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Volume 10

Geometridae Part 1

Aberrational Forms

Geometridae Vol. I.

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parthenias L. aberrational forms etc.

ab. obscura Prout. Seitz. 4 p. I 1912.
The forewings darkened, almost unicolorous.

an. nigra Tutt. Brit. Noct. 4 p. 14 1892.
Entirely black, without any trace of white or yellow in it.

ab. nigrobasalis Spuler. Schmett. Eur. I. p. 337 1908.
The entire basal part of the hindwings black.

ab. passetii Thierry-Mieg. Le. Nat. 6 p. 437.
The hindwings infuscated.

ab. cuprea Cockayne. Ent. Rec. 64 p. 65 pl. 3 f. I 1952.
The central area of the forewings pale copper colour leaving a narrow margin of normal blackish-brown along the inner margin, outer margin, and costa. The white median band is present, the reniform ringed with black standing out clearly

ab. albofasciata Cockayne. Ent. Rec. 64 p. 65 pl. 3 f. 2 1952.
On the forewings the basal line is absent, the ante and postmedian lines are very thick and straight, the area between largely filled with white which also extends beyond the postmedian line. Hindwings normal.

ab. intermedia Lempke. Tijdschr. Ent. 90 p. 148 1949.
The ground colour of the hindwings orange-yellow.

ab. luteata de Hennin. Rev. Mens. Soc. Ent. Nam. 10 p. 67 1910.
= flava W.-Wood. Entomologist 49 p. 80 1916.
Hindwings of a pale clear yellow without any trace of orange.

ab. variegata Lempke. Tijdschr. Ent. 90 p. 148 1949.
Ground colour of the forewings of a much paler brown and strongly spotted with white. Extreme pale female form.

ab. contrasta Lempke. Tijdschr. Ent. 90 p. 148 1949. (fig'd. vol. 110, pl. 11, f. 1.)
Basal half of the forewings unicolorous black, a large whitish and sharply contrasting spot before the small reniform stigma, outer half of the wings unicolorous dark brown-grey.

ab. fasciata Lempke. Tijdschr. Ent. 90 p. 148 1949.
The black central spot of the hindwings is not only connected with the basal suffusion, but also with the costa, so that a continuous band results.

ab. dilutior Heinrich. Dtsch. Ent. Z. 1916 p. 524 pl. 4 f. 13 .
The white markings of the forewings strongly reduced.

ab. unicolor Heinrich. Dtsch. Ent. Z. 1916 p. 524 pl. 4 f. 14.
The white markings of the forewings completely replaced by the ground colour, except for the marginal fringe.
This would seem to be the same as ab. obscura Prout. (above)

ab. muliercula Stephan. Int. Ent. Z. 17 p. 85 1923.
The narrow black marginal band of the hindwings showing only as a thin, short curved line and between it and the margin the ground colour appears again. The middle spot remarkably small and isolated.

Geom. I continued.

parthenias L. continued.

ab. *szymanskii* Isaak. in Maskowsky. Polsk. Pismo. Ent. 8 p. 3 fig.
The black bands of the hindwings almost entirely lost, the black shade on the inner margin very much reduced, the markings of the forewings also weakened.

ab. *brunnea* Closs.
Forewings above and beneath, unicolorous brown.

ab. *dealbata* Klemensiewicz. Spraw. Kom. fizyogr. Krakow 47 p. II 7 1913.

ab. *indigena* Lambillon.

ab. *griseocosta* Lempke. Tijdschr. Ent. 1967. 110. p. 225.
Upperside of forewings with a narrow pale grey stripe from the base to the subterminal line.

ab. *brevipennis* Lempke. Tijdschr. Ent. 1967. 110. p. 225.
Fore and hindwings distinctly shortened.

Archiearis.

notha Hbn. aberrational forms etc.

ab.intermedia Cockayne. Ent.Rec.64 p.65 1952.

Hindwings orange yellow or dull yellow with little trace of orange.

ab.obscura Cockayne. Ent.Rec.64 p.65 1952.

Forewing uniformly dark brown with pattern scarcely visible and with no white spot on costa. Hindwing normal.

ab.diluta Cockayne. Ent.Rec.64 p.65 1952.

Forewing with pale faded appearance due to all black scales having been replaced by brownish ones. On the hindwing the black markings are replaced by grey.

ab.cuprina Cockayne. Ent.Rec.64 p.65 1952.pl.3 f.I. (fig.I is notha, not parthenias)

Forewing pale copper colour except for narrow margins of blackish brown and the median band, including the reniform. The copper colour is lightly dusted with blackish brown, especially along the nervures.

ab.laeta Rebel.

Forewing white grey with broad black grey median band which is more extended outwards and with the hindwing bright uniform orange yellow except for a weak darkening at the inner margin.

ononaria Fuessly. aberrational forms etc.

ab. rubraria Prout. Seitz. 4 p. 6 1912.

Darker and redder than normal specimens, the irroration, in part, fuscous.

ab. sudataria Hubner. Samml. Eur. Schmett. pl. 95 f. 492 1814-1817.

Markings stronger.

ab. berytaria Staudinger. Catalogue. Ed. 3 p. 261 1901.

Almost unicolorous greenish grey.

ab. blanca Ribbe. Iris 23 p. 300. 1912.

White yellow, almost without markings.

ab. trifasciata Stauder. Int. Ent. Z. 14 p. 35 1920.

An additional band on the forewings in the middle field.

ab. monotonia Stauder. Int. Ent. Z. 14 p. 35 1920.

Varying towards rubraria Prout and in which the transverse lines are completely lacking on upper and undersides.

ab. squamata Stauder. Int. Ent. Z. 14 p. 35 1920.

With bright berytaria ground colour but with a stronger dark red dusting in which there are no transverse lines.

gen. east. faecaturia Hubner. Samml. Eur. Schmett. pl. 95 f. 492 1814-1817.

Summer form.

pruinata Hufn. aberrational forms etc.

atropunctaria Walker, List Lep. In. Brit. Mus. 1863, 26 p. 163

ab. fasciata Prout. Seitz 4 p. 14 1912. (See Prout 1875 (1876) p. 217)

The lines of the forewing somewhat approximated, the area between them considerably darker than the ground colour. see also ab. virgata Lempke p. 1 of these notes

ab. grisescens Reutti. Uebers. Lep. Faun. Baden. 2e Aufl. p. 110 1898.

= grisescens Hannemann. Int. Ent. Z. 10. p. 146 1917.

The ground colour of the wings grey instead of green.

ab. cotangens Cockayne. Ent. Rec. 64 p. 66 1952

On the forewings the ante and postmedian lines are united or pulled in above the inner margin, between nervures 1 and 2, the lower part forming a dark small triangle.

ab. mixta Lempke. Tijdschr. Ent. 90 p. 152 1949.

The forewings green, the hindwings grey.

ab. fuscomarginata Lempke. Tijdschr. Ent. 90 p. 152 1949.

Ground colour green but the whole space between the subterminal line and the fringe powdered with black grey, the nervures as a rule blackish.

ab. tangens Lempke. Tijdschr. Ent. 90 p. 152 1949. (descript. p. 147.)

The two transverse lines of the forewings touch or unite below the middle and then separate again.

ab. approximata Lempke. Tijdschr. Ent. 90 p. 152 1949. (described p. 147)

The two transverse lines of the forewings are close together.

ab. reducta Lempke. Tijdschr. Ent. 90 p. 153 1949.

The antemedian line of the forewings is absent.

ab. unilineata Lempke. Ent. Ber. Amst. 9 p. 290 1936.

On the forewings the dark antemedian and the whitish submarginal lines are absent leaving only the dentate postmedian line. Hindwings whitish line absent, the postmedian remaining, resulting in a uniform ground with a single dark brown line on all wings, irrespective of ground colour.

ab. bilineata Lempke. Tijdschr. Ent. 90 p. 153 1949.

On the forewings the white subterminal line fails, the dark transverse lines remaining.

ab. extrema Lempke. Tijdschr. Ent. 90 p. 153 1949.

Dark grey specimens in which only the white subterminal line is still visible.

ab. albescens Schingenschuss. Verh. zool.-bot. Ges. Wien. 74-75 p. (141) 1925.

Forewings, hindwings, thorax and abdomen white, transverse lines light brown.

ab. albida Kolossow. Ent. Nachrbl. 10 p. 149 1936.

Dull white ground colour.

ab. viridimelaina Heydemann. Ent. Z. 51 p. 341. 1938.

Ground colour green but on the costa, the whole marginal area, on the veins in the central area and over the whole grey hindwings it is suffused by a dense brownish grey wash. Lines distinctly blackish grey with black vein dots, the white submarginal is often diffused. Underside uniform silky grey brown with a dull dark central band and discal dots.

ab. nigrolineata Schwingenschuss. Verh. zool.-bot. Ges. Wien. 68 p. (151) 1918.

The transverse lines black.

ab. albolineata Wagner. Int. Ent. Z. 16 p. 40. 1922.

Specimens with a strikingly white marginal line on all wings.

Lempke says these belong to subsp. atropunctaria Wkr. which has heavy transverse lines whereas the author puts them under subsp. holsatica in which the lines are not mentioned.

ab. pallida Rocci.

= candidata Stauder. Int. Ent. Z. 14 p. 36 1920.

Unicolorous whitish, the transverse lines normal coloured.

ab. aurata Bretschneider. Z. Wien ent. Ges. 36 p. 21 1951.

The ground colour light orange, the lines reddish orange and white subterminal line prominent.

ab. *viridisquama* Heydemann. Schr. Naturw. Ver. Schels.-Holst. 1934. 20. p. 164.
Unicolorous grass-green.

ab. *agrestaria* Duponchel. Hist. Nat. Lep. Fr. 1829. 4. (2). p. 257, pl. 152, f. 4.
Nearly unicolorous, the dark lines being entirely effaced, but the white sub-terminal line still present.

ab. *virgata* Lempke. Tijdschr. Ent. 1967. 110. p. 229.
Forewings with dark contrasting central area.
There would seem to be very little difference between this form and ab. *fasciata* Prout (p. 1 of these notes).

Hipparchus Leach.

papilionaria L. aberrational forms etc.

ab. herbacearia Men. Mel. Biol. Ac. Sci. Pet. 3 p. II2.
Both transverse lines obsolete. Prout says this is a subspecies, East Siberia.

ab. alba Gillmer. Soc. Ent. 24 p. 42. 1909.
Entirely white, above and beneath, slightly tinged with yellowish.

ab. cuneata Burrows. Ent. Rec. 17 p. 202 1905.
A large white triangular or wedge-shaped spot on the basal side and in contact with the lunule of the forewing.

ab. subcaerulescens Burrows. Ent. Rec. 17 p. 202 1905.
Distinctly blue-green.

ab. subobsoleta Burrows. Ent. Rec. 17 p. 202 1905.
The basal and subterminal lines of the forewing absent leaving only the central line. On the hindwing the subterminal line is absent, leaving only the central line. The result is an insect with but one transverse line on each wing.

ab. deleta Burrows. Ent. Rec. 17 p. 203 1905.
On the forewing the basal and central lines only are represented, the subterminal being absent.

ab. prasinaria Hufnagel. Berl. Mag. 4 p. 506. 1767.
All three transverse lines on the forewing and two on the hindwing are quite distinct although made up of crescents or spots.

ab. obsoleta Osthelder. Schmett. Sudbayern. p. 380 1929.
Form without markings.
This would seem to be the same as herbacearia Men. see above.

ab. diffluata Marschner & Hirschberg. Mitt. Munchen ent. Ges. 22 p. 13. 1932.
Ground colour green, the white rows of spots still visible. Around the veins no colour, like ivory, the area between the veins green. Only on the upperside.

ab. tangens Lempke. Tijdschr. Ent. 1967: 110. p. 230.
On the upperside of the forewings the ante and postmedian lines touch each other a little above the inner margin and then separate again.



viridata L. Aberrational forms etc.

ab. mathewi Bankes. Ent. Rec. 19 p. 210. 1907.

Fore and hindwings dusted with orange scales, fewest nearer the base but especially noticeable between the subterminal line and the termen.

ab. rosearia Culot. Bull. Soc. Ent. Fr. 1910 p. 270.

The green replaced by a pale rosy tint above and below,

ab. cerulescens Burrows. Ent. Rec. 20 p. 132. 1908.

Of a decidedly blue-green colour.

ab. olivaceo-marginata Burrows. Ent. Rec. 20. p. 132. 1908.

Fringes of all wings dark olive green.

ab. rufotincta Burrows. Ent. Rec. 20 p. 132. 1908.

