticæ rufo-fuscæ, maculis argenteis variegatæ; ciliis ochraceis; corpus ochraceum, palpis albis: exp. alar. unc. 1, lin. 1.

Nubia. Coll. Kaden in Coll. Druce.

The prettiest species of the genus.

GENUS PITHONIDES. *Hübner.*

1. *Pithonides gladiatus*, fig. 6.

Pithonides gladiatus. *Butler*, Trans. Ent. Soc., p. 512, n. 1 (1870).

Alæ supra cyaneæ, purpurascens, certo situ virescentes; anticæ macula magna disco-cellulari, fasciâ transversa discali cum ea nexa, et margine externo, nigro-fuscis; posticæ fasciâ mediâ et alterâ marginali, nigro-fuscis; corpus nigrescens; alæ subtus fuscæ, fasciis supernis indistincte visis fundo obscurioribus; corpus fuscum, palpis ochraceo-fuscis: exp. alar. unc. 1, lin. 6.

Para. Coll. Druce; Tapajos. B.M.

2. *Pithonides Jabesa*, fig. 7.

Pithonides Jabesa, *Butler*, Trans. Ent. Soc., p. 513, n. 2 (1870).

Alæ supra fuscæ; anticæ plaga mediâ subquadrata obscuriore; area marginali obscuriore; fasciâ angulata discali grisea diffusa; posticæ fasciâ mediâ fureata, obscure fusca; area externa late griseo-irrorata; corpus fuscum; anticæ subtus pallidiores; macula diffusa discoidea, et fasciâ supernâ interrupta discali, griseo-irroratis; posticæ pallide cæruleæ, area anali albicante; area costali fusco-irrorata; costâ, apicè, macula subcostali et alterâ subapicali, fuscis; corpus album, abdomine fuscescente; exp. alar. unc. 1, lin. 6.

Venezuela. Coll. Druce.

Allied to *P. Oecus* of Fabricius.

GENUS PLASTINGIA. *Butler.**Plastingia Helena*, fig. 3.

Plastingia Helena, *Butler*, Trans. Ent. Soc., p. 511, n. 1 (1870).

Alæ anticæ supra area basali fulva, apicali nigra; macula media magna triangulari, duabus discoideis parvis, duabus et puncto oblique positis discalibus, et una pone cellam bifida, hyalinis; posticæ fulvæ, marginibus costali et externo (angulo anali excepto), nigris; maculis duabus pone cellam hyalinis; corpus sordide fulvum; alæ subtus aureo-fulvum; anticæ area apicali venis fulvis interrupta, aliter velut supra; posticæ costa et striga abdominali fusciscente; litura discali et sex internervularibus, albo-pupillatis, nigris; linea apicali-marginali nigra; corpus fulvum; exp. alar. unc. 1, lin. 5.

Sarawak (*Loice*). Coll. Druce.

Belongs to the *P. flavescens* group.



(A) PLE. M. PAN.



HAERXIS SMARAGDINA (CHARAXIS MORNII)

Original from the collection of the British Museum, London

W. H. H. 189



1 EUPHYCHIA EPHOLEA 4 EUPHYCHIA FULGIFERA
2 EUPHYCHIA ZEBA - 3 EUPHYCHIA QUADRINA
6 EUPHYCHIA MAPE

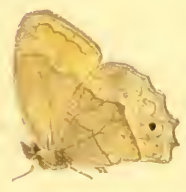


Illustration of butterflies, likely from a scientific publication. The text is faint and partially illegible, but appears to contain the title and author information.



Small text at the bottom left corner, possibly a collector's mark or publisher's information.

Small text at the bottom center, possibly a title or description of the butterflies.

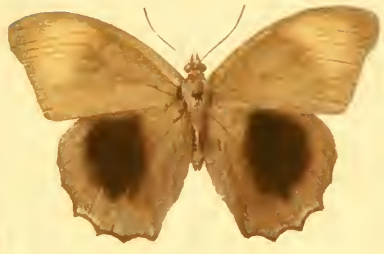
Small text at the bottom right corner, possibly a collector's mark or publisher's information.



Illustration of a butterfly

1. *Pieris* *glaucopis* (Cramer) 2. *Pieris* *glaucopis* (Cramer) 3. *Pieris* *glaucopis* (Cramer) 4. *Pieris* *glaucopis* (Cramer)

Illustration of a butterfly



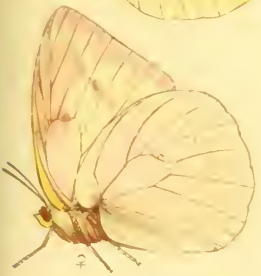
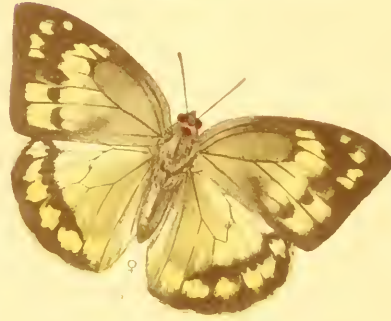
1	2	3	4
184	185	186	187
188	189	190	191



