

NEW FORMS IN THE GENUS *EREBIA* (LEPIDOPTERA)

by

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A revision of the material belonging to the genus *Erebia* Dalman in the Rijksmuseum van Natuurlijke Historie at Leiden, mainly based on the "Monograph of the genus *Erebia*" by B. C. S. Warren (London, 1936), induced me to describe a number of new subspecies and aberrations, and to make some remarks on forms already described.

The greater and most important part of the material is to be found in the Mezger collection, which is kept separate. It has always been indicated with the types, if they are to be found in that collection; all other types are included in the general collection of Lepidoptera of the Rijksmuseum van Natuurlijke Historie.

Descriptions and remarks are following here in systematic order, according to Warren's system.

Erebia eriphyle (Frr.) subsp. ***tristis*** H.-S. ab. ***secundo-tertiopunctata*** nov. ab.

The typical *eriphyle* possesses two black spots on the forewing; specimens deviating in this respect were described as ab. *tripunctata* Hoffm. with three spots, and as ab. *impunctata* Höfn. without black spots. One of the specimens in hand, from Reichenstein, Styria, and consequently belonging to the subsp. *tristis* H.-S., shows the two hindmost black spots of the ab. *tripunctata* Hoffm., but the foremost spot is lacking. I propose the name *secundo-tertiopunctata* nov. ab. for this aberration.

Holotype: ♂, Reichenstein, 15 VII 1923, in the Mezger collection.

Erebia manto (Schiff. & Dennis) subsp. ***osmanica*** Schaw. ab. ***subtus-lutescens*** nov. ab., and ab. ***bubastis*** nov. ab.

In his excellent monograph of the genus *Erebia* Warren writes that the ♀♀ of the subspecies *osmanica* Schaw.—Schawerda did not describe the ♀ himself—do not show a bright submarginal band on the underside of the hindwing. This statement is borne out by the greater part of the specimens which I have examined from the typical locality, "Trebevic". Here the bands

are reduced and they do not contrast much with the ground-colour. Two ♀♀, however, show a distinct submarginal band, the first a lemon-yellow one: ab. *subtus-lutescens* nov. ab.

Holotype: ♀, Trebevic, 21 VII 1927, Dr. Bath, Halle a.S., in the Mezger collection.

The second distinctly banded ♀ shows a pure white band: ab. *bubastis* nov. ab.

Holotype: ♀, Trebevic, VII 1929, Dr. Bath, Halle a. S., in the Mezger collection.

These deviations agree with those of *E. manto* (Schiff. & Dennis), respectively of the subsp. *mantoides* (Esp.), described under the same names.

Erebia flavofasciata Heyne subsp. ***thiemei*** Bartel.

Contrary to Warren I consider the Engadine specimens as a good subspecies, because all the specimens in hand show the same development, namely the tendency to reduction of the bands and of the black spots. In none of the 28 Engadine specimens which I examined, the bands and spots have developed as much as in the type of the species from Campolungo Pass. The f. *warreni* Vty. is a local form of this race, which shows the tendency to reduction in extreme measure.

Erebia epiphron (Knoch) subsp. ***silesiana*** M.-D. ab. ***privata*** nov. ab.

In a ♂ from the Altvater, the typical locality of this race, the otherwise rich bands of the forewing are reduced to separate brown-red spots enclosing the black pupils. The bands of the hindwing are nearly extinguished. The black spots have decreased; the ground-colour is lighter.

Holotype: ♂, Altvater, in the Mezger collection.

Erebia epiphron (Knoch) subsp. ***orientpyrenaica*** subsp. nov.

After comparing the series in hand: 28 specimens from the Vosges, among which cotypes of the subsp. *vogesiaca* Goltz (syn. of subsp. *mackeri* Fuchs), and 29 specimens from the Pyrénées Orientales, I cannot agree with Warren's opinion that the *epiphron* from the Pyrénées Orientales also has to be included in the subsp. *mackeri* Fuchs. The race of *epiphron* flying in the Pyrénées Orientales averages a larger size, and is more strongly built than the race from the Vosges. The specimens from the Pyrénées Orientales show more brilliant colours. The red-brown or yellow-red on the underside of the forewing of the ♂♂, respectively the ♀♀, radiates from the bands to the base of the wing. The principal character is, however, presented by the much wider but shorter bands in the forewings of the new subsp., which bands are totally replaced by the ground-colour in the last segment of the wing, and partially so in the penultimate segment; they almost appear

horizontally cut off. This new race may be named subsp. *orientpyrenaica* nov. subsp.