Forewings with a distinct red central flush,

ab. subobsolata Lempke. Tijdschr. Ent. 90 p. 155. 1949.

On the forewings the basal transverse line fails. *This is typical form.*

(ab. approximata Lempke. Tijdschr. Ent. 90 p. 155 1949. (described p. 147))

(The two transverse lines of the forewing are close together.)

Based on a misidentification, so must be withdrawn; see Lempke, Tijdschr. Ent. 1967:110.p.232.

ab. insignata Staudinger. Cat. Ed. 3 p. 263 1901.

The transverse lines obsolete or almost so.

ab. concavilinea Burrows Ent. Rec. 20 p. 132 1908.

The transverse line on the hindwing concave outwardly.

ab. albimaculata Lingonblad. Notul. Ent. 15 p. 53 fig.

ab. rotulata Fabricius. Syst. Ent. 1775: 635.

With two stripes on forewings, the typical form has only one.

smaragdaria Fabricius. aberrational forms etc.

subsp. *maritima* Burrows. *Setis Macro* sp. 1915-16. Ent. Rec. I2 p. II5 1900.

ab. *obsoleta* Burrows. Ent. Rec. I2 p. II5 1900.

Forewings with no discoidal spot.

ab. *alinea* Burrows. Ent. Rec. I2 p. II5 1900.

Forewings with no transverse lines.

ab. *unilinea* Burrows. Ent. Rec. I2 p. II5 1900.

Forewings with outer transverse line only.

ab. *viridis* Burrows. Ent. Rec. I2 p. II5 1900.

Colour of a much more vivid green than usual.

ab. *caeruleo-viridis* Burrows. Ent. Rec. I2 p. II5 1900.

Colour decided blue green.

pustulata Hufn. aberrational forms etc.

ab. rosea Cockayne. Ent. Rec., 64 p. 66 1952.
Ground colour replaced by pink.

ab. stigmatisata Stauder. Int. Ent. Z. 14 p. 36. 1920.
Lively green with suffused transverse lines of the forewings, the spot on the inner angle drawn out to the middle of the wing. All four discoidal spots are clearly defined or visible (as in *neriaria* H.-S.)

ab. tangens Lempke. Tijdschr. Ent. 90 p. 154 1949. (described p. 147.)
The two central transverse lines of the forewing touch each other below the middle and then separate again.

ab. tangens Hartweig. Z. Lepid. I p. 163.

ab. alba Schnaider & Worz. Jh. Ver. Vatl. Naturk. Wurttemb. 95 p. 232 1940.

Hemithea Dup.

aestivaria Hbn. aberrational forms etc.
=strigata Muller.

ab.alboundulata Hedemann. Hor. Soc. ent. Ross. 14 p. 511. 1879. pl. 3 f. 8.

Blue green. Forewing with a darker middle band between two whitish undulate lines
Hindwings with a whitish undulate transverse line. Distinguished from strigata
by the more grey green colour and whitish transverse lines of the forewing.

ab.krajniki Komarek. Acta. Soc. Ent. Csl. 47 p. 43.

ab.mus Kaucki. Polsk. Pismo. ent. I p. 40.

ab.approximata Lempke. Tijdschr. Ent. 1967. 110. p. 231.

On the upperside of the forewings the two transverse lines are close together.

fimbrialis Scop. aberrational forms, etc.

?ab. magnata Fuchs. Jahrb. Nass. Ver. Nat. 1903. 56. p. 53.

Very large, forewing 19mm. Fringes not mottled rust-brown but only a little brownish at base.

Almost certainly a subspecies and not found in England.

ab. tangens Lempke. Tijdschr. Ent. 1949. 90. p. 155. (descript. p. 147.)

The two central transverse lines of the forewing touch each other below the middle and then separate again.

ab. approximata Lempke. Tijdschr. Ent. 1949. 90. p. 155. (descript. p. 147.)

The two central transverse lines of the forewing are close together.

ab. ochracea Kolossow. Ent. Nachr.-Bl. 1936. 10. p. 149.

Ochreous yellow with only vestiges of green colour at the base of the wings.

ab. subobsoleta Lempke. Tijdschr. Ent. 1967. 110. p. 233.

on the upperside of the forewings the inner transverse line is absent.

ab. obsoleta Skala. Verh. Ver. Brunn. . 51. p. 115-377. ??

The white lines of the upperside almost entirely obsolete, and much less distinct than usual on the underside.

I have been unable to verify this reference and description, but if the description is correct, then the following obsoleta Lempke is a preoccupied name, although the description of Lempke's form is of a rather more extreme insect.

ab. obsoleta Lempke. (nom. praeoc. Skala??) Tijdschr. Ent. 1967. 110. p. 233.

The transverse lines on the upperside of the wings are completely absent. See remark under the preceding obsoleta Skala regarding this form.

ab. fasciata Hartweg. Z. Lepid. . 1. p. 164.

lactearia Linn. aberrational forms, etc.

ab. *approxinata* Lempke. Tijdschr. Ent. 1949. 90. p. 156. (descript. p. 147.)
The two central transverse lines of the forewing are close together.

(*immaculata* Thnbg.) name dropped, see Lempke Ent. Tijdschr. 90 p. 155.

chrysoprasaria Esp.

=*vernaria* Hbn.

Aberrational forms etc.

ab. *dentigera* Prout. Seitz. 4 p. 30 1913.

The postmedian line of the forewing dentate, nearly as in *zimmermanni* Hed.

ab. *albifusa* Cockayne. Entomologist 83 p. 49 1950. pl. I f. 22.

The transverse white lines of the forewing are closer together than usual at the costa and converging, are united at the median nervure; between this and the inner margin, after coalescing, they form a broad white band with ill defined edges which becomes slightly narrower as it approaches the inner margin.

ab. *contracta* Chalmers-Hunt. Entom. 1961. 94. p. 283 pl. 7 f. 8.

On the forewing the cross-lines gradually converge and are nearest to each other three quarters of the way from costa to dorsal margin, where they are separated by a narrow gap 1 mm. wide which is marked with white scales.

ab. *subobsoleta* Lempke. Tijdschr. Ent. 1967. 110. p. 234.

The antemedian line on fore- and hindwings is absent.

albipunctata Hufn.
= *pendularia* auct. nec. Clerck.

Aberrational forms etc.

ab. flavescens Prout. Seitz 4 p. 143. 1913.
The ground colour of a decided yellow.

ab. rufescens Lempke. Tijdschr. Ent. 90 p. 182 1949.
Ground colour of the wings unicolorously reddish, powdered with dark grey along the costa of the forewings and the hind margin of all wings, the central spots and transverse lines whitish, sharply contrasting.

ab. griseata Lempke. Tijdschr. Ent. 90 p. 181 1949.
Ground colour of the wings dark grey with sharply contrasting pale postmedian band, for the rest normal. The form is identical with subrosea Woodforde but the red tint in the central area of the forewings fails.

ab. albescens Lempke. Tijdschr. Ent. 90 p. 181. 1949.
Ground colour of the wings whitish because the dark striae fail almost completely.

ab. brunnearia Lambillion. Cat. Lep. Belg. 1905. p. 248.
Wings strongly charged with brown atoms.

ab. griseolata Staudinger. Iris 10 p. 23. 1897.
Darker than typical form, densely dusted grey and almost without markings.

ab. unicoloria Lambillion. Cat. Lep. Belg. 1905 p. 248.
The macular band of the distal margin obliterated.

ab. foliata Lempke. Tijdschr. Ent. 90 p. 181. 1949.
On all wings a row of dark spots in the distal margin area.

ab. linearia Lambillion. Cat. Lep. Belg. 1905. p. 248. (see Barrett pl. 328 f. 2c, example)
Wings with well developed median shade, which is brown.

ab. mediofasciata Lempke. Tijdschr. Ent. 90 p. 181. 1949.
Wings with strongly broadened central shade so that there is the impression of a band. The space between the two transverse lines is, however, not completely filled with it.

ab. obsoletaria Lambillion. Cat. Lep. Belg. 1905 p. 248.
The basal or antemedian line of fore and hindwings almost obsolete.

ab. striata Lempke. Tijdschr. Ent. 90 p. 181. 1949.
The points of the two transverse lines distinctly lengthened into streaks.

ab. radiata Delahaye.
Prout in Seitz says -- Fore and hindwings with black rays extending along the veins from the antemedian line to the base and from the postmedian to the distal margin, on upper and underside.

ab. nigrostriata Lutzau.
Prout in Seitz says -- Yellowish grey, median shade blackish grey, indistinct on forewing, distinct on hindwing; both lines of black dots distinct on forewing, obsolescent on hindwing. Beyond the postmedian pale belt a broad blackish grey marginal band on which the veins are marked in black. The name would refer to all specimens showing the dark band and black veins distally. see also Lempke on p. 2.

ab. depulsa Bastelberger. Iris 20 p. 263 1907.
In place of the ring spot on all wings only a small black spot, in one female the spot is red.

ab. magnocellata Lempke. Tijdschr. Ent. 90 p. 181 1949.
Fore and hindwings with distinctly enlarged ring spots.

ab. hatertica Schultz. Int. Ent. 2. 25 p. 180 pl. 2 f. 35 1931.
The figure shows black streaks or rays in the middle field extending from the basal line to the postmedian of the forewing. The streaks are confined to the lower half of the wing.

ab. orbiculoides Woodforde. Ent. Mon. Mag. 55 p. 103 1919.

Ground colour darkish grey, the two transverse lines indicated by rows of black dots rather larger than usual, the postmedian in both wings being bordered by a narrow whitish band, faint on its inner side but conspicuous on the distal side. Cells very conspicuous. A very narrow indistinct reddish band crosses the centre of the wing, the cilia are whitish. The insect so much resembles a dark form of *C. orbicularia* Hbn. that I name it orbiculoides.

ab. subroseata Woodforde. Entomologist 35 p. 275-276 1902. (see Barrett pl. 328 f. 2b)
Ground colour slaty grey whilst the whole of the centre of the wing is filled up with a rosy pink. This rosy area has no clearly defined edges but merges gradually into the ground colour.

ab. subochreatea Woodforde. Ent. Mon. Mag. 46 p. 115 1910.

Differ from subroseata as follows - The central portion of the forewings is pale ochreous instead of rosy pink. The hindwings are entirely grey.

ab. decoraria Newman. Zoologist 19 p. 7798. 1861.

= nigroroseata W.-Wood. Entomologist 49 p. 80 1916.

= nigrosubroseata Bowman. Entomologist 50 p. 117 1917.

= ianthinarium Stichel. Berl. ent. z. 46. p. (20) 1901.

= ianthinaria Rebel. Berge's Schmett. Ed. 9 p. 326 1910.

Forewings with costal and hindmargins bluish lead colour. The disc of the wings tinged with delicate red inclining to rosy; two very distinct pale grey transverse waved lines. Hindwings almost the same colour as forewings but almost without any tinge of red.

ab. inpictaria Meves. Ent. Tidskr. 1914. 35. p. 123-4.

Ground colour inclining to yellowish, the markings wanting except weak discal rings and terminal black dots. This is from the German description on p. 137.

gen. aest. aestiva Vorbrodts.

Quite strikingly small and pale, more weakly marked.

ab. plumbomarginata Lempke. Tijdschr. Ent. 1967. 110. p. 237.

The marginal area (between postdiscal line and fringe) on fore- and hindwings of a uniform dark grey.

This would appear to be rather similar to ab. nigrostriata Lutz. (p. 1 of these notes), but until the original description can be verified, the two forms are kept separate.

ab. nigrosarsata Lempke. Tijdschr. Ent. 1967. 110. p. 237; pl. 11, f. 8.

Fore- and hindwings finely powdered with black, eye-spots encircled with black, the rows of points standing on continuous black transverse lines, the postdiscal of which is very distinct.

ab. nigrescens Lempke. Tijdschr. Ent. 1967. 110. p. 237.

Fore- and hindwings of a uniform black-grey, without pale bands, the eye-spots and the two rows of points present.

ab. orbiculoides Woodforde. Ent. Mon. Mag. 55 p. 103 1919.

Ground colour darkish grey, the two transverse lines indicated by rows of black dots rather larger than usual, the postmedian in both wings being bordered by a narrow whitish band, faint on its inner side but conspicuous on the distal side. Cells very conspicuous. A very narrow indistinct reddish band crosses the centre of the wing, the cilia are whitish. The insect so much resembles a dark form of *C. orbicularia* Hbn. that I name it orbiculoides.

ab. subroseata Woodforde. Entomologist 35 p. 275-276 1902. (see Barrett pl. 328 f. 26)
Ground colour slaty grey whilst the whole of the centre of the wing is filled up with a rosy pink. This rosy area has no clearly defined edges but merges gradually into the ground colour.

ab. subochreatea Woodforde. Ent. Mon. Mag. 46 p. 115 1910.

