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THE BUTTERFLY CALLED *ISMERIA* BY BOISDUVAL AND LeCONTE

(WITH A NEOTYPE FOR *ERESIA CARLOTA* REAKIRT)

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The butterfly that Boisduval and LeConte called *Melitaea ismeria* has puzzled taxonomists for over a century. Actually four names are involved in the tangle, *gorgone* Huebner [1810], *ismeria* Boisduval and LeConte (1833), *phaon* Edwards 1864 and *carlota* Reakirt 1866. The best approach to a solution to the problem is to discuss these names in the sequence in which they were proposed, and then discuss the taxonomic problem.

THE NAMES INVOLVED

***Dryas reticulata* Gorgone** Huebner
Figs. 1 and 2

Sammlung exotischer Schmetterlinge, volume 1, plate [41] [1810.]

There is no text in the *Sammlung* for *gorgone*, nor did Hemming (1937) discover any manuscript material that relates to this species. It is believed that the several butterflies that Huebner described from Georgia came to him from John Abbot through an intermediary. The plate devoted to *gorgone* contains four figures. Two of these, 1 and 2, present a butterfly that resembles very closely the taxon later named *carlota* by Reakirt. These are figures of a male. The two figures, 3 and 4, of the female *gorgone* represent a different species. This is the taxon later named *phaon* by Edwards. By the principle of priority the name *gorgone* applies to figures 1 and 2, the male.

Melitaea ismeria Boisduval and LeConte
Figs. 3 and 4

Lépidoptères de L'Amerique Septentrionale, pl. 168, pl. 46 [1833]

The butterfly figured is one upon the upper side of which there is a black pattern on a fulvous ground. The pattern has the elements of those found on some North American *Phyciodes* and *Melitaea*. These are reduced, much as the pattern on *mylitta* Edwards is reduced on *barnesi* Skinner or those of *palla* Boisduval are reduced on *neumoegeni* Skinner. On the under side the most striking feature is broad orange brown margins on both wings, much as on *harrisii* Scudder. The disc pattern is not unlike *harrisii*, but at best is only a crude approach to that pattern. It is quite unlike the pattern on *gorgone* ♂, or *carlota*. The text accompanying the plate describes the figures.

W. H. Edwards wrote to Henry Edwards on December 3, 1871, concerning A. G. Butler's advice about several butterflies he (W. H. E.) had sent to the British Museum: "Moreover, I sent him *Phyciodes Carlota*, Rea. and he says it is Boisduval's *Ismeria* to my astonishment." Edwards did not accept the synonymy suggested.

Apparently Butler and Scudder had jointly arrived at the conclusion about *ismeria*. Scudder (1872) stated that he had found the original of Abbot's plate of *ismeria* in the British Museum (N. H.) and that it represented the male of Huebner's *gorgone*. My very good friends, Mr. N. D. Riley, Dr. L. G. Higgins and the late Dr. R. M. Fox, examined all of the plates in the 17 volumes of Abbot's drawings in the British Museum (N. H.) for me. Dr. Fox wrote to me at the conclusion of this task, "The conclusion is that the Boisduval & LeConte plate does not hinge on any of these paintings and was not copied from anything available here." He further stated: "And finally, I discovered the following statement in the front of the Boisduval & LeConte volume here: 'The originals of these plates are in the Boisduval Library, acquired by Oberthür. Seen by F. A. Heron, 11 x 1904.' He was the Keeper at that time." In 1928, the Oberthür library was purchased by the book seller La Chavalier and dispersed piecemeal. I have not been able to locate the plates in question, but continue to search for them.

From the above we can draw certain conclusions: The Abbot figure in the British Museum (N. H.) that both Scudder and Butler used as the basis for their decision that *ismeria* Boisduval and LeConte 1833 was a very poor representation of a manuscript plate by Abbot does not represent the species figured by Boisduval and LeConte and was not the model for their plate 46.

In the preface to their book, Boisduval stated that he did not touch the Abbot drawings in the first nine livrasons, but beginning with the 10th, he caused some retouching to be done because he had received so many complaints from subscribers about the poor quality and scientific inexactitude of the plates circulated earlier. The plate of *ismeria* is one of those so modified at Boisduval's request.

The concept that *ismeria* Boisduval and LeConte represents the same butterfly as Huebner's figure of male *gorgone* stems from Scudder's statement about the Abbot plate in the British Museum (N.H.). That plate is not the one used by Boisduval and LeConte as the basis for their Plate 46. Therefore, Scudder's concept is untenable.