A. J. Smith del. G. S. Woodcut.

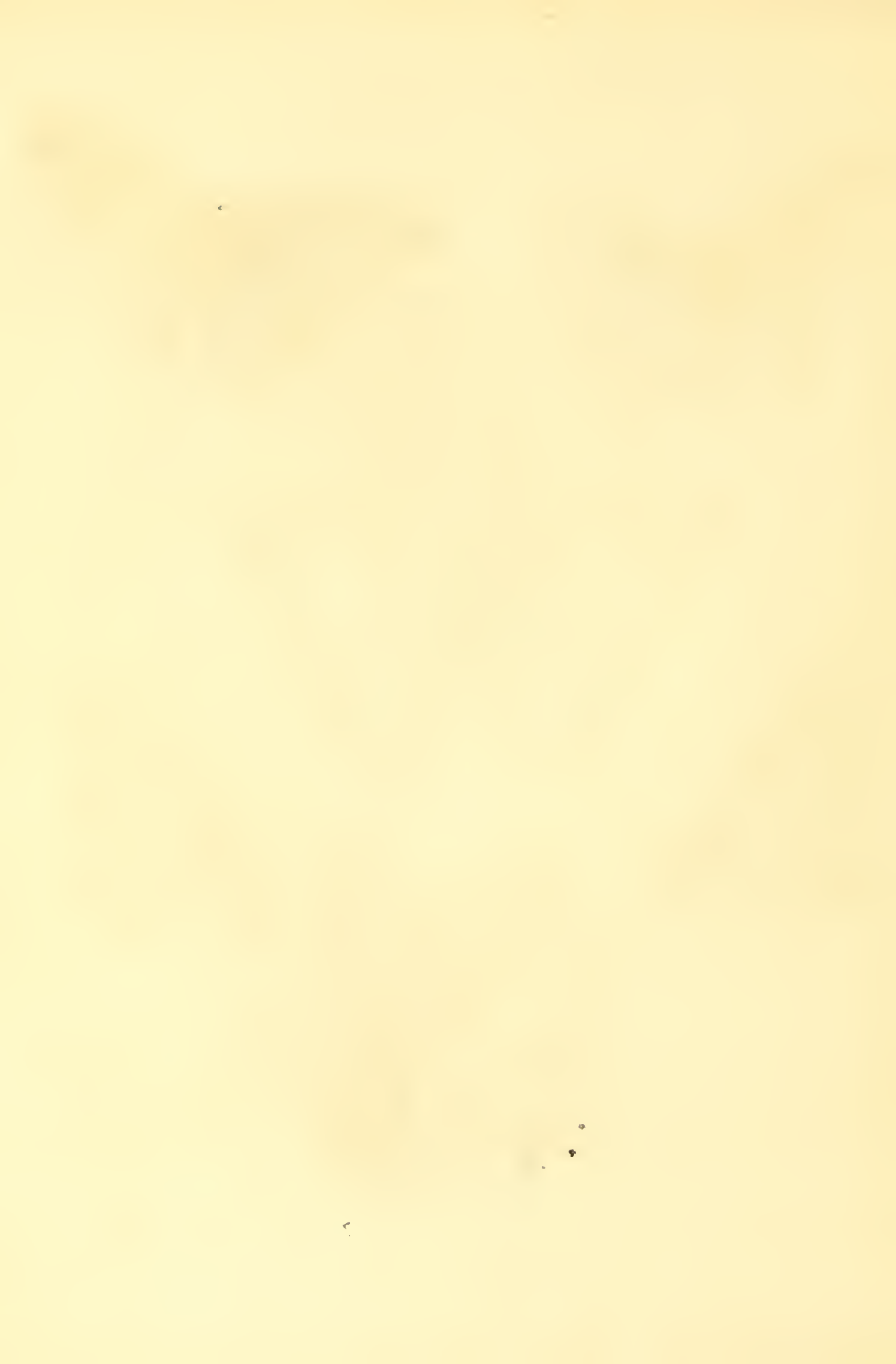
W. Peck engr.

THE BOSTON SOCIETY OF NATURAL HISTORY

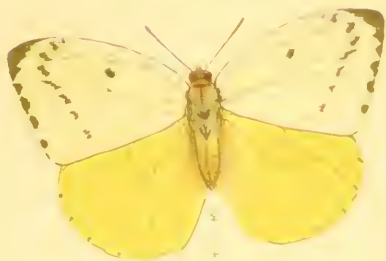




1. GYPSY BUTTERFLY 2. COMMON BLUE BUTTERFLY 3. COMMON WHITE BUTTERFLY 4. COMMON BROWN BUTTERFLY 5. COMMON BROWN BUTTERFLY 6. COMMON BROWN BUTTERFLY

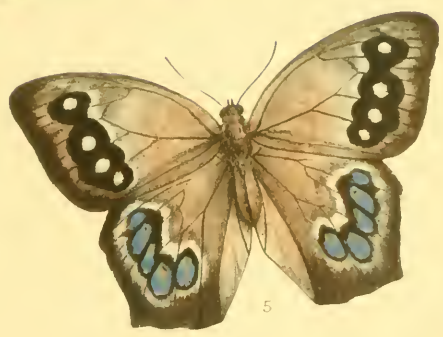






1. 2. 3. 4. CAENIDICTES ...

...



Coll. Entom. Mus. Hist. Nat. Paris (1871)

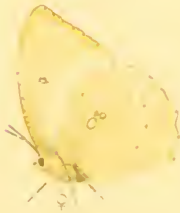
A. Guenée del.

1. *EPHILIO SANDA*
3 & 4. *PAHLEO JUNA*

2. *PAHLEO EPHELO*
5. *EPHIOLEMA CRATA*



PLATE I
THE BUTTERFLIES OF THE
GENUS *ANISODICTYA*
BY
J. G. REEVE



1. *Graphium*

♀ ♂

2. *Graphium*

♀ ♂

3. *Graphium*



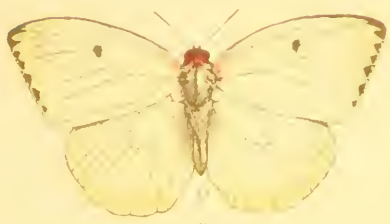
3



1



4



2



5



6



7



8

Lucerna lucerna

Lucerna lucerna
1898

Lucerna lucerna

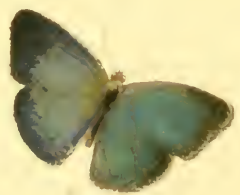


2



5

1, 2, PACTINIA FUSA 3, PERITOPUS IGNITA
4, 5, PERITOPUS JANSSENI



LEPIDOPTERA

- | | |
|------------------------------------|------------------------------------|
| a. <i>Phaenocarpa</i> <i>leuco</i> | b. <i>Andronota</i> <i>corolla</i> |
| c. <i>Andronota</i> <i>phocis</i> | d. <i>Andronota</i> <i>argilla</i> |
| e. <i>Andronota</i> <i>phocis</i> | f. <i>Andronota</i> <i>argilla</i> |
| g. <i>Andronota</i> <i>corolla</i> | h. <i>Andronota</i> <i>argilla</i> |



Pieris ...