Differ from subroseata as follows - The central portion of the forewings is pale ochreous instead of rosy pink. The hindwings are entirely grey.

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Forewings with costal and hindmargins bluish lead colour. The disc of the wings tinged with delicate red inclining to rosy; two very distinct pale grey transverse wavy lines. Hindwings almost the same colour as forewings but almost without any tinge of red.

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This would appear to be rather similar to ab. nigrostriata Lutz. (p. 1 of these notes), but until the original description can be verified, the two forms are kept separate.

ab. nigrosparsata Lempke. Tijdschr. Ent. 1967. 110. p. 237; pl. 11, f. 8.

Fore- and hindwings finely powdered with black, eye-spots encircled with black, the rows of points standing on continuous black transverse lines, the postdiscal of which is very distinct.

ab. nigrescens Lempke. Tijdschr. Ent. 1967. 110. p. 237.

Fore- and hindwings of a uniform black-grey, without pale bands, the eye-spots and the two rows of points present.

pendularia Clerck.
= orbicularia Hbn.

Aberrational forms etc.

ab. namurcensis Lambillion. Cat. Lep. Belg. 1905 p. 249. (fig. Tijdschr. Ent. 38 pl. 4 f. 4)
Uniformly blackish grey tinged with reddish in the middle, almost exactly as in
the most extreme examples of *C. albipunctata* ab. *decoraria* Newman.
The figure of the Type appears almost identical with *decoraria*.

ab. *roseonigrata* Cockayne. Entomologist 83 p. 49 pl. I f. 18 1950.
Fore and hindwings black flushed with claret colour; none of the usual markings
present. The absence of white transverse lines distinguishes it from *namurcensis*
Lamb.

ab. *biobsoleta* Cockayne. Ent. Rec. 64 p. 66 1952.
No ocellus on fore or hindwing.

ab. *semistriata* Cockayne. Ent. Rec. 64 p. 66 1952. pl. III f. 3.
The dots of the postmedian transverse line of the fore and hindwings are elong-
-ated to form short streaks.

ab. *nigrescens* Lempke. Tijdschr. Ent. 1967. 110. p. 235; pl. 11, f. 3.
Ground colour of fore and hindwings black-grey, the central area of the
forewings not reddish.
Lempke (1967) says this melanic form outnumbers the typical form in the Nether-
lands, whilst *namurcensis* Lamb. is a rarity.

annulata Schulze. aberrational forms etc.

ab. obsoleta Ridg. Ent. Rec. 10 p. 239 1898.

The ocellus of the forewing absent but present on hindwing.

ab. biobsoleta Ridg. Ent. Rec. 10 p. 239 1898.

The ocellus on both fore and hindwing is absent.

ab. extenuata Dannehl. Ent. Z. 47 p. 82 1933.

The dark dusting between the middle and postmedian lines completely absent, often, also, the middle line so that only a very distinctly defined postmedian is present.

ab. fasciata Lempke. Tijdschr. Ent. 90 p. 183 1949.

On fore and hindwings outwards from the ocellus a dark central band because the space between the central shade and the postdiscal line is completely filled in with dark.

ab. sertaria Dannehl. Ent. Z. 40 p. 459 1926.

Considerable darkening of the elements between the middle and postmedian line resulting in an almost black uninterrupted band. On the hindwings the band continues as a central transverse band, also widened by the blackening of the antemarginal (second band) which is also broadened.

Similar to fasciata Lempke but more extreme especially on hindwings.

ab. striata Cockayne. Ent. Rec. 64 p. 67 pl. 3 f. 5 1952.

On the forewing the first line is represented by small black dots linked together by a few grey scales; the second and third lines are represented by a row of neural streaks except on nervure 5 where there is a single black dot. Hindwing lightly marked but normal.

ab. decolorata Cockayne. Ent. Rec. 64 p. 67 1952.

All the markings are buff instead of blackish.

gen. aest. aestiva Prout. Seitz. 4 p. 145. 1913.

The smaller summer brood, deeper ochreous and an increase of dark dusting.

punctaria L. aberrational forms etc.

ab. signata Cockayne. Entomologist 83 p.50 1950.

On the forewing there is a dark blotch running outwards from the median line, a little above the middle of the wing.

ab. ochreifusa Prout. Seitz 4 p.149. 1913.

The red suffusion is replaced by yellowish or ochreous, parallel to *albipunctata*
ab. subochreata Woodforde.

ab. communifasciata Donovan. Nat. Hist. Brit. Ins. 13 p.49 1808.

= *unifasciata* Donovan. " " " " " " " "

The figure shows a small specimen almost without markings except for a slender well defined transverse line and strong black dots on the distal margin.

In my opinion this is synonymous with the typical form.

ab. subangularia Haworth. Lep. Brit. p.313 1809.

The wings rather more angular than usual, the median line more bent, especially on the hindwing where it is more angled.

ab. pulcherrimata Fuchs. Jahrb. Nassau Ver. 53 p.48 1900.

Brightly coloured. All wings with broad dark brown middle line and two transverse rows of thick brown points on the veins, of which the outer one is connected to the middle line by fine brown dusting.

ab. nigrotransversata Horhammer. Int. Ent. Z. 27 p.294 1933. fig. 2 of plate.

Dirty ochreous ground colour with hardly a trace of reddish and a few slightly blackish scales. The antemedian line is shown by stronger black points. The whole area between postmedian and median shade is uniformly blackish on all wings; the points of the postmedian radiate.

Apparently much more extreme than the preceding.

ab. cingulata Fuchs. Jahrb. Nassau Ver. 53 p.48 1900.

Pale. All wings with a broad dark brown middle shadow, a bit dusted along its sides. The remainder of the wings virtually without markings.

ab. foliata Fuchs. Jahrb. Nassau Ver. 53 p.49 1900.

All wings with a connected series of blotches before the margin, some brown others purplish and sometimes dark grey.

ab. demptaria Fuchs. Jahrb. Nassau Ver. 53 p.49 1900.

Almost entirely without markings.

ab. radiomarginata Joannis. Bull. Soc. ent. Fr. 1908 p.45 1908. (f. Ann. S. E. Fr. 1908 p.11)

The spots in the margin of the forewing are developed very regularly along the veins forming short lines or rays, strictly limited to the marginal region.

The figure shows a uniform series of thick streaks with normal ground colour between, which start just beyond the postmedian line and travel outwards to the marginal edge.

ab. venata Prout. Seitz. 4 p.149 1913. (fig. Barrett pl. 326 f. 2e.)

Dark lines on the veins extending completely from the antemedian to the postmedian on both wings, thus crossing the median shade which is rather fine and weak. (Type in Rothschild-Cockayne-Kettlewell coll. B.M.)

ab. arcufera Reuter. Ent. Tidskr. p.202 1890. (fig.)

The median shade of the forewing is very strongly bent or curved basewards in the middle so that instead of running down to the inner margin it forms an arc and terminates in the cell near the base, almost reaching the costa.

A specimen in the B.M. actually reaches the costa, forming a complete arc.

ab. infuscata Reuter. Ent. Tidskr. p.202 1890.

An increase of the fuscous dusting both above and beneath and a strong smoky band densely dark dotted on each side.

ab. naevata Bastelberger. Iris 13 p.84 1900.

Almost without markings except for occasional blackish and reddish dusting. In the marginal area the purplish spots are extremely strongly developed so that almost cover this part of the wing. Only in the summer generation.

ab. erythrescens Preissecker. Verh. zool.-bot. Ges. Wien. 72 p. (94) 1922.
Reddish dusting on forewings, dense and extended. The basal area and a narrow
stripe along anterior margin and outer margin, without this dusting.

ab. anastomosaria Lempke. Tijdschr. Ent. 1967. 110. p. 241; pl. 11, f. 12.
On the upperside of the forewings the central shade (somewhat broadened)
coalesces for the greater part with the basal row of dark points.

ab. basilinea Lempke. Tijdschr. Ent. 1967. 110. p. 241.
At the base of the forewings, instead of the row of points, there is an
uninterrupted line from costa to inner margin; an identical line on hindwings,
but weaker. (Lempke's English says "paler".)

ab. albescens Lempke. Tijdschr. Ent. 1967. 110. p. 242.
Ground colour of the wings whitish.

ab. fuscociliata Lempke. Tijdschr. Ent. 1967. 110. p. 242.
Fore- and hindwings with dark fringes.



porata L. aberrational forms etc.

ab. rubearia Lambillion. Rev. Mens. Soc. ent. Namur. 5 p. 250. 1905.
The disc of the forewing reddish.
Presumably more reddish than typical.

ab. linearia Lambillion. Cat. Lep. Belg. 1905 p. 250.
The median shade unusually strongly developed.

ab. punctularia Lambillion. Cat. Lep. Belg. 1905 p. 250.
A well developed series of grey-brown spots in the distal margin on both wings.
In the typical forms these marginal spots are weak and small.

ab. marginaria Lambillion. Cat. Lep. Belg. 1905 p. 250.
A brown macular band in the distal margin of the hindwing.
Normally these blotches are best developed on the forewing.

ab. nigrosarsaria Lempke. Tijdschr. Ent. 90 p. 189 1949.
= plumbomarginata Cockayne. Entomologist. 83 p. 49 1950. pl. I f. 19.
The ground colour coarsely and densely powdered with red-brown and blackish
and therefore strongly darkened.
Cockayne's plumbomarginata has the ground colour more deeply tinted with red than
usual with a complete dark grey border separated from the postmedian row of
dots by a narrow pale wavy line.
Cockayne himself has made this a synonym of nigrosarsaria Lpk.

ab. depulsa Lempke. Tijdschr. Ent. 90 p. 188. 1949.
On the forewings, or both, the eye spot with black ring, is reduced to a hardly
visible point.

ab. uniformata Lempke. Tijdschr. Ent. 90 p. 188 1949.
All markings fail with the exception of the eye spot.

ab. basirubra Cockayne. Ent. Rec. 64 p. 67 1952. (pl. 3 f. 6.)
On the forewing the ground colour is pale and not speckled; there is a dark red
area running from the first line near the base to a point just beyond the ocellus
and from the submedian nervure to the inner margin, the median shade is absent.

ab. vinicolor Cockayne. Ent. Rec. 64 p. 67 1952. (pl. 3 f. 7.)
The ground colour of the fore and hindwings and the thorax is deep vinous red
almost completely concealing the markings and the speckling which is of average
density.

ab. flava Bretschneider. Z. Wien. ent. Ges. 36 p. 22 1951.
Cream coloured without any trace of reddish scales. Summer generation as well
as typical form.

gen. aest. visperaria Fuchs. Stett. Ent. Z. 1884 p. 266.
= aestiva Hormuz. Verh. zool.-bot. Ges. Wien. 49 p. 39 1899.
Summer generation, smaller in size, paler with less dark dusting and less distinct
lines; distal blotches often better developed.

ab. delineararia Silbernagel. Acta. Soc. ent. bohém. 40 p. 16 1943.

linearia Hbn.
= trilineararia Bkh.

Aberrational forms etc.

ab. rufescens Lempke. Tijdschr. Ent. 90 p. 193 1949.

Specimens of the I gen. with strong transverse lines and indistinct eye spots, with reddish tinted ground colour.

ab. cingulata Lempke. Tijdschr. Ent. 90. p. 193. 1949.

Fore and hindwings with strikingly thick central shade.

ab. fasciata Prout. (~~Tijdschr. Ent. 90 p. 193 1949~~) Entomologist 45 p. 3 pl. I f. A. 1912.

Dark dusting between the median shade and the postmedian resulting in a strikingly banded form, showing on both fore and hindwings.

ab. semifasciata Derenne. Lambillionea 31 p. 30 1931.

Like the preceding fasciata Prout but the banded character showing on forewings only, hindwings normal.

ab. mesoorthia Schultz. Wissensch. Beil. Jahresb. Stadt. Freiligrathschule Lage. p. 19 193

The middle shadow of the forewings placed exactly between the first and second transverse lines. On the hindwings it is a little nearer the first than the second.

ab. trilineata Schawerda. Verh. zool.-bot. Ges. Wien. 71 p. 159 1922.

Distinguished by the strong development of all three transverse lines, the median especially well developed. On the hindwing a white eye followed by a strongly developed basal line. A row of marginal dots are fused into a band.

ab. approximans Prout. Seitz. 4 p. 150. 1913. (see Barrett pl. 327 f. Id.)

The median shade of both wings placed close to the antemedian.

ab. demptaria Prout. Seitz 4 p. 150 1913. (see Barrett p. 327 f. Ia.)