Holotype: ♂, Mont Canigou, VII 1928, J. Staettermayer; allotype: ♀, Mont Canigou, VIII 1927, J. Staettermayer, paratypes: 7 ♂♂, Mont Canigou; 2 ♂♂ Val d'Eyne; 3 ♂♂, 1 ♀, Vernet les Bains; 9 ♂♂, 5 ♀♀, Cambre d'Ase; all in the Mezger collection.

One ♂ from the Catalonian Pyrenees nearly approaches the subsp. *orientpyrenaica* nov. subsp., but has narrower and longer bands on the forewings.

Erebia epiphron (Knoch) subsp. **orientpyrenaica** nov. subsp. ab. **dispersa** nov. ab.

One ♂ from Mont Canigou shows the bands in the forewings radiating in the direction of the base of the wings. This aberration may be called *dispersa* nov. ab.

Holotype: ♂, Mont Canigou, VII 1928, J. Staettermayer, in the Mezger collection.

Erebia epiphron (Knoch) subsp. **pyrenaica** H.-S. ab. **obsoleta** nov. ab.

Two ♂♂ from Gavarnie show the tendency to blackening of this race in an extreme manner. They are plain black-brown above as well as below. Of the markings only small spots separated by the brown ground-colour and enclosing the four minute black pupils in the forewings are faintly visible.

Holotype: ♂, Gavarnie, Hautes Pyrénées, 25 VII 1935; paratype: ♂, Gavarnie; both in the Mezger collection.

This aberration agrees with its homonym described by Tutt of the subsp. *memnon* (Haw.)

Erebia pharte (Hb.)

In his monograph Warren adds the specimens of '*pharte*' from Carinthia to the subsp. *eupompa* Frhst., those from Vorarlberg to the typical race. In Carinthia representatives of the two races appear to meet. According to their appearances and the diagnosis of *E. pharte* (Hb.), respectively of the subsp. *eupompa* Frhst., the Carinthian specimens should be distributed over the two races. The large series in hand from Nest-Gehr, Eastern Vorarlberg, however, without doubt belongs to the subsp. *eupompa* Frhst.

Erebia pharte (Hb.) subsp. **eupompa** Frhst. ab. **reducta** nov. ab.

The subsp. *eupompa* Frhst. also has representatives with reduced bands; this reduction naturally does not go as far as in the f. *pellene* Frhst. This deviation from the type of the race may be named ab. *reducta* nov. ab.

Holotype: ♂, Rotwand, Bavarian Alps, 21 VII 1917; allotype: ♀, Nebelhorn, Oberstdorf, Allgäu, 26 VII 1917, E. Möbius; paratypes: 1 ♂, Rei-

chenstein, Styria; 1 ♂, Carniola, Crna prst, Dobovsek, Laibach; 1 ♂, Nest Gehr, Eastern Vorarlberg; 1 ♂, First, Eastern Vorarlberg, all in the Mezger collection.

Erebia aethiops (Esp.) ab. **perfusa** + **semicaeca** nov. ab.

One ♂ (*patria ignota*) has broadened bands with diluted inner edges. In the forewing there are four relatively small black spots, of which only the two apical ones, which have still the white pupils, are left on the under side; on the upper side of the hindwing the two inferior spots only are left as mere black points.

Holotype: ♂, *patria ignota*.

Erebia triarius (De Prun.) ab **reducta** nov. ab.

A ♀ from the Alpes Maritimes has the bands reduced on the upperside of the forewings; the bands of the hindwings for the greater part are replaced by the ground-colour and consist of round spots separated by the ground-colour along the nervures.

Holotype: ♀, Alpes Maritimes, in the Mezger collection.