Phoebastria ...

Pieris ...

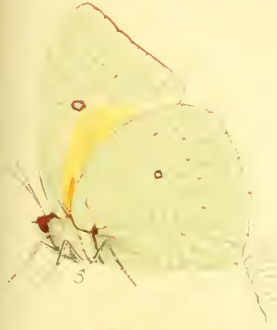


A. & B. See also in Pl. 1870

1. GONATIA ALBOPUNCTATA
2. DANAINUS LEONORAE
3. DANAINUS PHAENOMENON









Colias eurytheme (L.)

Colias eurytheme (L.)
Colias eurytheme (L.)



Illustration by [illegible]

[illegible]

PIERIS TRIVALENS F. C. 1859. COLOMBIA
 PIERIS TRIVALENS F. C. 1859. COLOMBIA
 PIERIS TRIVALENS F. C. 1859. COLOMBIA
 PIERIS TRIVALENS F. C. 1859. COLOMBIA



1852-1853

1852-1853	1854-1855	1856-1857
1858-1859	1860-1861	1862-1863
1864-1865	1866-1867	1868-1869
1870-1871	1872-1873	1874-1875
1876-1877	1878-1879	1880-1881
1882-1883	1884-1885	1886-1887
1888-1889	1890-1891	1892-1893
1894-1895	1896-1897	1898-1899
1900-1901	1902-1903	1904-1905

1852-1853



1. *Colias eurytheme* (L.) ♀ - 2. *Colias eurytheme* (L.) ♀ - 3. *Colias eurytheme* (L.) ♀ - 4. *Colias eurytheme* (L.) ♀ - 5. *Colias eurytheme* (L.) ♀ - 6. *Colias eurytheme* (L.) ♀ - 7. *Colias eurytheme* (L.) ♀ - 8. *Colias eurytheme* (L.) ♀ - 9. *Colias eurytheme* (L.) ♀ - 10. *Colias eurytheme* (L.) ♀ - 11. *Colias eurytheme* (L.) ♀ - 12. *Colias eurytheme* (L.) ♀



A. [illegible] del. [illegible] fecit.

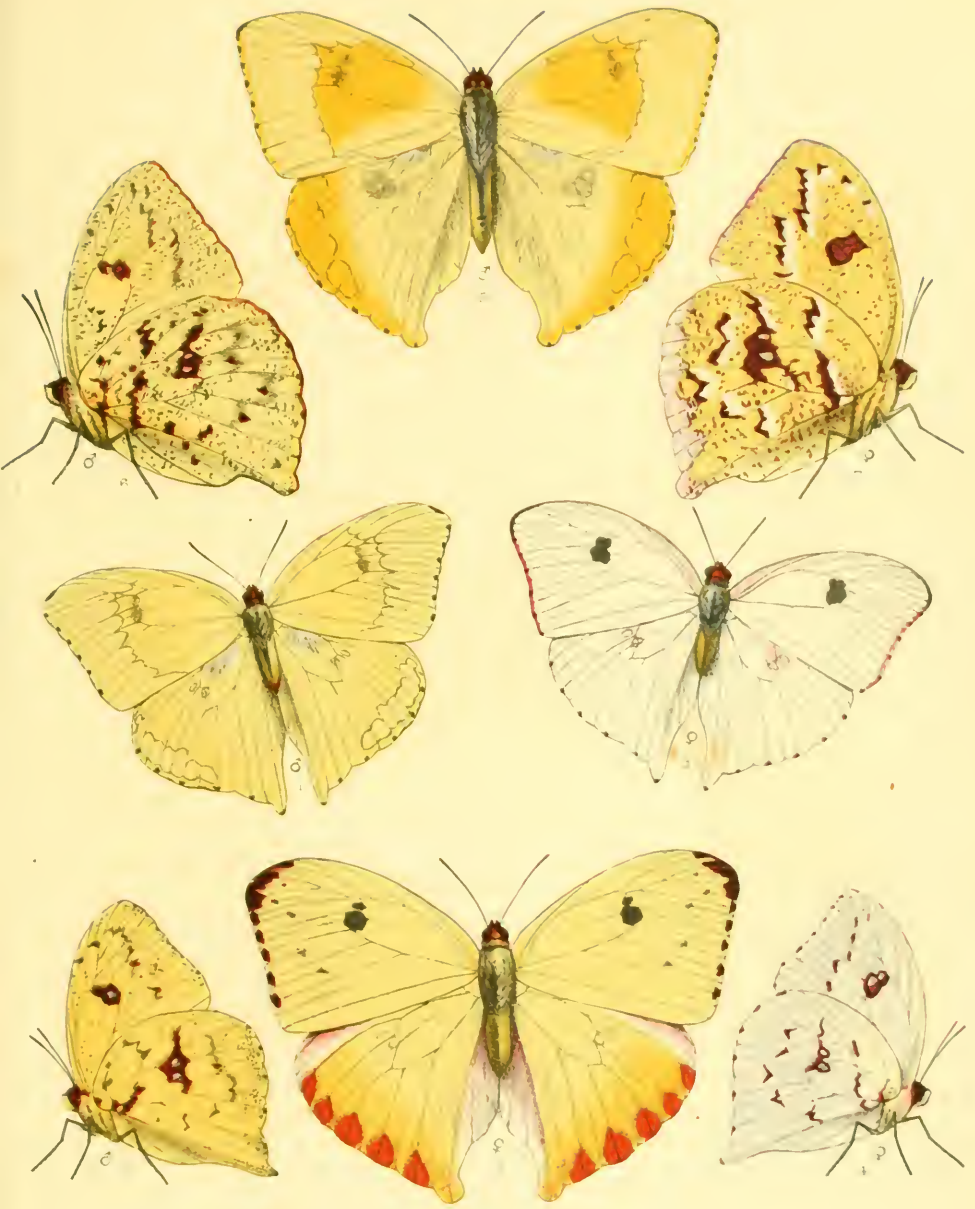
[illegible]