Nearly unicolorous ochreous with all the lines entirely absent.

ab. infuscata Prout. Seitz p. 150 1913. (see Barrett pl. 327 f. Ie.)

The entire surface of both wings strongly infuscated, nearly obliterating the lines but rendering the white discal spots conspicuous.

ab. simplificaria Culot. Noct. et Geom. 3 p. 95 pl. 14 f. 283 1917.

The figure shows only the middle shadow line developed, the ante and postmedians being completely absent on forewings and only slight traces on the hindwings.

ab. bicolor Oberthur. Lep. Comp. 12 p. 153 Pl. 395 f. 3351 1916.

The figure shows the space between the middle shadow and the postmedian filled with brownish followed by greyish brown which completely fills the marginal area, thus cutting the wings into two colour halves i.e. from the base to the middle shadow line normal ochreous and from shadow line to margin brown and grey.

ab. ophthalm^{maria}aria Oberthur. Lep. Comp. 12 p. 154 pl. 395. f. 3352. 1916.

A well developed white ocellus on forewings as well as one on the hindwings, which is even more marked and encircled with black.

ab. nigrosparsaria Fuchs. Stett. Ent. Z. 62 p. 137 1901. (see Barrett pl. 327 f. Ic.)

All wings as far as the middle shade finely but densely powdered with black, most richly in the middle area where there is a fine whitish moon.

ab. arcuifera Cockayne. Ent. Rec. 64 p. 66 1952. p. 13 f. 4.

The middle shade is bent or curved basewards just after leaving the costa, forms an arc and rejoins the costa on the position of the antemedian line, the costa also darkened between these two points. The postmedian line is in the form of small wedge shaped spots which fade away before reaching the inner margin. On the hindwing the first and second lines are fused to form a broad suffused band, the third line is rather broad, suffused and somewhat broken up.

ab. signata Cockayne. Entomologist 83 p. 50 1950.

On the forewing a dark wedge shaped blotch running outwards from the middle line about one third the distance between the costa and the inner margin.

ab. alba Cockayne. Ent. Rec. 64 p. 66 1952.

Wings and all other parts white, the markings are faint and pale brownish grey.



gen. aest. hybridaria De Selys. Mem. Soc. roy. Sc. Liege 2 (Enum. Ins. Lep. Sep) p. 34 1844.
= strabonaria Zeller. Bresl. Ent. Z. 5 p. 66 1851. = carnearia Laharpe.

The summer generation. Usually smaller and of a much more reddish tone, the lines sometimes more weakly expressed, sometimes more reddish in colour; the discal eye spots usually rather conspicuous often being ringed with black on the hindwings.

ab. naevata Lempke. Tijdschr. Ent. 1967. 110. p. 243.

On the forewing a continuous row of dark spots in the marginal area.

pupillaria Hbn. aberrational forms etc.

ab. *gyrata* Hubner. *Smmlg. Eur. Schmnett. (geom.) pl. 84 f. 434.*

The figure shows the ground colour chestnut or yellowish brown densely strewn with black scales from the centre of the wings outwards to the margin. A prominent middle shadow line and a postmedian row of dark spots on both wings, with a well developed white ocellus on each.

ab. *nolaria* Hubner. *Smmlg. Eur. Schmnett. Geom. pl. 63 f. 327 (not 325)*

The figure shows bright ochreous wings, no middle shadow line but well marked antemedian and postmedian rows of black dots; traces of a middle line at the anal angle of the hindwings. A prominent white ocellus on each wing.

ab. *badiaria* Staudinger. *Cat. Ed. 2 p. p. 153. 1871,*

Deep brown, white central ocellus on each wing; hardly a trace of middle band or line

ab. *fasciata* Wagner. *Z. ost. Ent. Ver. 12 p. 46 1927. fig.*

A very dark broad shadow line on all wings.

ab. *alogaria* Schawerda. *Z. ost. Ent. Ver. 4 p. 67 1919.*

= *depupillata* Dannehl. *Ent. Z. 47 p. 82 1933. def*

Without a trace of pupils, not even reddish spots where the pupils should be.

ab. *simplex* Thierry-Mieg. *Misc. Ent. 23 p. 51 1916.*

Complete absence of pupils on all four wings and no trace of the two lines of spots, nor the central shadow line.

ab. *stigmata* Dannehl. *Ent. Z. 47 p. 82 1933.*

The pupils or eye spots reduced to small points.

ab. *scorteata* F. Wagner.

= *decolorata* Dannehl. *Ent. Z. 47 p. 82 1933.*

Bright leather-yellow ground colour.



amata L. aberrational forms etc.

ab.pulverata Cockayne. Ent.Rec.64 p.67 1952.

Thickly powdered with dark grey atoms, appearing to be dark grey; the pink oblique stripe is normal and the fringes are pink.

ab.derufata Lempke. Tijdschr.Ent.90 p.195 1949.

Almost every trace of the reddish suffusion fails and the oblique transverse line is purely dark brown.

ab.rufomarginata Lempke. Tijdschr.Ent.90 p.195 1949.

With broad red suffusion along the margins of the wings about half way up to the thin postmedian line.

ab.extrema Lempke. Tijdschr.Ent.90 p.195 1949. (fig. Sepp. Series 2 vol.2 pl.49 f.10)

Forewings with broadly diffused oblique transverse line, hindwings completely purplish, the central spot, and on both wings the thin submarginal line, sharply contrasting.

ab.suffumata Prout. Seitz 4 p.48 1913.

Uniform pale smoky grey with the oblique line present.

ab.bipartita Prout. Seitz 4 p.48 1913.

Normal colour in basal half of wing, proximally to the oblique line, but with the entire area beyond it smoke coloured only becoming paler again just before the pink fringes.

ab.griseata Petersen. Beitr.Kunde Est.-Liv.u Kurlands. Sep.p.46 1902.

Strongly dusted, the lines reddish grey not pink.

ab.roseata Hirsche. Verh.zool.-bot.Ges.Wien.60 p.414 1910.

Instead of leather yellow the wings are very uniform unicolorous red-grey in which even the middle stripe disappears.

ab.deleta Rebel. Berge's Schmett.ed.9 p.327 1910.

Yellow grey with red fringes but almost without markings.

ab.nigra Rebel. Berge's Schmett.ed.9 p.327 1910.

Unicolorous black.

Black, as Prout remarks, is an exaggeration, the English specimen which Rebel named is smoky brown, the fringes faintly pink.

ab.witzi Schneider. Ent.Rdsch.55 p.381 1938. fig.

All wings dark reddish grey, the lines scarcely visible, discal point absent; the anterior margin of forewings black 3mm. width, fringes bright rose red. Underside unicolorous black.

Genetically possibly the same as nigra Rebel.

ab.atropurpurea Michel. Ent.Z.49 p.472 fig'd p.451 f.22 1936.

Ground colour of the upperside of forewings unicolorous deep black but the entire area, except for anterior margin, covered with purple red scales, the same dusting on the hindwings. Fringes and margin of the forewings yellowish to rose colour, head and thorax normal bright yellow. The markings above and beneath entirely suffused, the underside dark grey without dusting.

ab.comae Schmidt. Int.Ent.Z.25 p.57 fig. 1931.

Darker ground colour, more reddish ochre yellow reminding one of ab.bipartita Prout. Basally of the diagonal line more lightly scaled, and distally of this line to the margin somewhat more darkly scaled with reddish, densely sprinkled. Through this reddish grey tinge as well as its indistinct diagonal line it approaches roseata Hirsch. and deleta Rebel. The short red streak at the apex is sharply defined and the discal spots striking on all wings. Underside with the reddish brown scaling much heavier so appears darker, the diagonal stripe is lacking but the discal line distinct.

ab.serenata Dannehl. Ent.Z.40 p.461. 1927.

Uniform specimens without the smallest trace of dark dusting and with the diagonal lines narrow and sharply defined.

ab.effusaria Klemensiewicz. Verh.zool.-bot.Ges.Wien.44 p.184 1910.

Wings densely powdered with grey. The dark purplish red bands are outwardly very broad, the outer line very distinct. On hindwing the diagonal line in the inner margin area is suffused out as far as the transverse line, the rest of the area as far as the fringes distinctly reddened.

ab. *crassestrigata* Lempke. Tijdschr. Ent. 90. p. 195 1949.

The diagonal line is strikingly thick but the rest of the markings normal.

ab. *impuncta* Lempke. Tijdschr. Ent. 90 p. 195 1949. (description p. 147.)

The central spot of the forewings absent.

ab. *latistriga* Rebel. Rovart. Lap. 22 p. 174 1915.

The oblique line on the forewing strongly thickened with dentate proximal projections between the veins. On the hindwing it is still wider 1.5 mm., forming a wavy band.

ab. *flavescens* Lempke. Tijdschr. Ent. 1967. 110. p. 246.

Ground colour of fore- and hindwings pale yellow.

ab. *tenuistrigata* Lempke. Tijdschr. Ent. 1967. 110. p. 246; pl. 12, f. 8.

The oblique line on fore- and hindwings very thin, otherwise normal.

ab. *splendida* Lempke. Tijdschr. Ent. 1967. 110. p. 246.

The oblique line on fore- and hindwings of a splendid deep purple-red.

ab. *disjuncta* Lempke. Tijdschr. Ent. 1967. 110. p. 246; pl. 12, f. 9.

On the forewing the oblique line does not reach the apex, and is not connected to the thin submarginal line.

ab. *delineata* Lempke. Tijdschr. Ent. 1967. 110. p. 246.

On fore- and hindwings the thin submarginal line is completely absent, otherwise normal.

ternata Schrank. aberrational forms etc.
= funata Stephens.

ab. *simplaria* Freyer. Beitr. 6 p. 183 pl. 594 f. 1-2. 1852.

The figure shows the lines more distinct, darker, and the white ground colour less densely irrorated with black scales, especially in the male

ab. *resplendaria* Dannehl. Ent. Z. 39 p. 15 1925.

Larger, lighter, more brilliant than the type form, only the outer transverse lines are present but these are of a sharply defined black and extend also over the hindwings.

ab. *anastomosaria* Preissecker. Verh. zool.-bot. Ges. Wien. 74-75 p. (182) 1926.

The first transverse line and median shadow of the forewing partly or wholly fused together.

ab. *purissima* Djakanov. Jahrb. Martjanov Staatsm. 4 p. 14

Clear yellowish white, the usual dark scales almost entirely wanting, even the lines except the postmedian, quite weak, this line on the forewing is straighter than usual

ab. *laszloi* Dioszeghy. Verh. Siebenburg Ver. Naturw. 83-84 p. 117 1935.

ab. *demarginata* Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 185 & 187.

The subterminal and marginal areas form a uniform unmarked band of ground colour, dark-shaded on its inner side.

immorata L. aberrational forms etc.

ab. unicolorata Schneider. Ent. Z. 46 p. 149 fig. 1932.

Forewings unicolorous brownish, hindwings similar with black discal dot. Underside of all wings with obscure lines.

ab. fuscomarginata Hofer. Verh. zool.-bot. Ges. Wien. 71 n. (35) 1921.

The outer white wavy line of fore and hindwings completely absent and covered over with brown scales so that the wings appears surrounded by a broad brown margin.

ab. albofasciata Rebel. Verh. zool.-bot. Ges. Wien. 64 p. (57) 1914.

Strongly yellowish-grey ground colour. In the middle area a relatively broad 1 mm. pure white wavy transverse stripe, other transverse lines absent. Marginal area shows the normal little white spots of the wavy line.

ab. albomarginata Habich. Verh. zool.-bot. Ges. Wien. 53 p. 424 1903.

Marginal area from the wavy line to edge of fringe of all wings pure white, the ground colour retained only along the veins so that this area appears cut through by dark veins. Fringes and rest of wing normal.

ab. serenata Turati.

All the pale parts of the wings broadened, the dark lines therefore narrowed, the third (postmedian) line is darkest and thickest, the subterminal line and pale parts of the fringe rather conspicuously whitish.

ab. luctuata Rebel. Verh. zool.-Bot. Ges. Wien. 64 p. (57) fig. 1914.

Body and wings deep black, the latter showing only the spots of the wavy line in the marginal area. Underside with pale longitudinal stripes at base of all wings.

ab. bistrigata Galvagni. Verh. zool.-bot. Ges. Wien. 64 p. (58) 1914.

Middle area of all wings with two approximated sharply prominent dentate blackish lines, of which the outer one projects outwards in short streaks on the veins, the area between them and the basal area unicolorous.

ab. unistrigata Galvagni. Verh. zool.-bot. Ges. Wien. 64 p. (58) 1914.