(In the ♀♀ of the subsp. *eurykleia* Frhst. and the subsp. *letincia* Frhst. the reduction of the bands appears to belong to the racial characters; in a ♀ from Zermatt the band of the forewing is even interrupted by the ground-colour in the posterior segments).

Erebia medusa (Schiff. & Dennis)

I might remark beforehand, that the very rich material of this *Erebia* which I could examine does not match the diagnoses by the authors, but when I arrange the specimens as to their habitus, I am—on the other hand—unable to follow the regional division into several subspecies drawn up by Warren in his monograph. From Orsova for instance I have specimens, which should be assigned about for one half to the typical subspecies, for the other half to the subsp. *psodea* (Hb.). Is not *psodea* (Hb.) perhaps yet a local form? Can it not be that the variation of *E. medusa* (Schiff. & Dennis), as far as the development of the bands and the colour is concerned, is controlled by the climatic conditions in each flying season, and that the various subspecies have not yet got a constant habitus, characteristic of each of them? For want of enough special knowledge I do not venture to answer this question, but I should like to point out in connection with what is stated above, that in *Parnassius* the development of the markings and of the colour differs very much in the different years and that this fact does not determine the facies of the separate races at all. Yet there exists a general tendency for the direction of the development of "*medusa*", which is given by the local climate. The Bulgarian specimens in hand are marked rather poorer than the typical "*medusa*", they do not at all remind of *psodea*

(Hb.) and certainly belong to subsp. *euphrasia* Frhst. What Warren writes concerning this subspecies I cannot but confirm, and it applies to specimens from the Herzegovina too; the representatives of "*medusa*" from Serbia, also from the localities mentioned by Fruhstorfer in the description of subsp. *narona*, cannot be separated from those from Bulgaria. The specimens from France appear to me to be typical "*medusa*" rather than to belong to the subsp. *brigobanna* Frhst. Yet I might not decide this question, as I examined a one-sided although rich material, but only encourage specialists to pay attention to the questions roused above.

Erebia medusa (Schiff. & Dennis) subsp. ***brigobanna*** Frhst. ab. ♂ ***grisea*** nov. ab.

Ground-colour of both wings grey-brown instead of black brown.

Holotype: ♂, Oswitz, 28 V, in the Mezger collection.

Erebia medusa (Schiff. & Dennis) subsp. ***brigobanna*** Frhst. ab. ♂ ***masculina*** nov. ab.

♀♀ with the bands strongly reduced on both wings, and with the bands coloured brown red instead of yellow-red, may be called *masculina* nov. ab. Only the two anterior markings in the forewing are joined in a brown band spot, the other markings are surrounded by a narrow brown ring only. These ♀♀ look like normal ♂♂.

Holotype: ♀, Bad Ems; paratypes: 2 ♀♀ Vieux Moulin; 2 ♀♀ (belonging to the subsp. *narona* Frhst.), Koricna, Bosnia; all in the Mezger collection.

Erebia medusa (Schiff. & Dennis) subsp. ***turkeстана*** nov. subsp.

Warren mentions, sub subsp. *polaris* Stg., the statement of Herz, that the form of *medusa* from Witim and Mongolia is identical with "*polaris*", but doubts if it is true. The development of the eastern representatives of "*medusa*" yet appears to go in this direction. At all events a ♂ from Tscheljabinsk, Turkestan, which I examined, shows a close relation to the subsp. *polaris* Stg. It is, however, larger, 15 mm, of a dark ground-colour, and on the underside of the hindwing the submarginal band contrasts with a sharper edge against the darker basal part, about as in fig. 1048 (subsp. *uralensis* Stg.) on pl. 78 of Warren's monograph. Forewing with 4, hindwing with 3 small, white centred markings in narrow brown rings, of which on the underside only the two apical markings of the forewing are clearly visible. (To this subspecies almost certainly also a ♂ belongs which is labelled—without doubt erroneously—Asia minor). This race may be called subsp. *turkeстана* nov. subsp.