MIMULUS [illegible] [illegible]
[illegible]



2. *ATENEA LUNARA*
 3. *ATENEA FELIX*

4. *ATENEA COELES*
 5. *ATENEA NEMORUM*

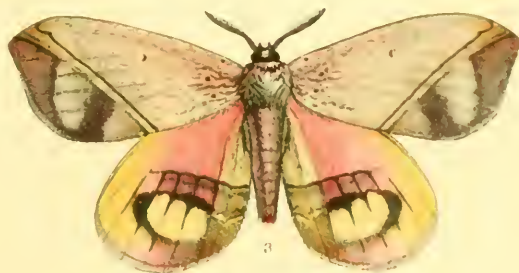




1



2



3

Actias trichocera (Linn.)

Actias trichocera (Linn.)

Actias trichocera (Linn.)

Actias trichocera (Linn.)





Plate 10

1. *Colias croceata* (L.)
2. *Colias croceata* (L.)
3. *Colias croceata* (L.)
4. *Colias croceata* (L.)
5. *Colias croceata* (L.)

Plate 10



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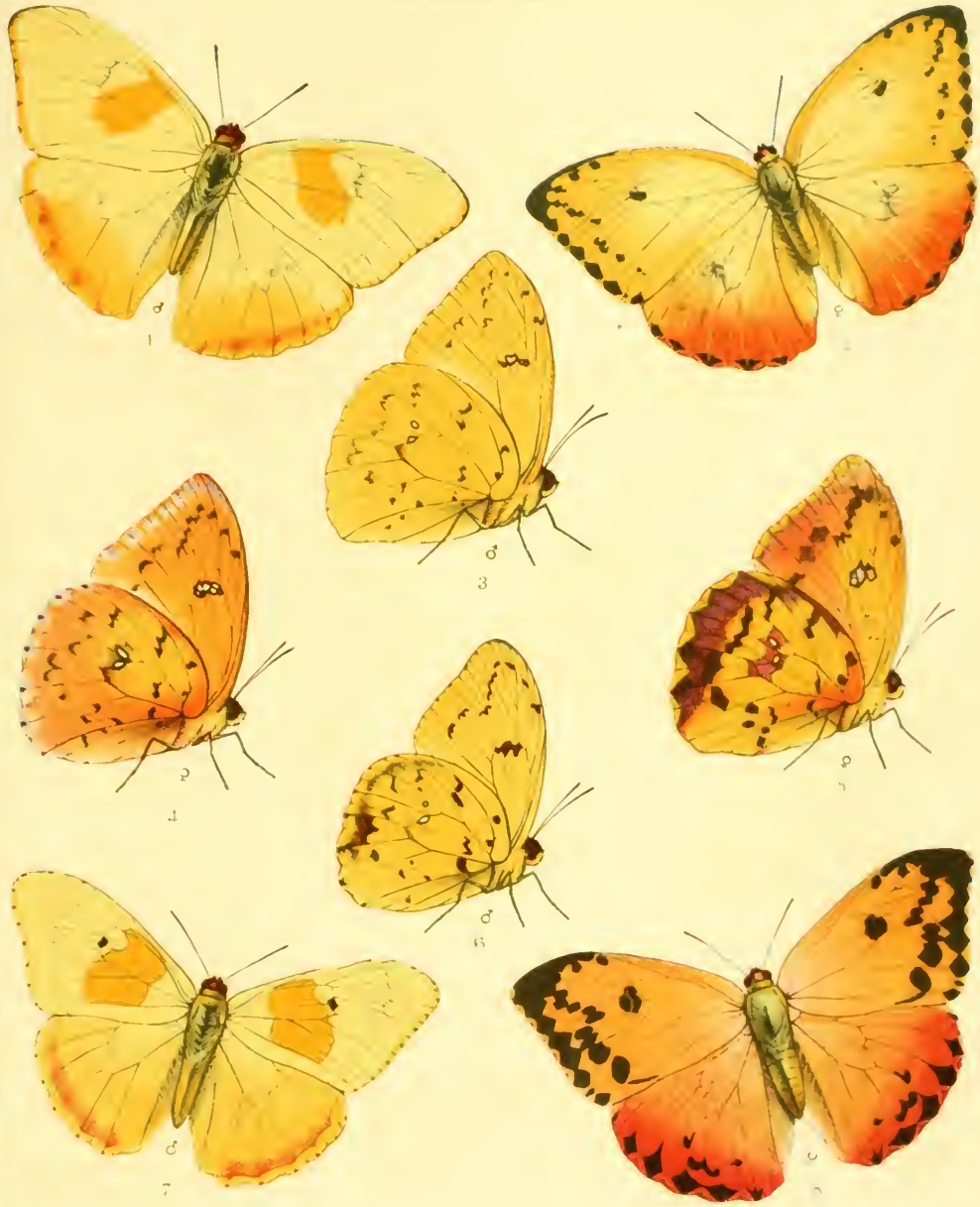


Albinoes of the 1st and 2nd

- 1 PAPUA'S GODWIN
- 2 WHITE HORSE
- 3 WHITE HORSE
- 4 WHITE HORSE

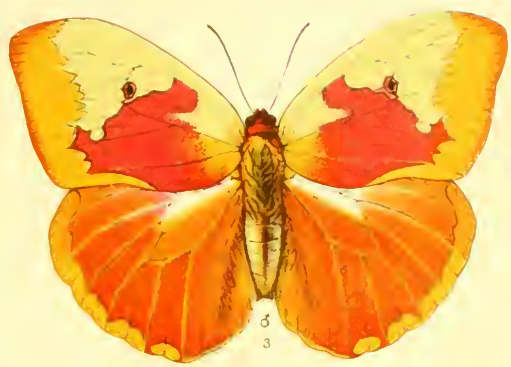
- 50 M. P. W. W. W.
- 7 M. P. W. W. W.
- 8 M. P. W. W. W.
- 9 M. P. W. W. W.