Similar variation to the preceding bistrigata but with only the outer transverse line in the middle area.

ab. porasa Krulikovskij. Rev. Russe. ent. 9 p. 310 1909.

gen. aest. The description does not seem to apply to the second brood in general. Smaller with a dark grey ground colour, of the white transverse lines only a trace remains in the form of a small separate spot.

gen. aest. pallidior Skala. Verh. Ver. Bruan. 51 p. 115-377.

Smaller, paler and generally more indistinctly marked.

ab. anastomosaria Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 174 & 176.

On the forewing the first transverse line is united with the central shade.

ab. nigrolineata Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 179 & 181.

The transverse lines sharply marked and black, black-grey or dark-brown, contrasting with the light ground colour.

1883

1883

1883

rubiginata Hufn. aberrational forms etc.

ab. rubricata Schiffermüller. Syst. Verz. p. 110 1775.

The purple red form (from Fabricius description of Schiff's specimens.)

ab. ochraceata Staudinger. Cat. ed. 3 p. 273 1901.

Ochreous or ochreous grey with no tint of red.

ab. clarirufa Lempke. Tijdschr. Ent. 90 p. 174 1949.

Ground colour of the wings pale clear red.

ab. pallifasciata Lempke. Tijdschr. Ent. 90 p. 174 1949.

On fore and hindwings the area between the submarginal and postdiscal lines is paler than the ground colour so that a pale central band results.

ab. rufolineata Lempke. Tijdschr. Ent. 90 p. 175 1949.

The basal line of the forewings and the central shade red, the subterminal line shadowed with red.

ab. brunⁿomarginata Schawerda. Verh. zool.-bot. Ges. Wien. 66 p. 241 1916.

On all wings the outer third, from the postdiscal line to the margin, is completely filled with dark brown.

ab. fuliginosa Strand. Ent. Mitt. 6 p. 298 1917.

Second generation form. Smoke-blackish without reddish tinge, less distinct markings, the area between both submedian lines a little brighter than rest of wing.

ab. obscurata Skala. Verh. Ver. Bruan. 51 p. 115-377.

Forewing dusted with grey so as to render indistinct the black markings, hindwing also dusted somewhat in the terminal area

ab. scotina Bubacek.

Wings uniformly copper brown, almost black brown but with the black lines still standing out sharply.

ab. purpureofasciata Dannehl.

Light brown yellow, the distal area of both wings entirely dark brown-rose.

ab. bilineata Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 178 & 179.

The central shade completely absent, otherwise normal.

ab. uniformis Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 182 & 183.

Specimens without markings.

marginepunctata Goeze. aberrational forms etc.

ab.mundata Prout. Seitz 4 p.63 1913.

Entirely without dark speckling, only the dark lines remaining and therefore standing out very clearly.

ab.pastoraria Joannis. Bull. Soc. ent. Fr. 1891 p.80.

A small whitish form with the usual markings all present but the lines and submarginal shades rather ill defined

ab.britonaria Culot. Noct. et Geom. 3 p.72 pl. 10 f.207. 1918.

Rather dark grey with the light marginal band particularly well developed and whitish, in sharp contrast to the rest of the wing.

ab.aniculosata Rambur. Ann. Sci. Obs. 2 p.266 1829. (see Barrett pl. 331 f.4b.)

This is the original description given by Prout in Seitz. --Wings black brown above, darker costally on the forewing, a central black dot with a slight whitish circumscription, a sinuous outer line of a yellowish white; termen yellowish as also the fringe which is bordered proximally by a series of black dots.

ab.marginevirgata Dannehl. Ent. Z. 40 p.456. 1927.

Melanic form. The basal and middle field entirely covered with black atoms, outer area however, only to the band of spots included within the broad submarginal line so that from this line outwards remains a broad wide outer margin completely without markings. The lines within the sooted part are blackish. Presumably the marginal area is yellowish white.

ab.orphneata Fuchs. Soc. Ent. 19 p.18 1904.

All wings black grey with black markings. Prout cites Entomologist 40 p.1.

ab.basinotata Cockayne. Entomologist 83 p.50 1950.

At the base of the forewing below the costa is a conspicuous blackish blotch, ill defined distally, in other respects normal.

ab.subatrata F. Wagner.

Similar to the preceding *orphneata*, much darker than the type including the fringes and underside.

ab.griseofasciata Turati. Atti. Soc. It. Sci. Nat. 53 p.556 f.3 1914.

On the forewings a blackish-grey median band, rather broad extending from the antemedian line to the median shade, on the hindwing a little reduced but more intense than normal.

ab.nigropunctata Hartmann & Sterneck.

Distinct stripes, unicolorous marginal area and large round black terminal dots at the inner angle of each wing, wedge shaped.

ab.zernyi Schawerda.

Entirely grey with very fine black irroration, the lines scarcely traceable.

ab.anastomosaria Reisser. Z. Wien. Ent. Ges. 1961. 46. p.174 & 177.

On the forewing the first transverse line is united with the central shade.

ab.bilineata Reisser. Z. Wien. Ent. Ges. 1961. 46. p.178 & 179.

On the forewing the central shade is completely absent, otherwise normal.

ab.demarginata Reisser. Z. Wien. Ent. Ges. 1961. 46. p.185 & 186.

The subterminal and marginal areas form a uniform band, dark-shaded on its inner side.

ab.difluata Reisser. Z. Wien. Ent. Ges. 1961. 46. p.187 & 188.

Discal points fine, the surface of all wings with a weak blackish dusting as far as the postmedian, with a pale effect. Basal line only weakly marked, the postmedian fine but well-developed, with a lighter appearance on its outer side, the area as far as the margin completely filled with dark grey. The subterminal is absent, except for slight traces at the apex, the marginal markings and the fringes normal.



S. marginepunctata Goeze. cont'd.

ab. *grisea* Lempke. Tijdschr. Ent. 1967. 110. p. 252; pl. 13, f. 2.

Ground colour of the forewings rather dark grey, markings as a rule indistinct, except for the submarginal [subterminal], which always remains clearly visible.

lactata Haworth.
 = floslactata Haworth.
 = remutaria Hbn.

Aberrational forms etc.

ab. flavescens Lempke. Tijdschr. Ent. 90 p. 178 1949.
 Ground colour of the wings yellowish.

ab. sublactata Haworth. Lep. Brit. p. 351 1809.
 Only the principal two lines present but these rather strongly expressed.

ab. conjunctiva Prout. Seitz 4 p. 67 1913.
 = anastomosaria Preissecker. Verh. zool.-bot. Ges. Wien. 72 p. (94) 1923.
 The first and median lines of the forewing entirely united into a brown band, the space between the median and postmedian consequently widened.

ab. undularia Hellweger. Jahresb. Gymnas Brixen 39 p. 1-164 ?
 Most of the markings weak, the subterminal exceptionally broad accompanied proximally by a conspicuous dark shade.

ab. quadripuncta Lempke. Tijdschr. Ent. 90 p. 178 1949.
 Both fore and hindwings with a distinct central spot.

ab. impuncta Lempke. Tijdschr. Ent. 90 p. 178 (described p. 147.) 1949.
 The central spot of the forewings is absent.
 It is rarer to find a British specimen which shows a distinct central spot, most of them are without.

subsp. scotica Cockayne. Entomologist 84 p. 154 19
 Scotland. Differs from English specimens in being smaller, more thickly powdered with dark scales, the lines well developed.

ab. obscura Lempke. Tijdschr. Ent. 1967. 110. p. 255; pl. 13, f. 7.
 The ground colour darkened, greyish; markings normal or heavier.

ab. exstirpata Fuchs. Stettin. Ent. Ztg. 1901. 62. p. 133.
 = uniformis Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 182 & 183.
 Very pale straw-yellow, very finely dark-dusted, without markings.
 Reisser's uniformis was described as "Specimens without markings".

ab. nigrolineata Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 179 & 181.
 The transverse lines sharply marked and black, black-grey or dark brown, contrasting with the light ground colour.

immutata L. aberrational forms etc.

ab. *flavescens* Lempke. Tijdschr. Ent. 90 p. 177 1949.
Extreme colour form of the male, the ground colour yellowish.

ab. *grisescens* Lempke. Tijdschr. Ent. 90 p. 177 1949.
Ground colour of the wings grey with white subterminal line.

ab. *pulverata* Cockayne. Entomologist 83 p. 50 1950. pl. I f. 4.
The whole surface of both wings is thickly powdered with dark scales.
This must be very similar to the preceding *grisescens* Lk.

ab. *atra* Rebel. Rovart. Lap. 21 p. 48.
Upperside almost completely blackened, only a longitudinal dash (containing the cell dot) and the dentate subterminal remaining white.

ab. *coarctata* Schultz. Int. Ent. Z. 1931. 25. p. 179; pl. 2, f. 26.
= *anastomosaria* Preissecker. Verh. zool.-bot. Ges. Wien. (1936/37) 1937. 86/7. p. 419.
The antemedian and median lines are closely approximated, almost giving the impression of a band. Ground colour of a decided yellow tone.
The figure shows this and another band-like double line nearer the margin which stand out in a somewhat striking manner altering the appearance of the insect.

ab. *juncta* Lempke. Tijdschr. Ent. 90 p. 177 1949.
The first and second transverse lines of the forewing joined in the middle by a horizontal line.

ab. *myrtillata* Dadd. Berl. Ent. Z. 57 p. (II) 1912.
Whiter than normal. The whole area from the third transverse line on fore and hindwings towards the fringe is unicolorous whitish because the darker shadow on both side of the undulate line is almost entirely absent.

ab. *uniformata* Lempke. Tijdschr. Ent. 1967. 110. p. 255.
The transverse lines obsolescent or completely absent, the black points, however, remaining present (at least in the Holotype).

ab. *nigrolineata* Lempke. Tijdschr. Ent. 1967. 110. p. 255.
One or more transverse lines (usually the postmedian) very distinct, the others normal or even paler.



nigropunctata Hufn. Aberrational forms etc.
= strigilaria Hbn.

ab. anastomosaria Preissecker. Verh. zool.-bot. Ges. Wien. 74-75 n. (182) 1926.
The antemedian and median lines of the forewing fused together.

ab. crassestrigata Lempke. Tijdschr. Ent. 90 p. 172 1949.
All or most of the transverse lines thickened.

ab. basinuda Lempke. Tijdschr. Ent. 90 p. 172 1949.
On the forewing the basal line fails.

ab. suffusa Lempke. Tijdschr. Ent. 1967. 110. p. 249.
Ground colour of the wings dark grey, markings normal.

ab. demarginata Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 185 & 186.
The subterminal and marginal areas form a uniform, unmarked band of ground colour, dark-shaded on its inner side.

emutaria Hbn. aberrational forms etc.

ab. subroseata Haworth. Lep. Brit. pt. 2 p. 351. 1809.

Wings rosy white with numerous extremely minute fuscous atoms and short oblique fuscous stripe on both wings.

ab. infrarosea Agenjo. Eos 10 p. 207 1934.

Underside of wings with a weak sprinkling of rose colour which is stronger on the forewings towards the inner border of median and terminal areas and on the hindwings on the anal, basal and median areas.

ab. delineata Lempke. Tijdschr. Ent. 1967. 110. p. 254.

The dark oblique line from apex to inner margin of the forewings is absent.

imitaria Hbn. aberrational forms etc.

ab. fasciata Vorbrod. Tessiner u Misoxer Schm. 1931 p. 326 pl. 9 f. 3.
The median line and shade outside it consolidated into a dark band.

ab. kesslitzii Hirsche. Jahr. Ber. Ent. Ver. Wien. 21 p. ~~95-97~~. 194 (1910) 1911.
Very striking form. The median line which gives the species its characteristic appearance, is entirely absent, on all wings

ab. aequilineata Schwingenschuss. Verh. zool.-bot. Ges. Wien. 74-75 p. (15) 1926.
The oblique stripe is slender, a mere line, like the other transverse markings.

ab. umbrata Dufrane. Lam. Illionea 31 p. 185. 1931.
Similar to fasciata Vorb. The oblique band still broader and reddish; the wings are more reddish ochreous.

ab. bitinctata Dannehl. Ent. Z. 47 p. 82 1933.
The basal half of the wings, as far as the median line, bone yellow, the entire outer part being strongly suffused with reddish brown.

ab. rosea Turati. Atti. Soc. Ital. Sci. Nat. 63 p. 113 fig.
Bright rose colour, with black cell dots and blackish oblique stripe but the rest of the markings obsolescent.

ab. brevipennis Cockayne. Ent. Rec. 64 p. 67 1952.
The wings shorter and broader than usual, the costa being about the same length as the inner margin. The oblique stripe is displaced towards the base and almost meets the first line on the inner margin; the discoidal spot lies within the oblique stripe.

ab. pallida Chalmers-Hunt. Entom. 1961. 94. p. 283.
The ground colour of both fore and hindwings is whitish-salmon.

ab. deumbrata Lempke. Tijdschr. Ent. 1961. 110. p. 253.
The reddish shade along the postdiscal line fails completely.

ab. flavescens Lempke. Tijdschr. Ent. 1961. 110. p. 253.
The ground colour of the wings pale yellow.



ornata Scopoli. aberrational forms etc.

ab. *obsoleta* Lempke. Tijdschr. Ent. 90 p. 173 1949.