Perhaps a few words about Abbot and his plates of butterflies is in order at this point. Abbot was sent to America to collect insects for a group of entomologists in England. He arrived in the American colonies in 1773, and after visiting several areas on the east coast settled in Georgia in 1776, living in the now extinct settlement of Jacksonborough. In addition to collecting insects for his patrons he drew many water-colors of birds, butterflies and flowers. These were sent to his agent, John Francillon, a silversmith on the Strand in London, who was a collector of insects and who sold folios of Abbot's water-color drawings. Many of these plates were copies, or even copies of copies, made under Abbot's supervision by colorists that he employed. Portfolios of these drawings are found in libraries, both public and private, and in several museums. In this country there are such at Harvard University and at the Carnegie Museum in Pittsburgh. Perhaps the largest such collection is the 17 volumes at the British Museum (N. H.).

It is not known now whether Abbot drew the plates used by Boisduval and LeConte as a specific commission, or whether these authors used a set of plates that had been previously prepared for general sale. At the time that Boisduval and

LeConte's book was being assembled, Abbot was about 80 years old. I have a vague memory of hearing that the plates in question had been purchased from Abbot by the father of Maj. John Eatton LeConte.

There is no way today to judge the accuracy of Abbot's representations in Boisduval and LeConte's book, except by comparison with known butterflies from America. Of course, if the original set of Abbot plates is found they will provide the proper measure of accuracy.

So far as the published plate labelled *ismeria* by Boisduval and LeConte is concerned, it represents no known butterfly from Georgia. It cannot be considered even a crude representation of either of the insects called *gorgone* by Huebner. It can be considered a crude representation of the butterfly called *harrisii* by Scudder, but this insect is not now found in Georgia. The larva figured with the imago on Plate 46, while melitaeine in appearance does not conform to the mature larva of *carlota* (*gorgone* ♂ Huebner). It does suggest the mature larva of *harrisii* Scudder. It has some resemblance to early-stage larvae of *carlota* and of *nycteis* Doubleday but not sufficient to positively identify the larva. The pupa that is figured is melitaeine, but unidentifiable. Thus the evidence of the plate of *ismeria* published by Boisduval and LeConte is that it accurately represents no butterfly known today from Georgia and certainly does not represent the butterfly called *gorgone* male by Huebner.

Careful study of the use of the name *ismeria* indicates that its acceptance as the equivalent of *gorgone* male hinges on Scudder's statement about the manuscript plate of Abbot in the British Museum (N. H.). Since this is not the plate used by Boisduval and LeConte, Scudder's argument, and the position of all others who have accepted it, falls to the ground. The published plate must be accepted at face value and the name *ismeria* must be retained for the butterfly there depicted.

Eresia carlota Reakirt

Proceedings of the Entomological Society of Philadelphia, 6:122-151, esp. p. 141, 1866.

Reakirt did not describe the butterfly for which he proposed the name *carlota*. If it were not for the fact that he referred to W. H. Edwards's detailed description of "*nycteis* Doubleday" published in 1861, the name would be *nomen nudum*. Edwards's description (1861:171-162) does not apply to *nycteis* Doubleday but to a butterfly very much like that figured on Plate [41] figs. 1 and 2 by Huebner and named *gorgone*, male.

Careful search of the material in the W. H. Edwards collection at the Carnegie Museum, Pittsburgh, Pennsylvania, failed to discover the specimens Edwards has misnamed *nycteis*. In his description of "*nycteis*" Edwards had stated that he had specimens from "Illinois; Missouri," before him. In a letter to S. F. Baird of the Smithsonian Institution dated 1 March 1860 (see Brown [1959]: 197) Edwards told of arranging with Cyrus Thomas to determine the butterflies in the collections of the Natural History Society of Illinois. I have no evidence of Edwards having received material from Illinois at an earlier date. Thus it appears that part of the material misidentified by Edwards came to him from Thomas and was returned to him.

I wrote to my former associate, Dr. Leigh E. Chadwick, chairman of the Department of Entomology at the University of Illinois, about this problem. He searched the collections in Urbana for any specimen of this species that had passed through Edwards's hands. He found none. It appears certain that the type of *nycteis* Edwards, 1861, is unrecognizable or lost.