Museo Brit. Lond.



1-4 GALLIUS S. SPINOLA
 5-8 GALLIUS S. SPINOLA

CALLIDRYAS. X.



A.C. Butler del et lith. Jan. 1872

1 2 CALLIDRYAS MISTRATA
3 5. CALLIDRYAS AVELLANELLA



1	CHARAXES TIMALARY	4	CHARAXES JAUDIPER
2	INAWARA	5	HONMA
3	PLECTANAX	6	KHAMATY



1 PRILIONIMA ALGATA

2 PARAZIA MELICELI

3 HETERORHOGA DI MIALE

4 MEEHNS' GEHELF

5 HETERORHOGA DENTATA

6 HETERORHOGA FERRIS

7 HETERORHOGA SAFERLINA

8 MIMASIA L. LAURINA







A. Butler de. et lith. Ann. 1856.

1. *EPHEMERA* *EPHEMERA*
 2. *EPHEMERA* *EPHEMERA*
 3. *EPHEMERA* *EPHEMERA*
 4. *EPHEMERA* *EPHEMERA*

5. *EPHEMERA* *EPHEMERA*
 6. *EPHEMERA* *EPHEMERA*
 7. *EPHEMERA* *EPHEMERA*
 8. *EPHEMERA* *EPHEMERA*

9. *EPHEMERA* *EPHEMERA*
 10. *EPHEMERA* *EPHEMERA*
 11. *EPHEMERA* *EPHEMERA*
 12. *EPHEMERA* *EPHEMERA*



A. Godard, 14 et 15, May 4, June 1891

Museo di Storia Naturale

MORPHO ABANTUS
2 " MARINUS

© 1891, P. Godard, 28, Rue de Valenciennes



A. Butleri (C. & G.)

LYCOPUS *LYCOPUS* *LYCOPUS*

Σταυροειδής



Plate of butterflies

Plate of butterflies

1. GYPSOPHORA... 2. GYPSOPHORA... 3. GYPSOPHORA... 4. GYPSOPHORA... 5. GYPSOPHORA... 6. GYPSOPHORA... 7. GYPSOPHORA... 8. GYPSOPHORA...



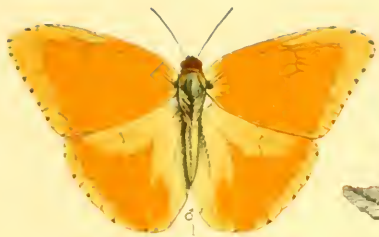
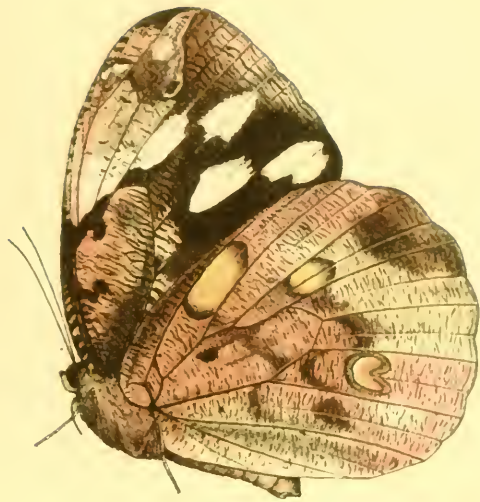




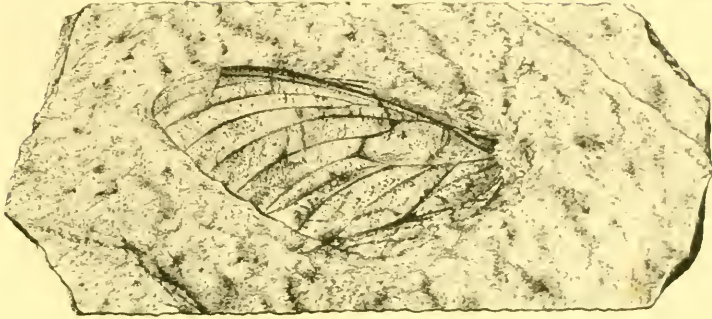
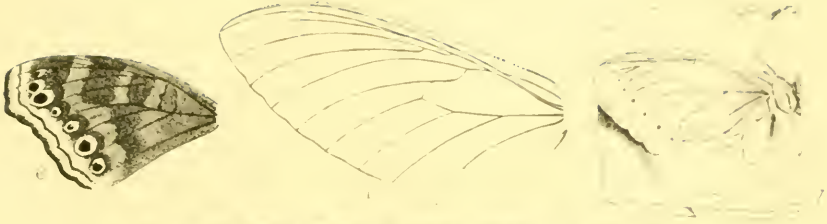
PLATE 100

THE BLOSSOM BUTTERFLY *THE COMMON BLUE*
THE WHITE BELLIED *THE COMMON WHITE*
THE COMMON BRASSICA

PLATE 100



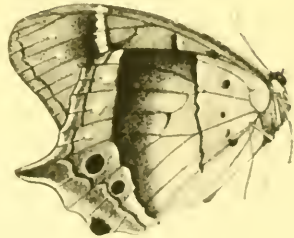
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2