Holotype: ♂, Tscheljabinsk, Turkestan, W. Siberia, 1913, G. von Rennekampf; paratype: ♂, "Asia minor", De Gavere.

Erebia pluto (De Prun.)

A ♂♀ from the Mont Blanc district without doubt belongs to the typical species. A rather large series from the P. Umbrail, with white centred black spots on the forewings, contrary to Warren's supposition, are to be classified as subsp. *velocissima* Frhst. A single ♂ from the Gross Glockner cannot be distinguished from the ♂♂ from Triglave and should consequently be included in the subsp. *triglavensis* Schaw.

Erebia aethiopellus (Hoffmsg.) ab. **obscura** nov. ab.

♀♀ in which the bands on the upperside of the hindwings are for a great part replaced by the ground-colour.

Holotype: ♀, Ligurian Alps, 1600 m; paratype: ♀, Monte Matto, Val-dieri; both in the Mezger collection.

Erebia tyndarus (Esp.) subsp. **dolomitensis** Wrn.

Specimens from the Rolle Pass which I examined in great number, and which as for the rest agree well with the diagnosis of the race, are by no means small, but rather show the size and strong build of the subsp. *rondoui* Obth. Further I might remark that the 3 black spots on the hindwings lack the white centres, which is in agreement with Goltz's diagnosis, called misleading by Warren.

Erebia pronöë (Esp.) f. **almangoviae** Stg.

In the first place it may be stated that the series in hand, from Oberstdorf, Allgäu, not at all consists of small representatives of this species; they rather average the size of the typical form; their bands, it is true, are reduced, their spots smaller, but yet they show white centred spots, and equally spots on the hindwings. The characters, reduction of the bands, decreasing of the spots, occur in the whole range of the typical form in a larger or smaller percentage. Consequently I doubt whether *almangoviae* Stg. can stand as a local form or should be considered as a general aberration of the typical form.

Erebia pronöë (Esp.) subsp. **vergy** (Ochs.)

Subsp. *vergy* (Ochs.) is by no means a very small race, but neither it is, as Warren asserts, the largest subspecies of *E. pronöë* (Esp.). The rich material which I examined permits me to state that subsp. *vergy* (Ochs.) on an average is of middle size, and that its representatives increase in the West of Switzerland, whereas in the East of that country smaller specimens prevail.

Erebia pronöë (Esp.) subsp. **tarcenta** Frhst.

In the Northern Dolomites also chiefly representatives of *E. pronöë* (Esp.) occur which belong to the subsp. *gardeina* Schaw. It may be mentioned that this race also occurs in the Trentino; the Trentino specimens

cannot be separated from typical representatives of this race, the ♂♂ merely show slightly more brown-red in the forewings.

Erebia lefebvrei (Boisd.)

The f. *rowlandi* Wrn., which the author classes with the typical subspecies, and which he only mentions from the Basses Pyrénées, undoubtedly also occurs in the Hautes Pyrénées and the Pyrénées Orientales; at all events 7 from 12 ♂♂ which I examined from the localities Gèdre and Mt. Canigou show the characters of the f. *rowlandi* Wrn. Cannot this be only a deviating form pertaining to the variability of the species, which is not bound to a locality? For want of material I do not venture to take a decision, although I could ascertain the same relation between subsp. *astur* Obth. and f. *pyrenaea* Obth. in a rather large series from Cambres d'Ase. In my opinion the ab. *intermedia* Obth. of f. *pyrenaea* Obth. has to be cancelled at all events, because the f. *pyrenaea* Obth., when the forewing shows brown-red colour on the underside, shows at least traces of it on the upper-side too. With the distinction between *astur* Obth. and *pyrenaea* Obth. this subspecies is sufficiently characterised.

Erebia lefebvrei (Boisd.) f. *rowlandi* Wrn. ab. **asturides** nov. ab.

One ♂ of the f. *rowlandi* Wrn. from Gèdre lacks the black markings on the upper- and underside of the hindwing. This aberration may be named *asturides* nov. ab.

Holotype: ♂, Gèdre, Hautes Pyrénées, in the Mezger collection.

Erebia lefebvrei (Boisd.) subsp. **astur** Obth. ab. **rowlandides** nov. ab.