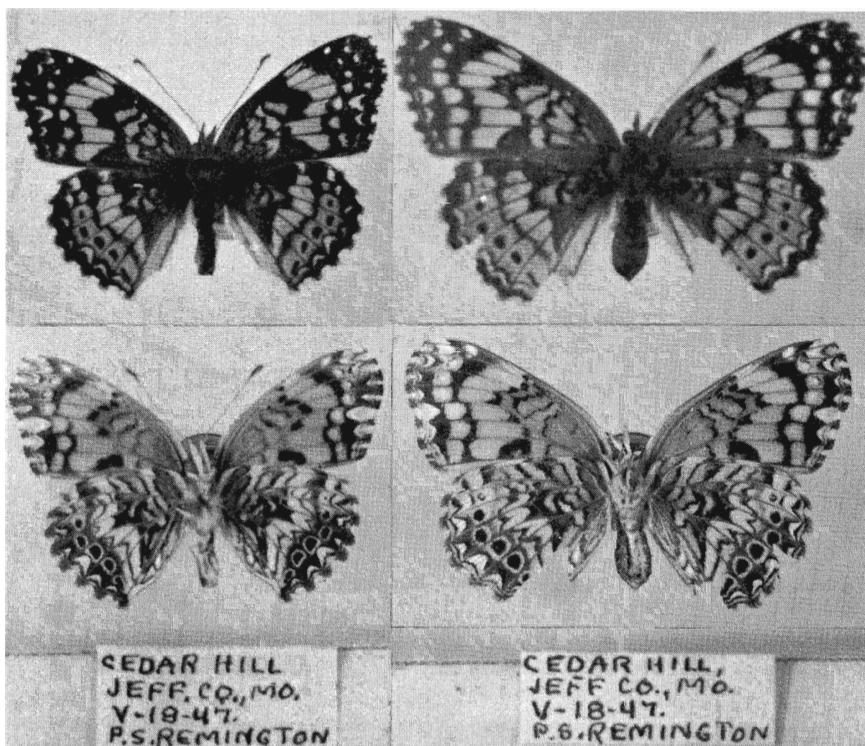
A search of the Reakirt material in the Strecker Collection at the Field Museum in Chicago revealed that the specimens considered the types of the name *carlota* Reakirt are Colorado specimens collected by James Ridings.

The original description of *Eresia carlota* is brief. After stating the new name and citing Edwards's misdetermination of *nycteis* Doubleday, he wrote:

"Hab. Rocky Mountains, Colorado Territory. (Coll. Tryon Reakirt.) 'Illinois, Missouri' Edwards. 'I cannot imagine how Mr. Edwards could have regarded this very distinct species, as identical with Mr.

Doubleday's figure; it no more resembles it, than does *Tharos*. Taken in June, among the mountains."

This poses an interesting nomenclatorial problem. First, the only description of *carlota* is that written by Edwards in 1861. This was based upon material from Illinois and Missouri. Therefore, *carlota* Reakirt is a replacement name for *nycteis* Edwards 1861, not Doubleday 1847. Article 72 (d) of the Code requires that "...the type of the replacement nominal species must be that of the prior nominal species, despite any contrary designation of type-specimen..." It is clear that the Colorado material now considered the types of *carlota* has no nomenclatorial standing. In the absence of any recognizable specimen of the original material Edwards had used, no lectotype can be selected for *carlota* Reakirt. This leaves the name without a type. Such a specimen is needed because of the confused status of *ismeria* Boisduval and LeConte. Therefore I propose as neotype for *carlota* Reakirt 1866 (= *nycteis* Edwards 1861) a specimen from the collection of Mr. P. Sheldon Remington. It is a male with the radius of the left fore wing 23 mm. It carries a pin label reading "Cedar Hill / Jeff [erson] Co., Mo. / V - 18 - 47. / P.S. Remington" and is here illustrated as figure 6. The specimen will be deposited with the Allyn Museum of Entomology, Sarasota, Florida. It now carries an additional label, partly printed in red, reading "Neotype / nycteis, 1861 / (= carlota Reak. 1866) / W. H. EDWARDS / designated by / F. M. Brown. 1967".



Neotype ♂ of *Eresia carlota* Reakirt, left, upper (top) and under (bottom) surfaces. Right, a ♀ from same population, upper (top) and under (bottom) surfaces.

Melitaea phaon Edwards

Proceedings of the Entomological Society of Philadelphia, 2:505, 1864.

The butterfly that Edwards described is the same as, or very like, the one figured by Huebner on Plate [41] figs. 3 and 4 as the female of *gorgone*.

Brown (1966:434-438, fig. 26) established a neotype for *phaon* Edwards.

