

This article was downloaded by: [University of Calgary]

On: 02 February 2015, At: 22:03

Publisher: Taylor & Francis

Informa Ltd Registered in England and Wales Registered Number:
1072954 Registered office: Mortimer House, 37-41 Mortimer
Street, London W1T 3JH, UK



Annals and Magazine of Natural History: Series 4

Publication details, including instructions
for authors and subscription information:

<http://www.tandfonline.com/loi/tnah10>

XXXIII.—Description of twenty new species of Hesperidæ

W.C. Hewitson

Published online: 13 Oct 2009.

To cite this article: W.C. Hewitson (1876) XXXIII.—Description of twenty new species of Hesperidæ, *Annals and Magazine of Natural History: Series 4*, 18:106, 347-355, DOI: [10.1080/00222937608682054](https://doi.org/10.1080/00222937608682054)

To link to this article: <http://dx.doi.org/10.1080/00222937608682054>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever

caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

The name *Noctilionidæ*, Gray, must therefore be rejected altogether by those who adopt my classification; and it is evident that, as Dr. Peters's families *Brachyura* and *Molossi* are united by me in a single family, it would be very undesirable to designate the new family thus formed by either of these names, which previously indicated only a section of it.

XXXIII.—*Description of twenty new Species of Hesperidæ.*

By W. C. HEWITSON.

Ismene Taranis.

Alis anticis supra cinereo-fuscis: posticis fuscis, fimbria alba, ad angulum analem fulva: posticis infra fascia triangulari alba puncto atro notata, macula fulva subanali.

Upperside brown, covered more or less, and especially near the base of the posterior wing, with grey hair. Posterior wing dark brown beyond the middle: the fringe, except at the anal angle, where it is orange, white.

Underside grey-brown. Posterior wing with a large central white spot marked by a round spot of black: a triangular orange spot near the anal angle: the fringe as above. The body beautifully tessellated with orange, black, and white.

Exp. $2\frac{1}{2}$ inches.

Hab. Zanzibar.

In the collection of Dr. Staudinger.

Near to *I. Pansa*, Hew., from Madagascar.

Ismene Bixæ.

Ismene Bixæ, Clerck, Icones, pl. 42. fig. 4.

Ismene Chalybe.

Ismene Chalybe, Doubleday & Hewitson, Genera of Diurnal Lepidoptera, pl. 79. fig. 2; Donovan's Nat. Repos. v. pl. 165.

The two butterflies I have quoted above, which have been considered as one, are very distinct species, as will be seen at once on comparing Clerck's and Donovan's figures of the undersides. In *I. Bixæ* the posterior wing is protruded at the shoulder, and has the white spot at a distance from the margin. In *I. Chalybe* the wing is of the ordinary form, and the white spot touches the margin. I have not quoted Linnæus, because his description will apply to either species, and Clerck's figure has the priority.

Eudamus Astrapæus.

Alis supra ochraceo-rufis : ambabus singulatim maculis duabus hyalinis : anticis punctis decem, posticis punctis quinque, fuscis : posticis infra maculis undecim albis.

Upperside. *Female* rufous. Both wings with two round transparent spots between the branches of the median nervure. Anterior wing with four brown spots between the first branch of the median nervure and the submedian—two before and two after the middle : a brown spot at the middle of the subcostal nervure, and five separate spots near the apex, the middle spot transparent. Posterior wing lobed, with five undefined brown spots, one in the cell, and two on each side of the transparent spots.

Underside as above, except that the posterior wing has a spot near the base, two spots within the cell, one between them and the inner margin, and one near the costal margin, forming part of a semicircle with those described above, all marked with white.

Exp. 2 to $2\frac{4}{10}$ inch.

Hab. Amazon : Villa Nova (*Bates*) and Chanchamayo (*Thamm*).

In the collections of W. C. Hewitson and Dr. Staudinger.