The dark markings on both sides of the subterminal line fail almost completely, the marginal area of both wings therefore only feebly darkened.

ab. *paucisignata* Krausse. Int. Ent. 2.6 p. 132

Almost entirely white, only an indistinct dark blotch persisting on each wing near the hinder angle, and the hindwing showing a distinct black discoidal dot.

ab. *defecta* Stauder.

Almost entirely white, the cell spots and cloudy subterminal shading wholly lacking, even the golden brown spots of the latter very rudimentary, scarcely noticeable. Hardly separable from the preceding, a little more extreme.

ab. *albomarginata* Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 183 & 184.

Whilst the inner shading of the subterminal line remains distinct, and often more strongly developed, its outer dark bordering is absent. Therefore, the marginal area is fused with the subterminal area to form a band of white ground colour extending to the marginal line and fringes, this band sometimes being dark-interrupted along the veins.

muricata Hfn. aberrational forms etc.

ab. lutescens Prout. Seitz 4 p.99 1913.

The purple or rosy colour restricted to a narrow costal border on the fore wings and a narrow distal band on both wings.

ab. maidorni Hanneman.

All red parts replaced by pale grey.

ab. totaruba Lambillion. Cat. Lep. Belg. 1905 p.242.

Both wings entirely purplish except for a small yellow spot in the centre of each wing, fringes also yellowish but less bright than in the type.

ab. rubrior Hoffmeyer & Knudsen. Danske Storsommerfugle 1938 p.213.

(fig'd. Hoffmeyer: De Danske Maalere, 1952, Ed. 1 pl. 2, f. 19.)

Fore- and hindwings unicolorous red, without yellow discoidal spots.

ab. atrorubra van Wisselingh. Ent. Ber. (Amst.) 1967, 27, p. 124.

The red colour of the wings of a strikingly darker tint.



Sterrha Hbn.

dimidiata Hfn. aberrational forms etc.

t

ab. delicata Prout. Seitz 4 p.99 1913.

Entirely lacks the characteristic dark distal blotches of the forewing, the distal area being uniform throughout, with the subterminal line scarcely indicated by faint shading on either side.

ab. lutescens Lempke. Tijdschr. Ent. 90 p.164 1949.

The ground colour of the wings straw yellow, the distal spots of the forewing strikingly dark.

ab. mediofasciata Lempke. Tijdschr. Ent. 90 p.165 1949.

Fore and hindwings with strikingly clear central shade.

ab. fuscomarginata Lempke. Tijdschr. Ent. 90 p.165 1949.

Fore and hindwings with strongly darkened outer margin, so that the usual dark spots no longer contrast.

ab. suffusa Lempke. Tijdschr. Ent. 90 p.165 1949.

Wings completely powdered with black scales, but markings distinct.

ab. roseata Turati. Ent. Rec. 25 p.17 1913.

Colour not yellow but somewhat reddish or rose flushed, markings at inner angle diffused violet.

ab. nigrociliata Chalmers-Hunt. Entom. 1961. 94. p.283.

The cilia on both fore and hindwings are blackish-grey. The rest normal.



oburnata Wocke.

x. subspecies britanniae Muller. Mitt. Munch. ent. Ges. 26 p. 30 1937
Aberrational forms etc.

ab. tenuis Muller. Mitt. Munch. ent. Ges. 26 p. 151 1937.

Lighter than the type form in Wales, transverse markings strongly reduced, especially on the hindwings, except the cell spots which are normal.

ab. anastomosaria Muller. (Prout i. l.) Mitt. Munch. ent. Ges. 26 p. 152 1937.

The median shade of the forewing moved towards the base, in part confluent with the antemedian line.

ab. nigrescens Muller. Mitt. Munch. ent. Ges. 26 p. 152 1937.

The British dark form, heterozygous to nigra Muller. Dark grey, with a slight brownish tone. The normal transverse markings always present but inconspicuous the costal spots and median shade generally the most distinct; cell dots concolorous with the other dark markings, never deep black; spots of the distal area light grey brownish (never yellow) often enlarged but never standing out very sharply.

ab. nigra Muller. Mitt. Munch. ent. Ges. 26 p. 153 1937.

The homozygote dark form of Britain. Much darker than nigrescens, the dark markings just perceptible, the light spots of the terminal area of the forewing almost absent.

seriata Schrank.
= virgularia Hbn.
Aberrational forms etc.

ab. *grisescens* De la Harpe. Neue Denkschr. Schweiz. Ges. Nat. 20 p. 4 1864.
= *obscura* Milliere. Ann. Soc. Linn. Lyon 29 p. 168 1883,
Suffused smoky colour but the markings remaining clear. The common London form.

ab. *fuscmarginata* Lempke. Tijdschr. Ent. 90 p. 164 1949.
The space between the second transverse line and the fringe powdered with dark, so that a broad dark band along the outer margin results, for the rest normal.

ab. *mediofasciata* Lempke. Tijdschr. Ent. 90 p. 164 1949.
Wings with strikingly enlarged central shade.

ab. *lutescens* Lempke. Tijdschr. Ent. 90 p. 164 1949.
Ground colour yellowish brown.

ab. *calcearia* Zeller. Ent. Z. 10 p. 217 1849.
Pure chalk white ground colour, the markings generally rather weak.

ab. *cubicularia* Peyerimhoff. Bull. Soc. Nat. Hist. Colmar 2 p. 156 1862.
= *bischoffaria* De la Harpe. Neue Denkschr. Schweiz. Ges. Nat. 20 p. 4 1864.
= *afra* Baker.
Unicolorous dark grey or blackish with lighter fringes, the underside however little darker than type form.

ab. *anastomosaria* Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 174 & 176.
On the forewing the first transverse line is united with the central shade.

ab. *hauderi* Kautz. Verh. zool.-bot. Ges. Wien. 1913. 63. p. (58); fig'd. vol. 62, pl. 2, f. 2
= *uniformis* Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 182.

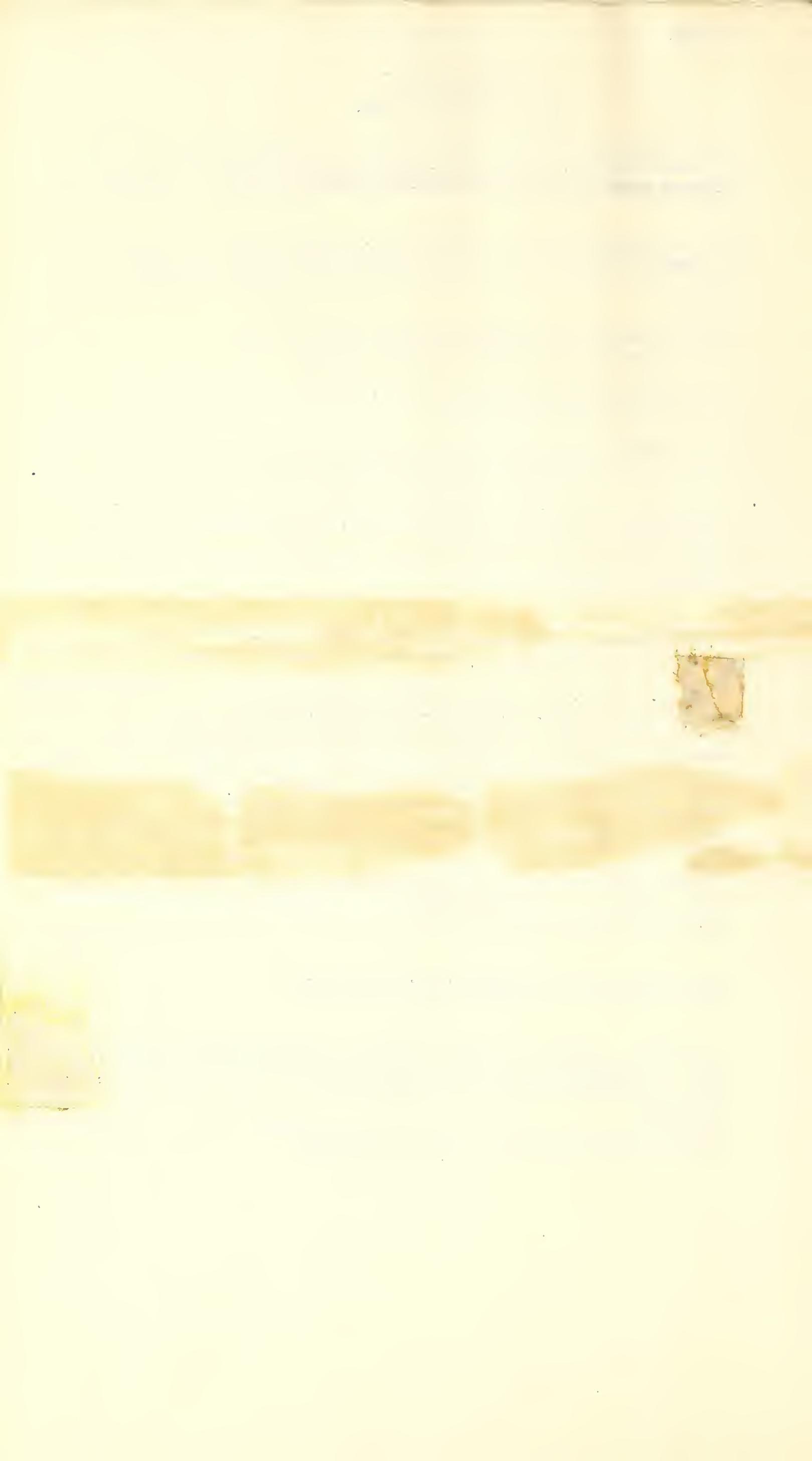
Ground colour white or yellowish-white, with the whole of the wing surfaces more or less thickly sprinkled with grey scales. The central spot present, the remaining markings completely absent, with the exception of the dark-edged subterminal line, which stands out sharply, and the marginal line and spots before the fringe, which are distinctly visible.

Reisser's *uniformis* was described as "Specimens without markings". Despite the fact that Reisser was aware that this form had already been named by Kautz, he has re-named it, for no other apparent reason than to "standardise" the names of parallel forms in closely allied species. He has merely created an unnecessary synonym, for although the two descriptions do not exactly agree, Reisser considers them to be the same form.

ab. *bilineata* Lempke. Tijdschr. Ent. 1967. 110. p. 263.
On the forewings the central shade is absent.

ab. *undulata* Osthelder. Schmett. Sudbayerns 1929. 1(3). p. 386; pl. 17, f. 1.
Form of ab. *grisescens* de la Harpe (*obscura* Mill.), with the markings indistinct, except for the subterminal line, which is broad, white and strongly developed.

Osthelder says the well-developed white subterminal line is on the forewing, but the figure also shows it on the hindwing.



subsericeata Haworth. Aberrational forms etc.

ab. *impuncta* Lempke. Tijdschr. Ent. 90 p. 165 1949. (description p. 147.)

The central spot of the forewings is absent.

In British specimens this spot is so faint as a rule that it is hardly discernible.

ab. *obscura* Rebel. Berge's Schmett. 9 p. 314 1910.

The entire upper surface is uniformly suffused with dark grey, only the fringes remaining white. The grey lines are obliterated but the subterminal is faintly discernible.

race *mancuneata* Knaggs. Ent. Mon. Mag. 2 p. 130 1865.

Considered at one time to be a separate species on account of larval differences but it seems hardly to be even a constant local race. Founded on bred specimens of a somewhat more ochreous tone, with the minute marginal dots rather even, the forewing less pointed thus, in part, corresponding to the second brood.

gen. aest. *pinquedinata* Zeller. Isis 1847 p. 521.

Generally smaller specimens of the summer generation.

ab. *anastomosaria* Lempke. Tijdschr. Ent. 1967. 110. p. 265.

On the forewings the basal line and the central shade touch each other, or are partly or for the greater part confluent.



sylvestraria Hbn.

= straminata Treitschke, aberrational forms, etc.

ab.(or race) *circellata* Guenée. Spec.Gen.Lep.1858.9.p.482.