HISTORIC APPLICATION OF THE NAMES

Huebner can be considered "first revisor" for interpretation of *gorgone*. In a now very rare 8-page pamphlet *Index Exoticorum Lepidopterorum* (see Hemming, 1937) published in 1821, he demonstrated a new system of nomenclature that he was using in his *Verzeichniss bekannte Schmettlinge* [sic]. On un-numbered page 3 of the *Index* is the entry: "Gorgone Pap. nym. f. *Dryas reticulata*: Phyciodes Cocyta". This apparently synonymizes *gorgone* Huebner with *cocyta* Cramer 1779 which in turn represents *tharos* Drury [1773]. Such action is not tenable. None of the figures of *gorgone* on pl. [41] in Huebner's original use of the name *gorgone* represents *cocyta* Cramer (= *tharos* Drury.)

In no way does this invalidate the use of the name *gorgone* Huebner in association with either *carlota* Reakirt or *phaon* Edwards. Huebner's action does not validate the use of *gorgone* Huebner [1810] in association with *tharos* Drury. It establishes that *cocyta* Huebner [1821], *nec* Cramer 1779, is a synonym of *gorgone* Huebner. This error of Huebner misled numerous 19th century lepidopterists, among them Doubleday, Herrich-Schaeffer and Kirby.

Doubleday (1852:531) among his "additions and corrections" placed *gorgone* Huebner as a synonym of "Mel *Tharos*, n. 24" on p. 181. On that page, 181, in volume I, he had listed as number 22 "Mel. *ismeria* Boisd. & LeComte [sic.]". Apparently Doubleday based his assignment of *gorgone* Huebner to *tharos* Drury upon Huebner [1821] or upon the female which does resemble *tharos* but is a distinct species. He did not assign the male of *gorgone* to *ismeria* nor did he list it otherwise. Doubleday's work cannot be used to limit the term *gorgone* Huebner since Huebner's plate represents two species. His assignment of the name to *tharos* Drury is erroneous, but understandable. Herrich-Schaeffer (1865) and Kirby (1871) followed Doubleday's assignment. Kirby (*l.c.*) considered *phaon* (p. 171), *carlota* (p. 173) and *ismeria* (p. 174) as valid species names.

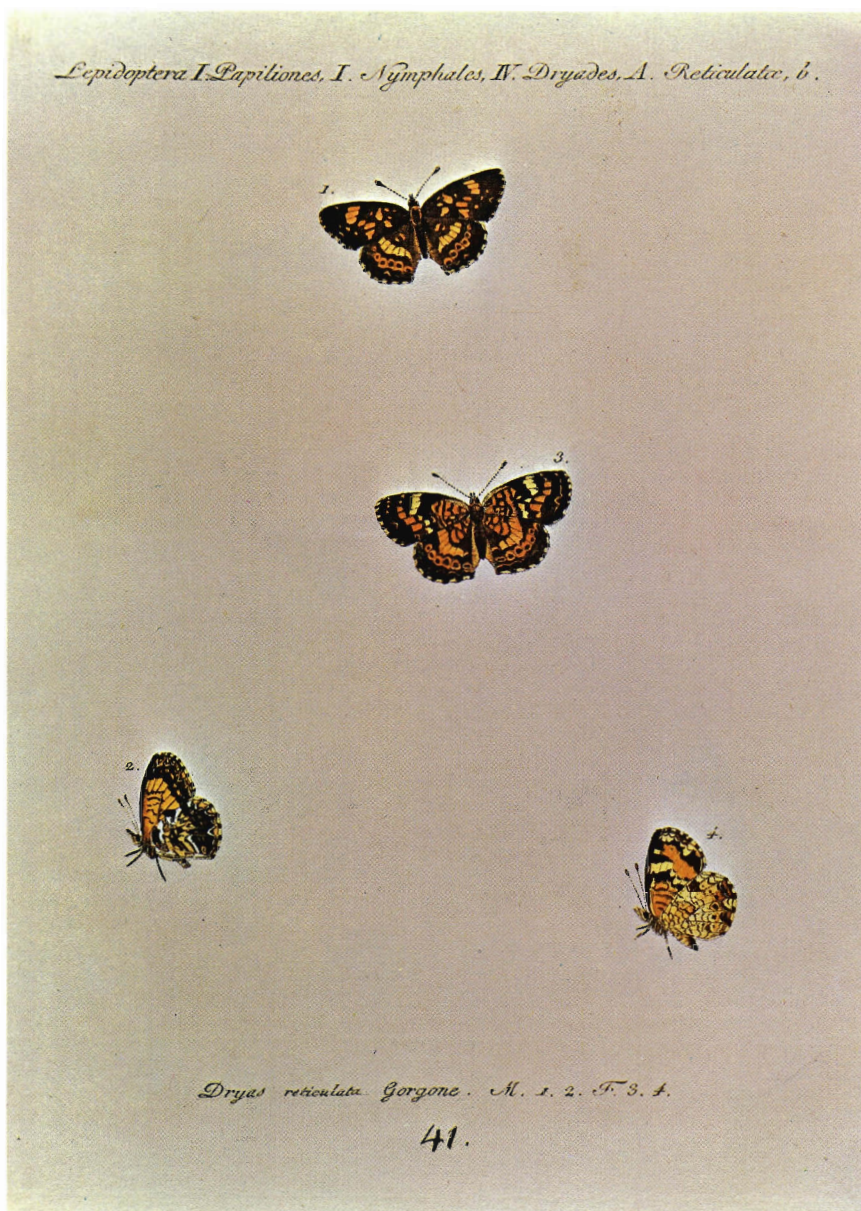
Scudder (1875:266) considered *gorgone* male Huebner and *carlota* Reakirt as synonyms of *ismeria* Boisduval and LeConte. He (*l.c.*:268) considered *gorgone* female Huebner and *phaon* Edwards as two valid species names.