3



1892, Plate 10, Fig. 1

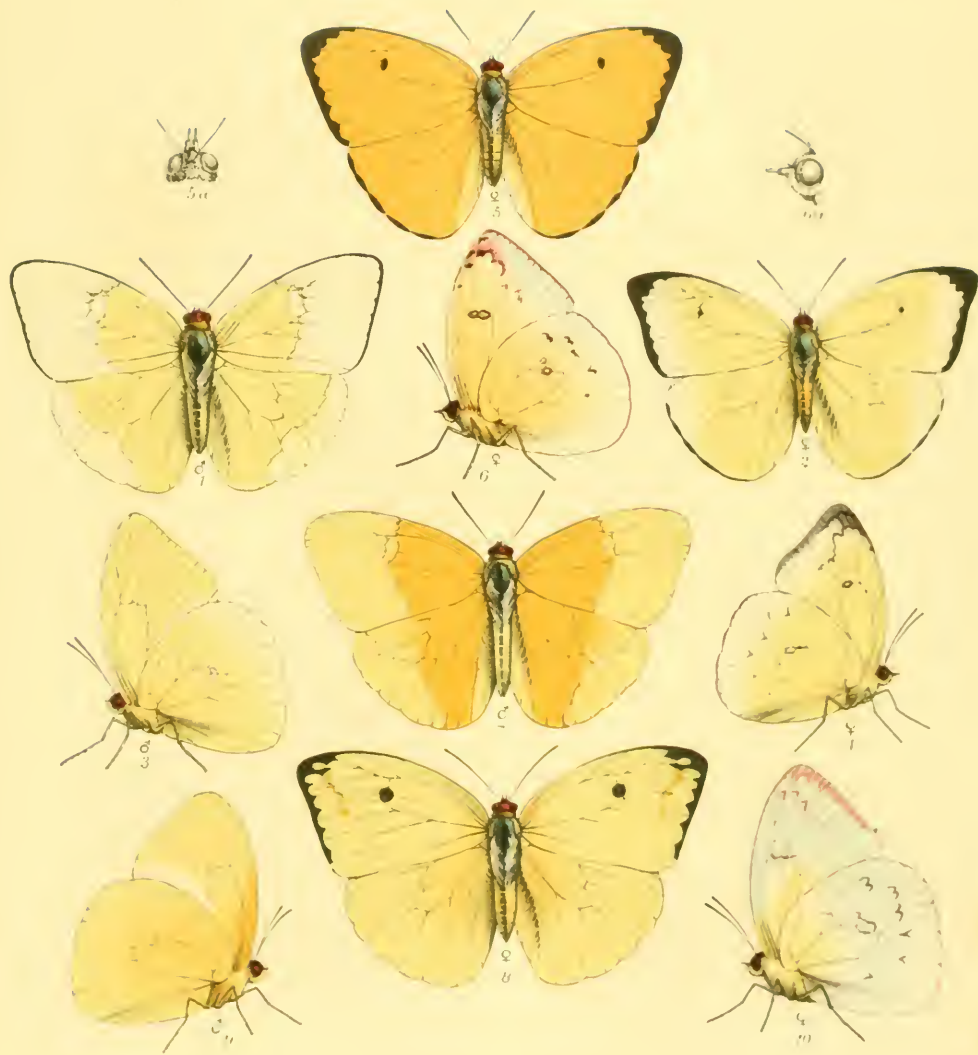
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 2. *Strophodonta* *Strophodonta* *Strophodonta* *Strophodonta*
 3. *Strophodonta* *Strophodonta* *Strophodonta* *Strophodonta*





A. R. Urd

1. *Pieris* *glaucopis* *glaucopis* *glaucopis*
2. *Pieris* *glaucopis* *glaucopis* *glaucopis*
3. *Pieris* *glaucopis* *glaucopis* *glaucopis*
4. *Pieris* *glaucopis* *glaucopis* *glaucopis*
5. *Pieris* *glaucopis* *glaucopis* *glaucopis*
6. *Pieris* *glaucopis* *glaucopis* *glaucopis*
7. *Pieris* *glaucopis* *glaucopis* *glaucopis*



Alcathoe (C. p.)