Described as a distinct species. Of a slightly more smoky or olivaceous tone, the antemedian and postmedian lines of the forewing, and often the median of the hindwing, very strongly expressed, the dots on the postmedian usually very prominent, giving it a very dentate appearance.

This form tends towards becoming racial on the Mosses of Lancashire and Cheshire, but is by no means constant; it also occurs elsewhere as an aberration.

ab.*minuta* Heydemann. Schrift.Naturw.Ver.Schlesw.-Holstein 1934.20(2).p.20.
Smaller and of a lighter bone colour.

Reputed to be a race, but treated by Lempke as an aberration.

ab.*graciliata* Mann. Verh.zool.-bot.Ges.Wien.1867.17.p.841.

Originally described as a species, but now considered to be an aberration. Weakly marked, only the costa of the forewing distinctly dusted, the median and postmedian lines reduced to dots on the veins.

ab.*clausa* Lempke. Tijdschr.Ent.1949.90.p.161.(description vol.82 p.197.)

The first and second transverse lines of the forewings touch each other at the inner margin.

ab.*demarginata* Reisser. Z.Wien.Ent.Ges.1961.46.p.185.

The subterminal and marginal areas form a uniform unmarked band of ground colour, dark-shaded on its inner side.

ab.*virgata* Cockayne. Entomologist 1950.83.p.50; pl.1, f.10.

On both fore- and hindwings there is a broad grey band filling the space between the postmedian and submarginal lines; the border is slightly darkened; the basal area is also grey. The aberration corresponds to the banded form of *S. aversata* Linn.

ab.*bilineata* Lempke. Tijdschr.Ent.1967.110.p.260.

On the forewings the central shade is absent.

ab.*grisescens* Lempke. Tijdschr.Ent.1967.110.p.260.

The ground colour of fore- and hindwings grey.

ab.*albescens* Lempke. Tijdschr.Ent.1967.110.p.260.

The ground colour of the wings whitish, the transverse lines very weak, but but the black discal points and the row of points before the fringe normal. In the original Dutch description, Lempke refers to the transverse lines as being "very weak"; however, in his English translation, he calls these lines "obsolete"; presumably he meant to write "obsolescent".

biselata Hfn. aberrational forms etc.

ab. *griseata* Preissecker. Verh. zool.-bot. Ges. Wien. 72 p. (93) 1922.

All wings dusted with grey especially dense from base to middle shadow; the normally dark shaded subterminal and fringes remain clear yellowish.

ab. *extincta* Staudinger. Iris 10 p. 15 1897.

The dark distal markings or shading of all wings is entirely or almost entirely obsolete or suffused.

ab. *infuscata* Prout. Seitz 4 p. 127 1913.

Both wings uniformly powdered over with grey black, obscuring the markings.

ab. *fimbriolata* Stephens. Ill. Haust. 3 p. 306 1831.

= *schaefferaria* Fuchs. Jahrb. Nassau Ver. Nat. 57 p. 40 pl. 2 f. 9 1904.

The posterior margin broadly deep fuscous with a wavy whitish striga traversing it.

ab. *delineata* Lempke. Tijdschr. Ent. 1967. 110. p. 261.

All transverse lines, with the exception of the subterminal, on fore- and hindwings absent; the other markings, including the discal spots, are normal.



trigeninata Haw., aberrational forms, etc.

ab. *nigrolineata* Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 179 & 180.
The transverse lines sharply marked and black, black-grey or dark brown,
contrasting with the light ground colour.

ab. *demarginata* Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 185 & 186.
The subterminal and marginal areas form a uniform unmarked band of ground
colour, dark-shaded on its inner side.

rusticata Schiff., aberrational forms, etc.

spec. or subsp. *vulpinaria* Herrich-Schaffer. Syst. Bearb. 1851. 6. f. 473-74.
Prout in Seitz Supplement treats this as a distinct species; Cockayne drops *rusticata* in favour of *vulpinaria* for the English species, but Lempke retains *rusticata*.

ab. *albomarginata* Lempke. Tijdschr. Ent. 1949. 90. p. 159.

The whole outer part of the forewings beyond the central area is unicolorously white.

ab. *demarginata* Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 185.

The subterminal and marginal areas on both wings form a uniform unmarked band of ground colour, with a broad dark shade on its inner side. Also, the basal part of the hindwings is dark.

Similar to the preceding ab. *albomarginata* Lpke., but presumably the word "both" in the original description refers to fore- and hindwings; the dark base to the hindwings also separates it from Lempke's form.

ab. *fusca* Lempke. Tijdschr. Ent. 1967. 110. p. 259.

The subterminal line on fore- and hindwings broadly dark-bordered on both sides; the base of the hindwings also darkened.

dilutaria Hbn. aberrational forms etc.

Duponchel.

Suppl.

race holosericata (Duponchel) Pap. Fr. 1842 4. 3. p. 109. pl. 59 f. 7.

A distinct race in places including England. Differs in wanting the discal dots and in being entirely without the dark marginal shading.

According to Fletcher, this is merely a form of the 1842 series.

ab. subfasciata Prout. Seitz. 4 p. 133 1913.

The median line of both wings approximated to the postmedian and the space between them occupied by dark suffusion forming a vague band. Figured by Barrett pl. 333 f. I.

ab. anastomosaria Preissecker. Verh. zool.-bot. Ges. Wien. 72 p. (94) 1923.

The antemedian and median lines of the forewings more or less fused together.

ab. nigrolineata Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 179 & 180.

The transverse lines sharply marked and black, black-grey or dark brown, the ground colour also slightly darkened.

fuscovenosa Goeze. aberrational forms etc.
interjectaria Bsd.

ab. anastomosaria Preissecker. Verh. zool.-bot. Ges. Wien. 72 p. (94) 1923.
The antemedian and median lines of the forewings more or less fused together.

ab. bilineata Lempke. Tijdschr. Ent. 1967. 110. p. 262.
On the forewings the central shade is absent.

ab. impuncta Lempke. Tijdschr. Ent. 1967. 110. p. 262.
The central spot on the upperside of the forewings is absent.

humiliata Hfn. aberrational forms etc.

ab. *impuncta* Lempke. Tijdschr. Ent. 90 p. 163 1949. (description on p. 147.)
The central spot of the forewings is absent.
This spot is a very feeble one and the form hardly worth naming.

ab. *anastomosaria* Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 174 & 175.
On the forewing the first transverse line is united with the central shade.

ab. *nigrolineata* Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 179 & 180.
The transverse lines sharply marked and black, black-grey or dark brown,
contrasting with the light ground colour. In the Holotype, the reddish
colour on the costa is blackish-dusted near the transverse lines.

ab. *bilineata* Lempke. Tijdschr. Ent. 1967. 110. p. 263.
On the forewings the central shade is absent.

ab. lactea Cockayne. Ent. Rec. 58 p. 91. 1946.

The ground colour is cream colour with a distinct tinge of yellow, the markings normal.

ab. depravata Staudinger. Cat. Ed. 3 p. 272 1901.

The characteristic dark band is absent, the lines in general quite indistinct, the wings almost unicolorous.

ab. floridaria Prout. Seitz 4 p. 135 1913.

Ground colour deep rose red, somewhat tinged with brown, the dark median band almost wanting (as in depravata Stgr.)

ab. affumigata Dannehl. Ent. Z. 39 p. 15 1925.

The lines more blackened than in the normal form, median area more heavily powdered with blackish

ab. meridiana Milliere.

More yellowish or olivaceous ground colour and lighter, redder band.



inornata Haworth. aberrational forms etc.

ab. agrostemata Guenee. Spec. Gen. Lep. 9 p. 512 1858.

Very weakly marked, the lines scarcely traceable. Described as small in size.

ab. impuncta Lempke. Tijdschr. Ent. 90 p. 169 1949. (description on p. 147)

The central spot of the forewings is absent.

ab. approximata Cockayne. Ent. Rec. 64 p. 68 1952.

On the forewing the middle line is displaced towards base so that it approaches the first line very closely and the discoidal spot lies external to it instead of internal.

ab. rufescens Cockayne. Ent. Rec. 64 p. 68 1952.

The ground colour tinged with rufous.

ab. nigrolineata Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 179 & 181.

The transverse lines sharply marked and black, black-grey or dark brown, contrasting with the light ground colour.

aversata L. aberrational forms etc.

The type form is banded, i.e. the space between the median and postmedian lines is filled with grey, the ground colour pale yellowish grey.

ab. lividata Clerck. Icones I pl. 5 f. 10 1759.

Very similar to the type form. The dark band on fore and hindwings is followed externally by another dark line and still another, very fine one, preceding the fringe. The dark band is apparently darker than in the type form, but it may well be a synonym as Prout says in Seitz.

ab. remutata Linn. Syst. Nat. 10 p. 528 1758.

= spoliata Staudinger. Hor. Soc. Ent. Ross. 7 p. 150 1870.

No dark band between the median and postmedian lines, ground colour as in type

ab. aurata Fuchs. Jahrb. Nassau Ver. Nat. 53 p. 48 1900.

The ground colour bright clay yellow with a slight reddish tinge, the band commonly present but Fuchs also includes non banded forms.

ab. aureo-spoliata Boltd. Ent. Z. 39 p. 134 1925. = fuchsi Duf. Lamb. 31 p. 187 1931.

No band on the wings and the ground colour of a yellowish orange.

ab. amoenata Fuchs. Stett. Ent. Ztg. 62 p. 121 1901.

The ground colour light ochre yellow shaded with reddish, the margins and fringe lighter, finely dusted with ochreous brownish and with indistinct transverse lines.

ab. diluta Hannemann. Int. Ent. Z. II p. 58 1917.

The markings obsolescent, the border of the band wanting.

ab. latefasciata Vorbrodt (Wehrli in litt.) Schm. Schweiz. 1913-14. 2. p. 638.

The dark band extended proximally so as to enclose the discal spot.

ab. fuliginata Haworth. Lep. Brit. 1809 p. 350.

The ground colour darkened, the band still appreciably darker.

The original description is bad, see Prout's remarks in Seitz 4 p. 138.

ab. effuscata Galvagni. Verh. zool.-bot. Ges. Wien. 52 p. 712. 53 p. 87 1903.

A still further development of lividata Cl. with the dark colour of the band extended over the entire marginal area of both wings.

ab. suffumata Lambillon. Rev. Mens. Soc. Ent. Nam. 9 p. 62 1909.

The entire surface of the wings ^{black} covered with ^{a few whitish scales,} blackish atoms, ^{the only yellow} the lines still ^{is on costa, thorax, head and anal tip. The abdomen black like the wings.} darker. ^{Original description}

ab. atrata Fuchs. Soc. Ent. 19 p. 18 1904.

All wings and the thorax blackish, so distinct from the preceding suffumata.

aurata-diluta

ab. aurodiluta Hannemann. Int. Ent. Z. II p. 58 1917.

As in ab. diluta Hann. with the markings obsolescent and the border of the band wanting, but with yellowish ground colour.

ab. quadrilineata Cockayne. Ent. Rec. 64 p. 68 1952. pl. 3 f. 8.

On the forewing the submarginal line, normally very thin and poorly developed, is very strong forming a complete line, broader and more distinct than any of the others. There is no dark band and the ground colour is unusually pale.

ab. approximata Cockayne. Ent. Rec. 64 p. 68 1952.

On the forewing the middle line is displaced towards the base so that it approaches the first line very closely.

ab. tenuifasciata Lempke. Tijdschr. Ent. 90 p. 168 1949.

The dark central band strongly narrowed.

Lempke almost certainly refers to the postmedian-band; "central" is hardly its position.

ab. suffusa Lempke. Tijdschr. Ent. 90 p. 168 1949.

The whole ground colour powdered with black scales which causes a grey tint. Apparently not so dark as the almost black suffumata Lamb.

ab. unilineata Lempke. Tijdschr. Ent. 90 p. 168 1949.

Without the dark band and with only the outer transverse line on fore and hindwings present.

ab. impuncta Lempke. Tijdschr. Ent. 90 p. 168 1949. (description p. 147.)

The central spot of the forewings absent.

ab. mediofasciata Schwingenschuss. Z. Wien. Ent. Ges. 38 p. 223 1953.

The middle line of the forewings is widened to a band of 1 mm. in width, also the inner transverse line of the hindwings is strongly widened. This middle line is normally very thin.

ab. dilutata Preissecker. Verh. zool.-bot. Ges. Wien. 72 p. (93) 1922.

The area between the middle shadow line and outer transverse line is weak but still distinctly darker than the rest of the wing. The middle shadow line and both transverse lines are weakly developed.