Strecker (1878:120-121) in a footnote to *tharos* made an utterly confused statement about *gorgone*. In this he refers to plate [40] of Huebner. This plate presents four figures of *Dryades reticulata Liriope* (published in [1813]. He infers that figures 1 and 2 are those to which Scudder related *ismeria* Bdv. LeC. The name *liriope* is a Cramer name (1779) and represents a neotropical species that is not involved in this discussion. Huebner's figure of it is good and easily recognized, better than Cramer's original figure. Strecker's error was caused by his attempt to follow Herrich-Schaeffer's lead noted above.

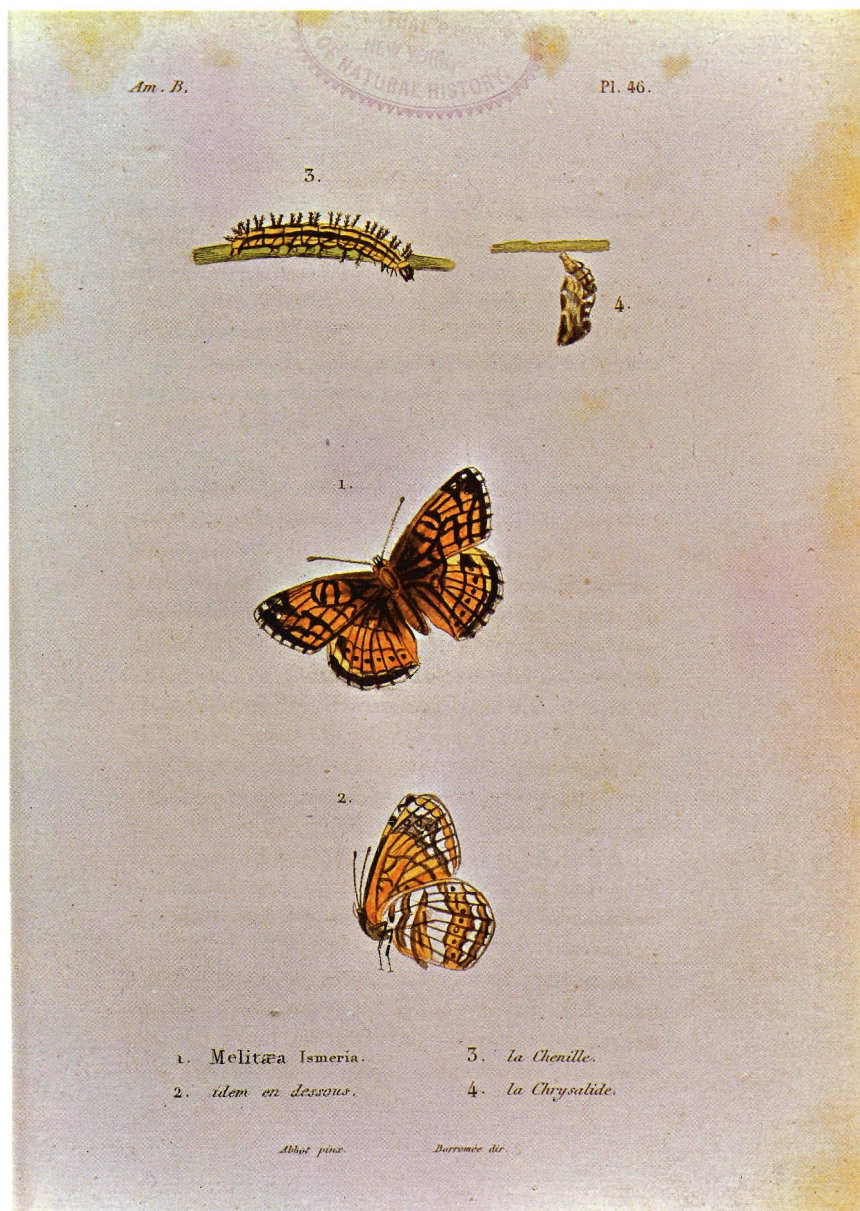
Edwards (1884) ignored *gorgone* Huebner and considered *ismeria* Bdv. & LeC. as a "Species at some time credited to the North American fauna, but omitted in the Catalogue for want of authentication." He retained *carlota* Reak. and *phaon* Edw. as valid names.