Three males in the collection of Dr. Staudinger are without any transparent spots : one has two lunular white spots in the place of the transparent spots of the anterior wing, and has three of the subapical spots marked with white. Comes in the same group as *Doriscus*.

Eudamus Nicephorus.

Alis rufo-fuscis : anticis puncto ochraceo costali : posticis serie punctorum ochraceorum.

Upperside. *Male* dark rufous-brown, paler towards the base. Posterior wing slightly lobed, with a bifid spot in the cell, followed by a curved band of six ochreous spots.

Underside as above, except that there is a small ochreous spot at the middle of the costal margin of the anterior wing, and a similar spot near the costal margin of the posterior wing, forming part of the transverse band.

Exp. $2\frac{4}{10}$ inch.

Hab. Amazon.

In the collection of W. C. Hewitson.

Eudamus Phraæanor.

Alis supra rufo-fuscis : anticis macula magna tripartita in medio posita maculaque sub apicem bipartita hyalinis : posticis macula

fusca serieque macularum fuscæ: his infra maculis novem ochraceis.

Upperside rufous-brown. Anterior wing with a large central trifid pale yellow spot, and a subapical bifid spot, both transparent. Posterior wing with a spot in the cell, followed by a curved band of seven spots, all dark brown.

Underside as above, except that the spots are ochreous, and that there are two additional spots near the costal margin, forming with the rest a complete semicircle.

Exp. $2\frac{1}{2}$ inches.

Hab. New Granada and Chiriqui.

In the collections of Dr. Staudinger and W. C. Hewitson.

I have described this species from Dr. Staudinger's collection. In my specimens the spots on both sides are very indistinct. Nearest to *Euribates* of Cramer.

Eudamus Mephitis.

Alis anticis supra fuscis, fascia centrali quinquepartita et punctis quatuor minutis sub apicem hyalinis: posticis nigris: posticis infra fuscis, maculis tribus albis pone medium positis.

Upperside. *Male* dark brown. Anterior wing with a central irregular band of five united transparent white spots: one on the costal margin bifid, three below this, one outside of them, and four minute spots near the apex. The body and inner margin of the posterior wing covered with blue-green hair, the fringe white: the anal angle projecting.

Underside as above, except that the posterior wing is darker at the middle, bordered outwardly with some white spots.

Exp. 2 inches.

Hab. Chiriqui (*Ribbe*).

In the collection of Dr. Staudinger. Will arrange with *E. naevos*.

Dr. Staudinger has an example of this species (perhaps distinct) in which the spots on the underside of the posterior wing are pale yellow and differently placed. It is from Peru.

Eudamus Ridens.

Alis anticis supra fuscis, fascia centrali quinquepartita fasciæque sub apicem sexpartita hyalinis: posticis nigris, macula in medio posita oblonga alba: posticis infra fascia alba punctis duobus atris notata.

Upperside. Anterior wing dark brown, crossed at the middle by a quinquefid band, the fifth spot outside of the others, and near the apex by a continuous irregular band of

six parts. Posterior wing black with a short tail: marked in the middle by an oblong trifold white spot: the inner margin covered with grey hair, the fringe white.

Underside as above, except that the posterior wing has (absorbing the spot described above) a continuous band of white parallel to the outer margin, and marked by two black spots.

Exp. 2 inches.

Hab. Chiriqui (*Ribbe*).

In the collection of Dr. Staudinger.

Eudamus Ægiocbus.

Alis anticis supra fuscis, basi cærulea, fascia transversa quadripartita recta punctisque quinque sub apicem hyalinis: posticis rufo-fuscis: his infra basi cærulea, puncto pallido in medio posito.

Upperside. *Male* dark brown, paler on the posterior wing. Anterior wing with the base brilliant blue: crossed at the middle obliquely by a quadrifid straight narrow band of white, the first spot on the costal margin bifid, a very minute spot outside of this band, and near the apex a band of five spots, all transparent. Posterior wing lobed, with the fringe white at the apex.