Alcathoe

ALCATHOE STATION
 & ALCATHOE IMPERIA FOR THE ALCATHOE STATION

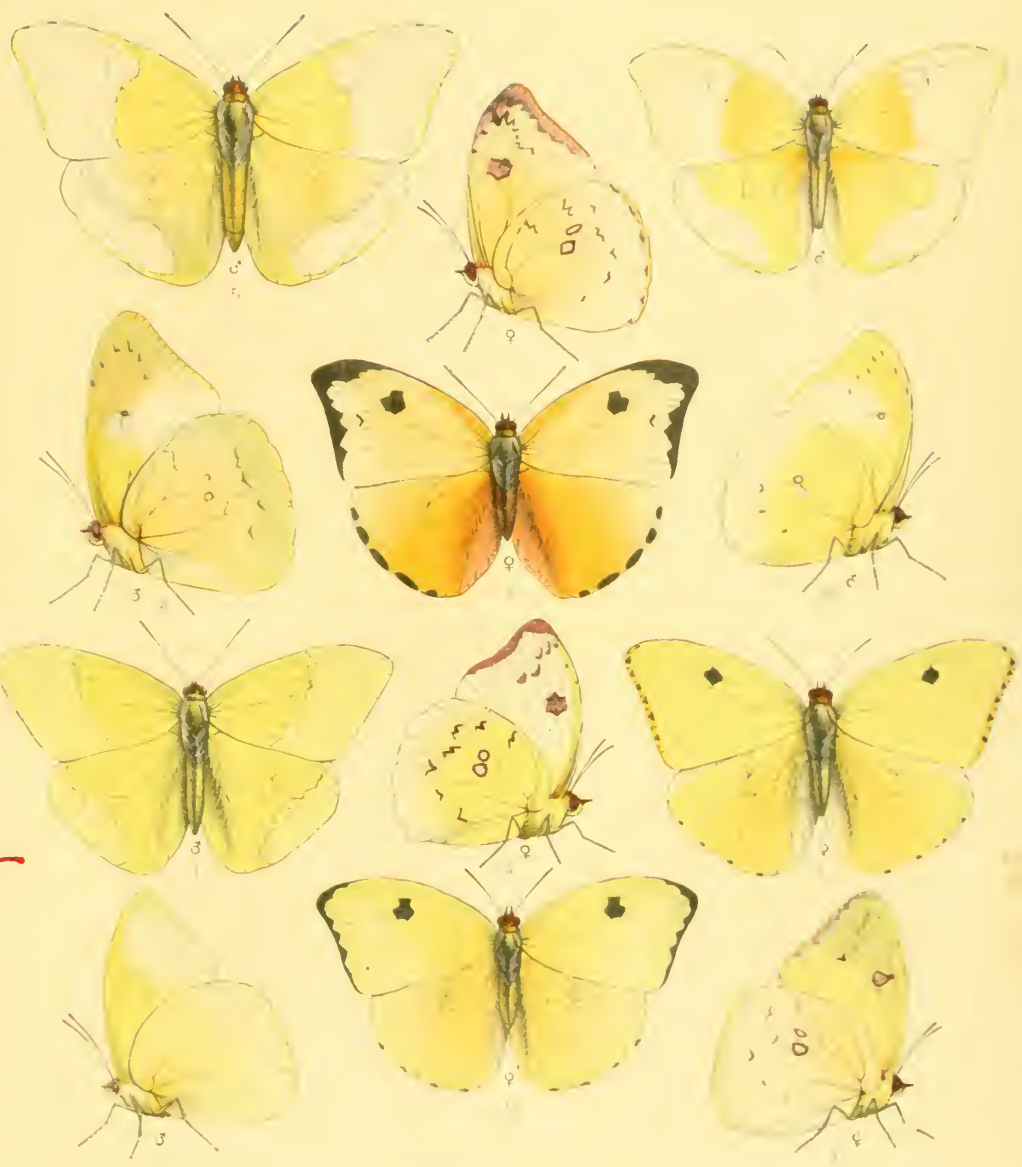


PLATE 100

1. *Colias eurytheme* (Doubtful) ♂
 2. *Colias eurytheme* (Doubtful) ♀
 3. *Colias eurytheme* (Doubtful) ♂
 4. *Colias eurytheme* (Doubtful) ♀
 5. *Colias eurytheme* (Doubtful) ♂
 6. *Colias eurytheme* (Doubtful) ♀
 7. *Colias eurytheme* (Doubtful) ♂
 8. *Colias eurytheme* (Doubtful) ♀
 9. *Colias eurytheme* (Doubtful) ♂
 10. *Colias eurytheme* (Doubtful) ♀
 11. *Colias eurytheme* (Doubtful) ♂
 12. *Colias eurytheme* (Doubtful) ♀



1



3



4

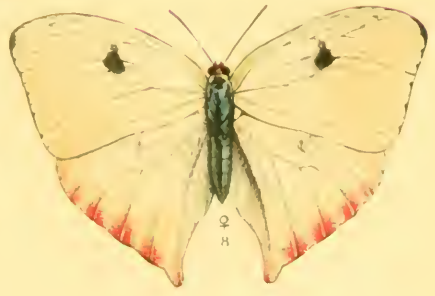
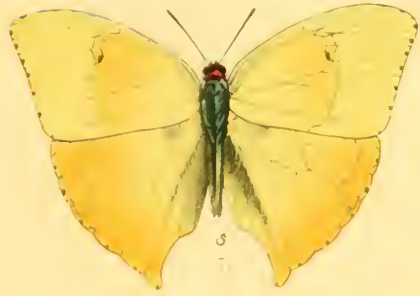
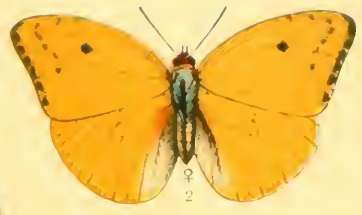
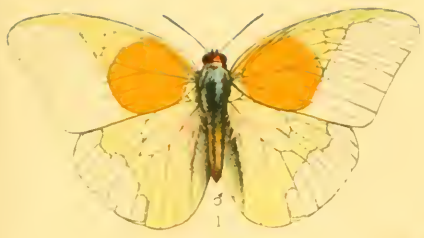


Abb. Ge. d. d. M.

COLETTA (L.) 2. ATREUS (L.)
COLETTA (L.) 2. ATREUS (L.)
COLETTA (L.) 2. ATREUS (L.)

Plate 10





11. *Epiphysa* ...

11. *Epiphysa* ...



Graphis lychnipennis (Cramer)

Graphis lychnipennis (Cramer)

Graphis lychnipennis (Cramer)





1. <i>Graphium</i> <i>zamboni</i>	8. <i>Graphium</i> <i>zamboni</i>
2. <i>Graphium</i> <i>zamboni</i>	9. <i>Graphium</i> <i>zamboni</i>
3. <i>Graphium</i> <i>zamboni</i>	10. <i>Graphium</i> <i>zamboni</i>
4. <i>Graphium</i> <i>zamboni</i>	11. <i>Graphium</i> <i>zamboni</i>
5. <i>Graphium</i> <i>zamboni</i>	12. <i>Graphium</i> <i>zamboni</i>
6. <i>Graphium</i> <i>zamboni</i>	13. <i>Graphium</i> <i>zamboni</i>
7. <i>Graphium</i> <i>zamboni</i>	14. <i>Graphium</i> <i>zamboni</i>



Illustration by [illegible]

Illustration by [illegible]

1. *Pieris brassicae* 2. *Pararge aegeria*
3. *Pieris napi* 4. *Pieris napi*



J. G. Rehn del. et lith. Oct 3, 1952 P.R.

- | | | | | | |
|---|------------------|----|-------------------------|----|----------------------|
| 1 | CARYSTES LESIANA | 8 | CARYSTES CANENTE | 9 | HOMERUS VITTA |
| 2 | " JABESA | 9 | STYCHIDES YUKAARA | 10 | " STIDAM |
| 3 | " OZYIA | 10 | PROTHESIS LARIPPE | 11 | " ONALIA |
| 4 | " OBIFA | 8 | ALICOPHILONIA PARAPALIA | 12 | ELACTOLA BLOWETTIANA |



1.