Skinner (1898:16) followed Scudder and listed *ismeria* with *carlota* as a synonym. He treated *phaon* as a valid species name and made no mention of *gorgone*. Dyar (1902) copied Skinner but added *gorgone* as a synonym of *tharos*.

Barnes and McDunnough (1917:10) used *gorgone* Huebner as a valid species name and placed *ismeria* and *carlota* as synonyms of it. They used *phaon* as a valid name with *gorgone* female as a synonym. Later Barnes and Benjamin (1926:13) reversed this, making *ismeria* the valid name with *gorgone* male and *carlota* syn-



Figs. 1 and 2: Huebner's Plate [41], showing the types of *Dryas reticulata* Gorgone. Figs. 1 and 2 represent what is now considered *gorgone*; Figs. 3 and 4 represent what is now known as *phaon*.



Figs. 3 and 4: Boisduval and LeConte's Plate 46, showing *Melitæa ismeria*. Adult figures (1 and 2), larva (3) and pupa (4).

onyms of it. They used *gorgone* (female only) as the valid name of another species with *phaon* Edwards as a synonym.

The two published revisions of *Phyciodes* (s.l.) treat the names somewhat differently. Hall (1929:33, 39) used the names as did Barnes and McDunnough in 1917. Forbes (1954:148, 151-152, 154) considered *ismeria* Bdv. & LeC. a valid species name, but not associated with *gorgone* Huebner nor *carlota* Reakirt. He gathered under the name *gorgone* synonyms *carlota* and "*ismeria* Auct.". He followed Barnes and McDunnough for *phaon* Edwards.

McDunnough (1938:19) used the names exactly as he had with Barnes in 1917. Klots (1951:95, 99) wrote "for the time being we should hold the name *ismeria* in abeyance." Otherwise he followed McDunnough (1938). Higgins (1960:438, 440) considered *gorgone* a valid species name with *carlota* as a synonym and *gorgone* female as a synonym of *phaon*. He followed Klots's (1951) suggestion about *ismeria*. Dos Passos (1964:82-84) reverted to Barnes and Benjamin's 1926 stand but raised *carlota* to sub-specific status.

It can be seen from this that there has been little real consensus among lepidopterists about the nomenclatorial use of the names *gorgone* and *ismeria*. Taxonomically there are two, possibly three, species involved. In part the confusion is the result of Huebner assigning the name *gorgone* to figures of two species on the same plate; in part to Huebner later equating *gorgone* with *cocyta* Cramer; in part to Scudder's equating of a figure of Abbot's in the British Museum with the figure published by Boisduval and LeConte.

DISCUSSION

Dr. dos Passos (1964) reopened the question of *gorgone* Huebner by diverging from the use of the name in McDunnough's Check-list (1938). McDunnough had made *ismeria* Boisduval and LeConte and *carlota* Reakirt synonyms of *gorgone* Huebner. This is consistent with his use of these names since 1917 in the checklist of Barnes and McDunnough. Such use resulted from publication the year earlier (1916:93) of the following:

"*Phyciodes gorgone* Hbn.

"Figs. 1 and 2 of Huebner's Samml. Exot. Schm. Pl. 41, as stated by Scudder (Bull. Buff. II, p. 266), certainly refer to the species at present listed as *ismeria* Bdv. whilst Figs. 3 and 4 are as plainly the ♀ of *phaon* Edw. If the name be held to the ♂ sex, *gorgone* Hbn. will have priority over *ismeria* Bdv. and the synonymy of the species will be:

"*gorgone* Hbn.

"*ismeria* Bdv. & Lec.

"*carlota* Reak.