Underside as above, except that the costal margin only of the anterior wing is blue, and that the posterior wing has the costal margin at the base broadly blue, and a pale spot at the end of the cell.

The *female* does not differ, except in the broader form of the posterior wing.

Exp. $2\frac{3}{10}$ inches.

Hab. Chiriqui (*Ribbe*).

In the collection of Dr. Staudinger. Comes near *E. mercatus*.

Eudamus Enander.

Alis supra fuscis, anticis basi cærulea: his infra margine costali cæruleo, margine interno albo: posticis basi cærulea.

Upperside rufous-brown, the base of both wings blue.

Underside rufous-brown. Anterior wing with the costal margin blue from the base to the middle, the inner margin broadly white. Posterior wing lobed, darker at the middle, followed by a band of paler colour.

Exp. $1\frac{6}{10}$ inch.

Hab. Pará.

In the collection of Dr. Staudinger.

Eudamus Meretrix.

Alis supra fuscis, basi cærulea: anticis fasciis tribus fuscis: alis infra ochraceis, posticis fasciis duabus fuscis.

Upperside dark brown: the base of both wings brilliant green-blue. Anterior wing crossed by three bands of dark brown—one bordering the blue, the second between it and the outer margin, the third, which is short, near the apex. Posterior wing lobed.

Underside ochreous-brown. Anterior wing with the bands as above. Posterior wing with a small spot near the base and two transverse bands dark brown, the outer band bordered outwardly with ochreous yellow.

Exp. $2\frac{2}{6}$ inches.

Hab. Ecuador (*Buckley*).

In the collection of W. C. Hewitson. Near to *E. Anaphus*.

Eudamus Cephisus.

Alis supra fuscis: anticis fascia quadripartita centrali, puncto minuto maculaque quadripartita sub apicem hyalinis: anticis infra basi ochracea: posticis dimidio interno ochraceo, maculis fuscis notato.

Upperside dark brown. Anterior wing crossed transversely at the middle, from the costal margin to the anal angle, by a continuous band of four distinct parts, a small spot outside of this band and a quadrifid spot near the apex all transparent white.

Underside as above, except that the base of the anterior wing and the inner half of the posterior wing are ochreous. Posterior wing with two spots near the costal margin before its middle and an oblique band of spots at the middle all brown.

Exp. $1\frac{2}{8}$ inch.

Hab. Chiriqui (*Ribbe*).

In the collection of Dr. Staudinger.

Eudamus Lebbæus.

Alis supra fuscis: anticis fascia bipartita punctisque duobus (uno sub apicem posito) hyalinis: posticis infra rufo-fuscis, puncto in cellula posito punctisque quatuor (duobus albo notatis) fuscis.

Upperside dark brown. Anterior wing with a short bifid band at the middle, a spot outside of it, and a spot near the apex all transparent white.

Underside as above, except that it is paler and tinted with carmine, and that the posterior wing, which is lobed, has a minute black spot at the end of the cell, and is crossed beyond the middle by four small black spots, two of which are marked with white.

Exp. $1\frac{2}{6}$ inch.

Hab. Chiriqui (*Ribbe*).

In the collection of Dr. Staudinger.

Eudamus Thaddæus.

Alis supra fuscis: anticis maculis tribus centralibus disjunctis, punctis duobus prope angulum analem punctisque quinque disjunctis sub apicem hyalinis: posticis infra fascia alba latissima.

Upperside dark brown, rufous towards the inner margin of the posterior wing. Anterior wing with three detached spots at the middle, two smaller spots below these near the anal angle, and five at the apex, also apart from each other, all transparent.

Underside as above, except that the spots of the anterior wing are much larger, that there is a small spot at the middle of the costal margin, and that the posterior wing is crossed by a very broad band of white.

Exp. $1\frac{1}{2}\frac{7}{8}$ inch.

Hab. New Guinea (Wallace).