On the contrary 6 ♂♂ from Cambres d'Ase, belonging to the subsp. *astur* Obth., show 3 clear, white centred, black spots. This aberration may be called *rowlandides* nov. ab.

Holotype: ♂, Mont Canigou, VII 1928, J. Staettermayer; paratypes: 3 ♂♂ Cambres d'Ase; 1 ♂ Mont Canigou; 1 ♂, Nuria, Eastern Pyrenees, Catalonia, VIII 1915, Weiss; all in the Mezger collection.

Erebia lefebvrei (Boisd.) subsp. **astur** Obth. ab. **caeca** nov. ab.

For 2 ♂♂ which lack all markings and of which the wings are consequently plain brown-black I propose the name ab. *caeca* nov. ab.

Holotype and paratype: ♂♂, Cambres d'Ase, VII 1928, J. Staettermayer, in the Mezger collection.

Erebia scipio Boisd. ab. ♀ **flavescens** nov. ab.

E. scipio Boisd. is a little variable and hardly digryph species. The ♀♀ strongly resemble the ♂♂; they only are somewhat lighter than these and generally show 4 black spots in the forewing and 3 in the hindwing. Therefore an almost yellow, on the underside white-yellow ♀, which may be

referred to as ab. *flavescens* nov. ab., is the more remarkable. It may be observed that this ♀ lacks the black spots on the hindwing.

Holotype: ♀, patria ignota, from the Heylaerts collection.

Erebia stirius (Godt.) subsp. ***gyrtone*** Frhst. ab. ***expupillata*** nov. ab.

In his monograph Warren already refutes the diagnosis of this race by its author, which states among other things that the hindwings of subsp. *gyrtone* Frhst. show well developed black spots, just as the f. *nerine* (Frr.). The contrary is rather the case; a ♂ from the typical locality, the Grossglockner, completely lacks the black spots, which occurs but rarely in *Erebia stirius* (Godt.). This aberration may be called ab. *expupillata* nov. ab.

Holotype: ♂, Glockner, 22 VII 1924, in the Mezger collection.

I might deal with some other observations on *Erebia stirius* (Godt.) in this place. I can only assign to the f. *nerine* (Frr.) of the typical subspecies a series in hand from Gastein, which properly should be classed with the subsp. *styx* (Frr.). The f. *orobica* appears to be not constant at all in the Mendel district. From a large series which I had at my disposition the greater part of the specimens belong to the subsp. *stelviana* Curò, and do not at all show the sense of development described by Turati.

Erebia montanus (De Prun.) ab. ***reducta*** nov. ab., ab. ***minorisocellata*** nov. ab., and ab. ***luxuriosa*** nov. ab.

The ab. *heinrichi* Zobel contains insects of the subsp. *homole* Frhst. of this species, in which the bands are substituted by the ground-colour; ab. *reducta* nov. ab., which comprises specimens with reduced bands, represents a transition to that aberration. In the hindwing this development leads to a division of the band into three spots round the markings.

Holotype: ♂, Brenner, 15 VII 1925; paratype: ♂, Hochnissl, Karwendel, 7500 ft.; both in the Mezger collection.

Often the third marking of the forewing is lacking. Rarely, on the contrary, the two posterior markings of the hindwing have vanished: ab. *minorisocellata* nov. ab.

Holotype: ♂, Lötschental, Wallis, VIII 1919, Ried; paratypes: ♂, Crans, Valais; ♂, Upper Engadine; all in the Mezger collection.

A ♀ which shows 5 particularly large markings in the forewing, and 4 also relatively large markings in the hindwing, deserves naming: ab. *luxuriosa* nov. ab.

Holotype: ♀, Pontresina, 8 VIII 1927, in the Mezger collection.

Erebia zapateri Obth. ab. ***ocellaris*** nov. ab., ab. ***excessima*** nov. ab., and ab. ***fasciata*** nov. ab.