"*phaon* Edw.

"*gorgone* Hbn. ♀ (nec ♂)

"If it be contended that Boisduval by his description of *ismeria* limited *gorgone* to the ♀ sex (Figs. 3 and 4) then *phaon* must fall."

Since neither in 1917 nor in 1938 did McDunnough consider that Boisduval limited *gorgone*, he followed the synonymy given above. In fact, Boisduval made no mention of *gorgone* in his description of *ismeria* and thus cannot have limited the use of the name.

In Scudder's (1875) article alluded to by Barnes and McDunnough, he listed the synonymy as follows:

"163. *Ismeria* Boisd. - LeC., Lep. Am. Sept. 168, pl. 46 (Melitaea)

Gorgone Hubn., Samml. Exot. Schmett. 1, figs. 1-2

(nec 3-4) (*Dryas reticulata*)

Carlota Reak., Proc. Ent. Soc. Phil., 6, 141 (*Eresia*)

Nycteis Edw. (nec Doubl.), Proc. Acad. Nat. Sc.,

1861, 161 (*Melitaea*)"

This resulted from Scudder's attempt to force an identity between a plate of Abbot's in the British Museum (our figure 5) and the plate published by Boisduval and LeConte (our figures 3 and 4). The identity is invisible to me.

I have never seen a butterfly that is a good fit for the figure of *ismeria*. To

me it looks on the under side like a crude drawing of *harrisii* Scudder. The upper side appears as might be expected of a *harrisii* with unusually reduced black markings. I have seen a specimen of the species represented by Huebner's male with almost as greatly reduced black markings on the upper side, but the under side is typical of *gorgone* ♂ Huebner. This specimen is a female in the collection of Mr. Lucien Harris, Jr., and was captured in the vicinity of Atlanta, Georgia.

I am not the first to recognize something like *harrisii* in Boisduval and LeConte's figure. In the posthumous edition of Harris's *A Treatise on some Insects Injurious to Vegetation* (1862:288-9) he described under the name "*Melitaea ismeria*?" the insect we today call *harrisii* Scudder. He stated, "I think it possible that this species may be distinct from the *Ismeria*, which is known to me only by Dr. Boisduval's figure." and "the only specimen which I have seen was sent to me by Dr. D.S. C. Smith of Sutton." Harris's hedge of his determination, I am sure, was based upon the un-*harrisii* appearance of the upper side of Boisduval's figure. In Harris's collection there was a specimen of *harrisii* bearing the number 514. In his manuscript catalogue 514 is noted as "*Melitaea*, Sutton, Dr. Smith." This information was published as long ago as 1878 by Strecker. Scudder (1889:679) verified Strecker's statements. At the same time, Scudder stated that he had erroneously considered Harris's *ismeria* a synonym of *nycteis* Doubleday in 1863 (p. 379) in which he was followed by Edwards (1878:163) and Saunders (1872:161). Scudder named *harrisii* in "1863" [1864] the same year in which he confused Harris's *ismeria* with *nycteis*.

A hundred years after Harris, Higgins (1960:440) stated his opinion of *ismeria*. He wrote: "The attribution of this name and figure to *gorgone* is not convincing. The figure is badly drawn and full allowance must be made for inaccuracy in details, but there is one feature that cannot be overlooked. This is the presence on the under surface of a distinct yellow border around the outer margins of both wings, external to the marginal lunules. Among eastern species this feature is best marked in *C. harrisii* (Scudder), and I should be inclined to place *ismeria* as a form of that species near *albimontana* Avinoff."

In addition to the imago, Boisduval and LeConte figured the larva and pupa of *ismeria*, copied from the Abbot plate that they used. We know enough about the immature stages of both *harrisii* and *carlota* to test the Boisduval and LeConte figures against the observations of competent lepidopterists.

Scudder (1889:680) stated that the only food plant for *harrisii* is *Aster* (*Doellingeria*) *umbellatus* Torrey - Gray. Without reference, Scudder (1889:1811) stated of *ismeria* "said to feed on *Helianthus trachelifolius*." This food plant is cited by Strecker (1878:122) and appears in pencil on the British Museum Abbot plate we have referred to in the earlier discussion of *ismeria*, from whence Scudder got his information. The author of the inscription is not known to the authorities at the British Museum. Comparison with numerous examples of Scudder's handwriting, which the inscription resembles, suggest that he did not write it. The plant determination is not based on anything published by Boisduval and LeConte.