In the collection of W. C. Hewitson.

Eudamus Hymenæus.

Alis supra fuscis: anticis maculis tribus centralibus disjunctis punctisque quinque sub apicem hyalinis.

Upperside dark brown, rufous towards the base. Anterior wing with a central band composed of three separate spots, and an apical band of five separate spots, three of which are linear.

Underside as above, except that there are two indistinct pale rufous spots near the anal angle of the anterior wing.

Exp. $1\frac{7}{10}$ inch.

Hab. Aru (Wallace).

In the collection of W. C. Hewitson.

Eudamus Migonitis.

Alis supra fuscis: anticis maculis duabus (una bipartita) maculaque sub apicem tripartita hyalinis: posticis infra dimidio basali (margine costali excepto) lilacino punctis duobus notato: fascia margineque exteriore lilacinis.

Upperside dark brown, paler towards the base. Anterior wing with two central white spots (one bifid) at the middle and a trifid spot at the apex all transparent white.

Underside. Anterior wing as above, except that it is irrorated with grey near the apex. Posterior wing with the basal half (except the costal margin, which is brown) grey-white marked by two black spots: the outer half rufous-brown, crossed by a band of grey, the outer margin irrorated with grey.

Exp. $1\frac{2}{5}$ inch.

Hab. Mysol (Wallace).

In the collection of W. C. Hewitson.

Eudamus Ænesius.

Alis supra fuscis: anticis macula magna centrali trifida maculaque tripartita sub apicem flavo-hyalinis: anticis infra macula apicali lilacina: posticis brunneis lilacino variegatis, puncto ochraceo, fascia margineque postico lilacinis.

Upperside dark brown. Anterior wing with a large central trifold spot and a trifold spot at the apex both transparent pale yellow.

Underside. Anterior wing as above, except that it has a large spot of grey at the apex. Posterior wing rufous-grey clouded with brown: the costal margin, which is marked by a small ochreous spot, and the outer half of the wing nearly, which is crossed by a band of grey spots, dark brown: the outer margin grey.

Exp. $1\frac{2}{6}$ inch.

Hab. Dorey (*Wallace*).

In the collection of W. C. Hewitson.

Eudamus Calathus.

Alis supra fuscis, macula tripartita punctisque duobus sub apicem hyalinis, puncto albo prope marginem interiorem: posticis apice flavo.

Upperside dark brown. Anterior wing with a large central trifold spot and two minute spots (at an unusual distance from the apex) all transparent white: a small white spot near the middle of the inner margin. Posterior wing with the apex white.

Underside as above, except that there is a yellow spot at the middle of the costal margin of the anterior wing, and that the central spot is joined to the small spot described above, and is extended to the inner margin.

Exp. $1\frac{8}{10}$ inch.

Hab. Sumatra (*Wallace*).

In the collection of W. C. Hewitson.

Eudamus Præstes.

Alis supra fuscis, anticarum margine exteriori rufo, posticarum lilacino: anticis punctis tribus apicalibus albis: posticis infra rufis, maculis fuscis indistinctis.

Upperside dark brown, rufous on the outer margin of the anterior wing, lilac on the outer margin of the posterior wing, the fringe rufous. Anterior wing with three white spots near the apex.

Underside as above, except that the posterior wing is rufous, paler towards the inner margin, and is crossed beyond the

middle by a series of four or five brown spots, and has a large dark brown spot on the lobe.

Exp. $1\frac{8}{10}$ inch.

Hab. Cayenne.

In the collection of W. C. Hewitson.

Eudamus Litanicus.

Alis supra rufo-fuscis: anticis maculis duabus fasciisque duabus fuscis: posticis macula fasciaque fuscis: his infra macula anali fusca.

Upperside dark rufous-brown. Anterior wing with a spot in the cell, a spot below it near the inner margin, a short band beyond the middle, and a band near the apex, all dark brown. Posterior wing lobed, with a spot in the cell and a transverse band beyond the middle both dark brown.