2.



3.

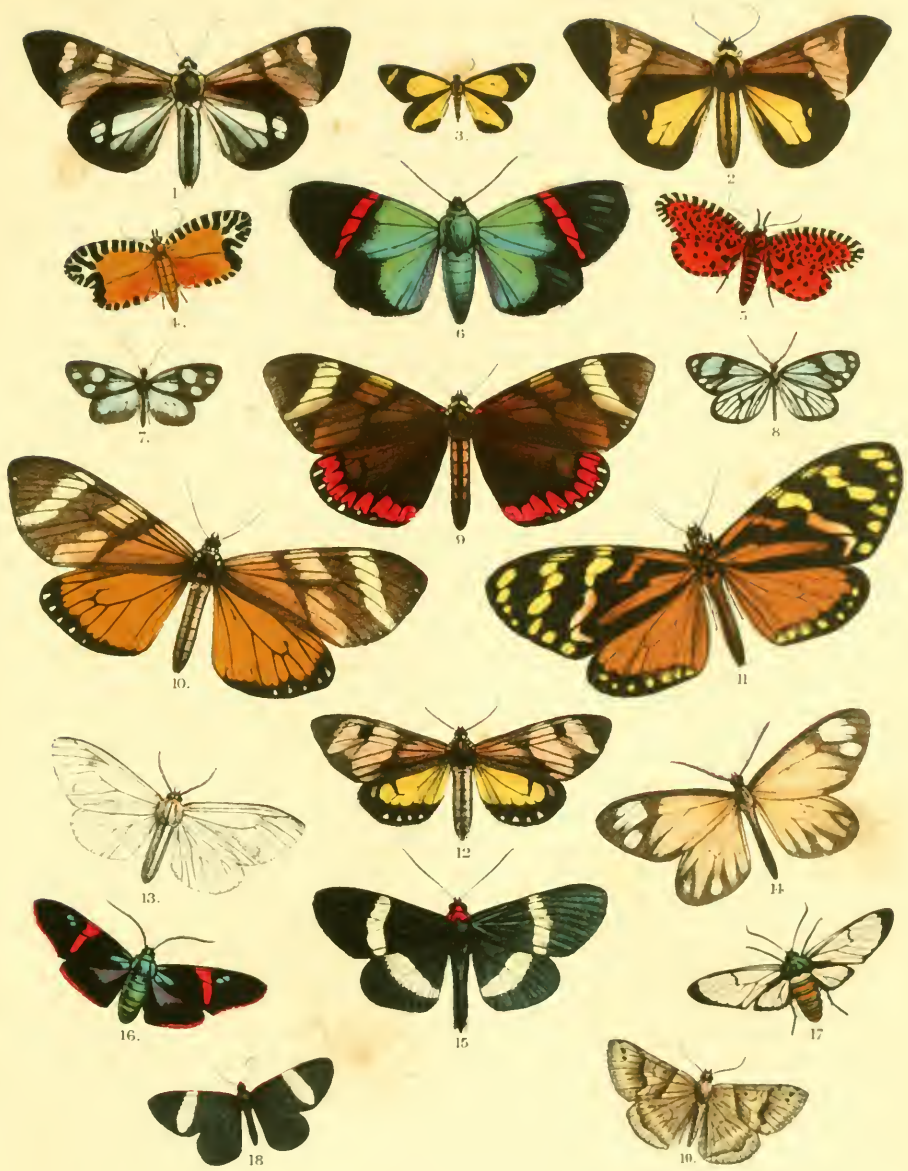


4.



5.

1. MYCIELIA	FAITHFUL
2. MYSOMIA	TALENTA
3. APTURA	PLUMPERNA
4. APTURA	INDIATA
5. APTURA	INDIATA



A. G. Butler del. et. sc. Jan. 1894

Mot. Pl. 10

- 1 PERICOPIS LUCIFER
- 2 PERICOPIS FANTASMA
- 3 EUPHYA PROMULINA
- 4 ATTEIA MUCANOA
- 5 ATTEIA LEONARDINA
- 6 EUCYANE MYSTASPEE

- 7 DACTYLO NOSTALGIDES
- 8 DACTYLO ITHOMEINA
- 9 PERICOPIS FLORA
- 10 PERICOPIS LECNINA
- 11 PERICOPIS IRENIDES
- 12 PERICOPIS SYBILLA
- 13 REMOIA IMPRESSA

- 14 CYARA CLARA
- 15 CYRUSAURE LUTESCENS
- 16 MACHAON VIBESLENS
- 17 GYMNELIA HANSON'S
- 18 GYMNELIA MORTIPAX





1. *Phalaena* *...*

2. *Phalaena* *...*

3. *Phalaena* *...*
 4. *Phalaena* *...*
 5. *Phalaena* *...*

6. *Phalaena* *...*
 7. *Phalaena* *...*
 8. *Phalaena* *...*



1.



2.



3.



4.



5.

Great Migration

Great Migration

1. *Heliconia cydippe* 2. *Heliconia cydippe*
 3. *Heliconia cydippe* 4. *Heliconia cydippe*
 5. *Heliconia cydippe*



1.



2.



3.



7.



4.



10.



8.



5.



11.



9.



6.



12.

1. *Graphis lychnipennis*
2. *Graphis lychnipennis*
3. *Graphis lychnipennis*
4. *Graphis lychnipennis*

5. *Graphis lychnipennis*
6. *Graphis lychnipennis*
7. *Graphis lychnipennis*
8. *Graphis lychnipennis*

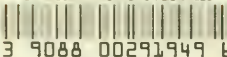
9. *Graphis lychnipennis*
10. *Graphis lychnipennis*
11. *Graphis lychnipennis*
12. *Graphis lychnipennis*





B82

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