Of the mature larvae of *ismeria* Scudder (*ibid.*) wrote "*Last stage* Yellow, with blackish spines and three longitudinal blackish stripes. Head black, as well as the thoracic legs and the ventral surface; the other legs are yellow (Boisduval and LeConte.)"

Careful study of the larva shown on the Abbot plate in the British Museum (N. H.) has been made from a color photograph of the plate. The caterpillar is drawn on a partly eaten leaf of a species of *Helianthus* (?) shown in flower. It is a yellow-fulvous caterpillar with black longitudinal stripes and rows of black spines. There is a narrow mid-dorsal black line, broad dorso-lateral black bands in which the spines are rooted and a narrow, broken ventro-lateral black lines. The true (thoracic) legs are black. The prolegs are yellow-fulvous with the anterior portion blackish. The head is black with two yellowish spots that may be highlights.

The inscription on the Abbot plate reads "The Caterpillar feeds on the Crop Wort, and Sun Flower. It tyed itself up by the tail, 16th May, changed into Chrysalis 17th, Bred 26th. It frequents the Oak Woods of Burke County, but is not common."

Scudder (1889:678) described minutely the larva of *harrisii*. In the fourth

instar it is yellow with black spines and a dark dorsal stripe with traces of a brownish stigmatal stripe on each side and with transverse dark lines. In the final instar the larva is orange with blackish dorsal and stigmatal bands and with darkish transverse lines at the junctions of the segments. The darkening of the colors in the last instar from those seen in the fourth is quite variable.

Dyar (1893) and Edwards (1894) described larvae each called *carlota* Reakirt. Dyar described a mature caterpillar and the pupa. His description is primarily of the distribution of the spines with these color notes: "Cervical shield, anal plate, feet outwardly and spiracles black; body brownish-red, with a dorsal and sub-dorsal black shaded line, most distinct in the segmental incisures." This reads to me like the description of *nycteis* larva, which I have raised. Further on he wrote, "Found on the ground feeding on an undetermined plant which was just starting, at Denver, Colorado, April 30, 1891," Davenport and Dethier's (1938:161) statement that the "Food plant: *Quercus chrysolepis*" was used by Dyar's *carlota* larva is wholly unfounded.

Edwards's color notes for *carlota* as a mature larva are these, "Colour (of three examples under view), deep black, speckled with white or yellow-white; a red fulvous mid-dorsal band from 2 to 13, sometimes widening on 2, interrupted by the tubercles after 4; along the lower half of side the black ground is much mottled with white, so as to have the effect of a white band, and on either edge is a macular white line, almost complete on the upper; the spines, as in the genus, rising from shining black tubercles, and are concolored with them, tapering to a blunt point, out of which springs a straight short bristle, and there are many such about the sides from top to base; underside gray-brown; the feet black, prolegs gray-brown; head obovoid, bi-lobed, shining black, with many short curved-down blackish hairs from black tubercles." I have seen the butterflies produced by these larvae and they are *carlota* Reakirt. I have raised similar larvae.

Neither Dyar's nor Edwards's description of *carlota* larvae fits the figured larva of *ismeria* Boisduval and LeConte as well as does the larva of *harrisii*, and that is a poor fit. It will be noted from the four descriptions of larvae, *ismeria*, *harrisii*, *nycteis* (?) and *carlota*, that both *ismeria* and *harrisii* are described as yellow, or orange, with three black longitudinal bands (dorsal and lateral) and *carlota* calls for dark larvae, variously marked. Again the evidence, poor as it is, points toward *harrisii* (or *nycteis*) rather than *carlota* being the closest known taxon to *ismeria*.

The larva shown on the Abbot plate in the British Museum (N. H.) is closer in appearance to the descriptions of the larvae of *ismeria* and *harrisii* than to the description of verified larvae of *carlota*. It also fits rather well Dyar's description of the larva he raised and believed to be *carlota*. I have not found the butterfly that emerged from Dyar's larva and cannot vouch for it being true *carlota*. It is possible that there are color phases of the larvae of *carlota*. It also is possible that Dyar really raised *nycteis*.

CONCLUSIONS

In conclusion, I believe that the name *ismeria* Bdv. & LeC. cannot be used in association with ♂ *gorgone* Huebner. The figures of *ismeria* imago, larva and pupa are more consistent with poor representation of *harrisii* Scudder than with poor representation of ♂ *gorgone* Huebner. Since the figures do not clearly represent either of these butterflies I believe that stability of nomenclature will be better served if we consider *ismeria* Boisduval and LeConte *nomen incognitum*, or even consider the representation fictitious and delete the name from the North American fauna.

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