Underside as above, except that the posterior wing is paler, has two additional spots near the costal margin, and one on the anal lobe, all brown.

Exp. $1\frac{5}{6}$ inch.

Hab. Amazon.

In the collection of W. C. Hewitson.

Eudamus Laogonus.

Alis supra griseo-fuscis: anticis maculis quatuor in medio positis maculaque sub apicem tripartita hyalinis, fascia transversa pone medium fusca: posticis macula fasciaque fuscis, margine exteriore in medio protumido.

Upperside grey-brown. Anterior wing with four separate spots at the middle: the first (very minute) on the costal margin, the second deeply sinuated: a trifid spot at the apex: all transparent: crossed beyond the middle by an indistinct band of brown. Posterior wing lobed, projecting at the middle of the outer margin, crossed by two indistinct bands of brown.

Exp. $1\frac{7}{10}$ inch.

Hab. Brazil.

In the collection of Dr. Staudinger.

Eudamus Marpesus.

Alis supra griseo-fuscis: anticis macula magna centrali quadripartita maculaque sub apicem trifida hyalinis, fascia transversa pone medium fusca: posticis fasciis duabus fuscis, margine exteriore protumido.

Upperside grey-brown. Anterior wing with a large central quadrifid spot and a trifid spot near the apex transparent white: the outer margin and a submarginal band dark brown.

Posterior wing lobed, projecting at the middle of the outer margin, crossed transversely by two bands of brown.

Exp. $1\frac{3}{16}$ inch.

Hab. Brazil.

In the collection of Dr. Staudinger. May be a variety of the last.

MISCELLANEOUS.

Note on the Phenomena of Digestion in the Cockroach (Periplaneta americana, L.). By M. FÉLIX PLATEAU.

THE Editors of the 'Annals of Natural History' have given (in volume xvi. 1875, p. 152) a summary of my "Recherches sur les phénomènes de la digestion chez les Insectes"*. In the number for April 1876, p. 333, they have reproduced, under the title "On the Functions of the Glands of the Digestive Apparatus of Insects," an abstract of the memoir of M. Jousset de Bellesme entitled "Recherches expérimentales sur la digestion des Insectes et en particulier de la Blatte" (8vo, Paris, 1875).

The publication of M. Jousset's work has called forth on my part a well-founded claim of priority†, since M. Jousset reproduced, a year after myself, nearly all my results. A discussion has also resulted, as we did not agree on certain points, of which the principal may be characterized as follows. Relying on a long series of experiments, I had put forward in my memoir of 1874 that the digestive juices of insects are alkaline or neutral, *never acid*. M. Jousset asserts the contrary, and says that in the *Blatta* the liquid of the cæca of the middle intestine is slightly acid.

The present note contains the results of a study which I have just made of the phenomena of digestion in *Periplaneta americana*. The following is an abstract of it.

The aliments when swallowed accumulate in the crop and undergo the action of the secretion (which is most frequently alkaline) of the salivary glands; there the feculent substances are transformed into glucose. This first product of digestion is absorbed on the spot, and is met with no more in the rest of the digestive tube.

The valvular apparatus (gizzard), which by no means plays the part of a trituratory organ, allows the matter in course of digestion to slide in small quantities into the middle intestine. That region receives the juice secreted by eight glandular cæca, which is ordinarily alkaline, *never acid*, neutralizing the acidity that the contents of the crop may have acquired after a long stay in that organ, transforming the albuminoids into soluble and assimilable bodies analogous to the peptones‡, and forming emulsion of the fats.

* Mém. de l'Acad. Roy. de Belgique, tome xli. 1874.

† Comptes Rendus, 1876, vol. lxxxii. p. 340.

‡ The action of the secretion of the cæca of the cockroach on the albuminoids has been demonstrated by M. Jousset. I am happy to confirm his results; only this secretion is not acid.