Generally the hindwing of this *Erebia* is plain black-brown; now and

then the indication of a marking appears in the ground-colour. One ♂, however, clearly shows 3 white centred black spots in rusty brown rings; two other ♂♂ show 2 such markings while a third one is faintly indicated. This aberration may be named ab. *ocellaris* nov. ab.

Holotype: ♂, Albaracin, Spain, VII-VIII 1907, J. Fabresse; paratypes: 2 ♂♂, Albaracin, Spain; all in the Mezger collection.

Ab. *excessa* Pether refers to specimens with a third spot in the forewing. One ♀ shows two supplementary white centred spots: ab. *excessima* nov. ab.

Holotype: ♀, Albaracin, Spain, VII-VIII 1907, J. Fabresse, in the Mezger collection.

Two ♀♀ possessing a narrow ochre-yellow band in the hindwing are particularly remarkable; I propose the name ab. *fasciata* nov. ab. for this aberration. This band begins at the costal margin of the hindwing and nearly reaches the inner margin. Both the type and the paratype show a well developed white centred spot at the end of the band.

Holotype: ♀, Albaracin, Spain, VII-VIII 1907, J. Fabresse; paratype: ♀, Albaracin, Spain; both in the Mezger collection.

Erebia neoridas (Boisd.) subsp. **pyrenaensis** S.-Stätmyr.

Warren deals with *pyrenaensis* S.-Stätmyr. as a forma only. As, however, all the 12 specimens from the typical locality, Vernet les Bains, are strongly built, large insects with broader bands and larger markings than *neoridas neoridas* (Boisd.), which moreover show a rather dark, violet-brown underside, yet I think that the Pyrénées Orientales harbour a good subspecies.

Erebia neoridas (Boisd.) ab. **parva** nov. ab.

A ♂ from Dourbes, Basses Alpes, measures 9 mm only and therefore may be named ab. *parva* nov. ab.; moreover it lacks the black spots in the hindwing.

Holotype: ♂, Dourbes, Basses Alpes, from the Heylaerts collection.

Erebia melas (Hbst.) ab. **parva** nov. ab.

Warren rightly observes that the largest specimens of the — on an average — smaller subsp. *leonhardi* Frhst. do not stand back by the typical race. As to the size subsp. *leonhardi* Frhst. is remarkably variable; in the largest ♂♀ the wing averages 15 mm, but uncommonly small specimens also occur, which I name ab. *parva* nov. ab. The type measures 9 mm, the allotype 10 mm.

Holotype: ♂, allotype: ♀, and paratypes: 5 ♂♂, 2 ♀♀, Ostaria, Velebit, Croatia, VII, Hilf, all in the Mezger collection.

Erebia meolans (De Prun.) subsp. **guttata** Gltz.

Warren unites the subsp. **guttata** described by Goltz as a forma with the subsp. *stygne* (Ochs.). That is certainly not right. Goltz used "*stygne*" as a species name and therefore spoke of "*Erebia stygne guttata*". But, judging from the rich material in hand—among which there are cotypes of the subsp. *guttata* Goltz—the insects from the Vosges belong by no means to the group of subsp. *stygne* (Ochs.), but rather join the subsp. *posidonia* Frhst. Subsp. *guttata* Goltz doubtlessly is a good subspecies, showing with subsp. *posidonia* Frhst. the lighter, more female bands, characteristic for that subspecies, but differing from it by the bands being often interrupted by the ground-colour and by the inner edge of the bands being mostly wedge shaped and not drop shaped.

Erebia meolans (De Prun.) subsp. **guttata** Gltz. ab. **feminina** nov. ab.

In two ♂♂ the bands are nearly crimson-red on the upper- and underside. This deviation I name ab. *feminina* nov. ab.

Holotype: ♂, Viel Armand, 15 VI 1935; paratype: ♂, Viel Armand; both in the Mezger collection.

Erebia pandrose (Bkh.) ab. **uniformis** nov. ab.

Specimens with for the rest normal colouring, in which the red-brown of the bands has vanished on the upperside, so as to make the whole wing plain grey-green may be called ab. *uniformis* nov. ab.

Holotype: ♂, Simplon, 6 VIII 1930; paratype: ♂, Simplon; both in the Mezger collection.