In effect this is a very pale form of the type.

ab. nigrolineata Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 179 & 180.

The transverse lines sharply marked and black, black-grey or dark brown, contrasting with the light ground colour.

ab. demarginata Reisser. Z. Wien. Ent. Ges. 1961. 46. p. 185 & 186.

The subterminal and marginal areas form a uniform unmarked band of ground colour, dark-shaded on its inner side.

ab. bilineata Lempke. Tijdschr. Ent. 1967. 110. p. 268.

The central shade on fore- and hindwings is absent.

ab. marginata Lempke. Tijdschr. Ent. 1967. 110. p. 268.

On the upperside of fore- and hindwings the area between the postmedian line and the fringe is darkened, but there is no dark central band.

emarginata Linn. aberrational forms etc.

ab. pallida Lempke. Tijdschr. Ent. 90 p. 166 1949.
Ground colour of the wings whitish yellow.

ab. brunescens Lempke. Tijdschr. Ent. 90 P. 166 1949.
Ground colour of the wings brown-yellow so a much browner appearance than with normal specimens.

ab. moscuensis Heyne. Soc. Ent. 14 p. 105. 1899.
Both wings more strongly powdered with black scales giving a much darker appearance, the median band strong, dark grey or blackish and fringes also darkened.

ab. obsoleta Lempke. Tijdschr. Ent. 90 p. 166 1949.
The transverse lines hardly visible.

ab. distincta Lempke. Tijdschr. Ent. 1967. 110. p. 267.
The postdiscal line on fore- and hindwings very distinct, sometimes also the basal.

ab. impuncta Lempke. Tijdschr. Ent. 1967. 110. p. 267.
On the upperside of the forewings the central spot is absent.

ochrata Scop.

subsp.cantiata Prout. Seitz.4 p.9I. 1913.

ab.major Dufrane. Lamillionea 31 p.185.1931.

Very large,28 mm.

ab.flavescens Galvagni. Verh.zool.-bot.Ges.Wien.1924.74/75.p.(I)

Large female,striking colour aberration. Unicolorous pale ochre-yellow instead of pale ochre-brown,transverse lines and wavy shadowing are brown with atoms of the same colour at the base and especially along the costa.The forewing discoidal spot absent,that of the hindwing discernible but hidden by the middle shadow.

ab.anastomosaria Reisser. Z.Wien.Ent.Ges.1961.46.p.174.

On the forewing the first transverse line is united with the central shade.

ab.bilineata Reisser. Z.Wien.Ent.Ges.1961.46.p.178.

The central shade completely absent, otherwise normal.

ab.nigrolineata Reisser. Z.Wien.Ent.Ges.1961.46.p.179.

The transverse lines sharply marked and black, black-grey or dark brown, contrasting with the light ground colour.

ab.demarginata Reisser. Z.Wien.Ent.Ges.1961.46.p.185.

The subterminal and marginal areas form a uniform unmarked band of ground colour, which is dark-shaded on its inner side.

sacraria Linn. aberrational forms etc.

ab. sanguinaria Esp. Schmett. Abbild. Nat. 5 p. 173 fig'd. pl. 30 f. 10-II 1799.
The greater part of the forewings suffused with rose colour, the stripe usually but little darkened but in the ♀ sometimes in part blackish. Hindwings often smoky not white.

ab. lividaria Costa.

Ground colour rosy but with a conspicuous yellow oblique stripe.

ab. rosea Oberthur. Etudes d'Ent. 20 p. 71. pl. 6 f. 101 1896.

Forewings entirely washed with bright rose, the oblique line brown, the hind wings grey on the upperside. The underside in general is darker than normal.

ab. labda Cram. Pap. Exot. 2 p. 129 pl. 181 D 1777.

The normally rose coloured oblique stripe of the forewings is changed to brown, pale in fig, entirely without the rosy tinge and rarely reaches the hind margin. The ground colour slightly richer yellow than usual. Our specimens range from pale yellow to buffish. Prout says the ground colour of labda is ochrous to buff and makes ochracearia Fuchs, which has clay-brownish wings, a synonym.

ab. ochracearia Fuchs. Soc. Ent. 18 p. 3 1903.

Forewings clay brownish with darker oblique stripe.

ab. sarothammaria R. Brown. Bull. Soc. Linn. Bordeaux. 40 p. 52 1866.

This is extremely similar to labda. Prout makes it a synonym.

ab. minervae Gistl.

Whitish with an oblique chestnut coloured stripe from apex both above and beneath. Described as a separate species but must be a pale form of sacraria.

ab. fumosa Prout. Seitz 4 Suppl. p. 70 1937.

Both wings dulled with smoky grey, the cell dot and oblique stripe blackish. An extreme development of labda but the stripe here is complete.

ab. desertorum Stauder. Z. Wiss. Ins. 10 p. 172 fig. 13 1914.

Described as a race but according to Prout's material this is not so. It is paler, the fringe white, not yellowish, the line of the forewing slender, more brown, the base of costa not rosy.

ab. aucta Krausse. Arch. Naturg. 79 A 7 p. 186 1913.

The rosy stripe broadened inwardly and a supplementary stripe or streak horizontally developed in the cell.

ab. excoecaria Fuchs. Soc. Ent. 18 p. 3 1903.

Forewings uniform yellow without markings.

ab. atrifasciaria Stefanelli. Bull. Soc. Ent. It. 2 p. 191 1870.

Very similar to labda Cram. of which Prout makes it a synonym with some reason, but in Cramer's figure the stripe is palish brown whereas Stefanelli's form has it dark brown or black, so it is separated here.

Larentia Tr.

clavaria Haworth.
= cervinata Schiff. (in error)

Aberrational forms etc.

ab. obscurior Schwingenschuss. Z. Wien. ent. Ges. 38 p. 251. 1953.

Much darker in colour.

ab. approximata Lempke. Tijdschr. Ent. 92 p. 117 1950 (description vol. 90 p. 147)

= stenotaenia Schwingenschuss. Z. Wien. ent. Ges. 38 p. 251. 1953.

Narrow central band, the two transverse lines are close together.

ab. edentata Schwingenschuss. Z. Wien. ent. Ges. 38 p. 251. 1953.

The two characteristic teeth on the inner transverse line are lacking leaving the line straight.

ab. tangens Lempke. Tijdschr. Ent. 92 p. 117 1950 (description vol. 90 p. 147)

The two transverse lines of the forewings touch each other below the middle and then separate again.

ab. planicolor Lempke. Tijdschr. Ent. 92 p. 117 1950. (description vol. 90 p. 147)

The central band of the forewings normally paler in the centre and bordered by the two dark lines, is of a unicolorously dark tint.



chenopodiata Linn.
= limitata Scop.

Aberrational forms etc.

ab.monodii Thiery-Meig. Le Nat. 7 p.

Wings smoky above and below, the median band very dark

ab.prieta Ribbe. Iris 23 p. 314 1912.

Prout makes this a synonym of the preceding, it is less extreme. Forewings entirely darkened and with dark margins on hindwings.

ab.unicolor Th.-Meig. Le Nat. 6 p. 437 1884.

Forewings almost unicolorously coffee brown with the median band not darker.

ab.grafi Joukl. Prodr. Schmett. Bohmens p. 163.

Forewing darkened, bands and distal margins black grey, markings indistinct, hindwing dark brown.

ab.defasciata Rebel. Berge's Schmett. // p. 329 1910. (from fig. Barrett 9 pl. 380 Id = fimbriata Cockayne. Ent. Rec. 58 p. 92 1946. (fig. Barrett. 9 pl. 380 f. Id.)

Forewings without middle markings. Footnote cites the figure in Barrett which shows three rather heavy transverse lines at the base, no median band but another heavy transverse line just before the margin and the margin itself dusky. The hindwings with a single submarginal line and dark margin. Cockayne described the same insect. The Type is in the Rothschild-Cockayne-Kettlewell Coll. in the Brit. Museum.

ab.medioprieta Ribbe. Iris. 23 p. 314. 1912.

The basal area of the forewing darkened as well as the median.

ab.obscurior Heinrich. Deutsch. Ent. Z. (1916) p. 525 1917.

More unicolorous than normal.

The description is too vague to be of use.

ab.violacearia Lambillion.

The ground colour of the forewings pale yellow and the median band violaceous yellow.

ab.birgittae Nordstrom. Svenska Fjarilar p. 240 pl. 34 f. 17c 1940.

Forewings dark ochreous yellow, middle field violet brown with broad rust brown markings.

A good example is figured in South pl. 54 f. 9.

ab.clarior Nordstrom Svenska Fjarilar p. 240 pl. 34 f. 17b 1940.

Forewings with bone yellow or greyish ground colour and distinct brown yellow marking. Especially a female form.

ab.brunnea Lempke. Tijdschr. Ent. 92 p. 125 1950.

Ground colour of the forewings clear brown.

ab.insigniata Osthelder. Mitt. munch. ent. Ges. 19 p. 398 1929. (Schmett. Sudbayerns

The transverse line markings entirely obsolete with the exception of the dark basal and middle field. Sometimes the undulate line disappears entirely.

ab.plurimelineata Stauder. Ent. Anz. 2 p. 81 1922.

All the subsidiary lines of the forewing and the postmedian and first sub-terminal of the hindwing accentuated.

ab.semifasciata Lempke. Tijdschr. Ent. 92 p. 125 1950.

The dark band on the inner side of the central band of the forewings fails completely.

ab.reducta Lempke. Tijdschr. Ent. 92 p. 125 1950.

Forewings with only three transverse lines; the basal and the two which border the central area; hindwings with only a dark submarginal line.

ab.planicolor Lempke. Tijdschr. Ent. 92 p. 125 1950. (description vol. 90 p. 147)

The central area of the forewings, normally paler between the two dark lines, is of a unicolorously dark tint.

ab.tangens Lempke. Tijdschr. Ent. 92 p. 125 1950. (description vol. 90 p. 147)

The two transverse lines which border the central area of the forewings, touch each other below the middle and then separate again.



Geom.50 continued,

chenopodiata Linn.

ab. *impuncta* Lempke. Tijdschr. Ent. 92 p. 125 1950. (description vol. 90 p. 147)
The central spot of the forewings is absent.

ab. *coarctata* Cockayne. Ent. Rec. 64 p. 68 1952.
The median band of the forewings is about half the normal width.

ab. *margaritata* Lucas. Ent. Ber. (Amst.). 1960. 20. p. 230.
On the forewings the two transverse lines which border the central area touch each other in more than one spot.

plumbaria F. aberrational forms etc.

ab. pallidaria Heydemann. Stett. Ent. Ztg. 102 p. 18 f. 16 1941.
Ground colour of the forewings lighter, whitish grey.

ab. nigrita Heydemann. Ent. Z. 52 p. 392 1938.
The dove grey ground colour densely sprinkled with black brown scales.

ab. nigrescens Cockerell. Entomologist 22 p. 55 1889.
= obscuraria Rothke. Jahresb. Ver. naturw. Samml. Krefeld 1895-96 p. 28 1896.
The ground colour of the forewings uniformly blackish grey, only the subterminal line usually remaining pale, lines as in the type form.

ab. pseudolimitata Heydemann, Int Ent. Z. 24 p. 128 pl. I f. 17 1930.
The ground colour strongly ochreous yellow-brown so that it recalls dark specimens of *O. limitata* (*chenopodiata*)

ab. luridata Hufnagel. Berl. Mag. 4 p. 526 1767.
= duponti Thiery-Mœg. Le Nat. 29 p. 212 1907.
= graslinaria Culot. Noct. et Geom. 1917-19. 3. p. 106; p. 16, f. 322.
The area between the two transverse lines blackish grey, forming a distinct median band.

ab. umbrifera Heydemann. Stett. Ent. Z. 102 p. 15 1941.
On the inner side of both transverse lines which border the middle field, a dark sometimes black-brown shadowing, which is nearly always darker than in *mucronata*.

ab. nigrolineata Dannehl. Ent. Z. 40 p. 461 1927.
The transverse lines are black brown without ochreous undertone, as is also the strongly developed apical dash.

ab. disconudata Dannehl. Ent. Z. 40 p. 461 1927.
The cell spot of the forewings completely wanting.

ab. approximata Prout. Seitz 4 p. 158 1914. (pl. 7 line E. in Suppl.)
The transverse lines of the forewing placed close together.

ab. juncta Lempke. Tijdschr. Ent. 92 p. 122 1950.
The basal line of the forewings on one or more places connected with the antemedian line by a horizontal line.

ab. bipunctata Lempke. Tijdschr. Ent. 92 p. 122 1950.
Forewings with a double central spot.

ab. fuscomarginata Lempke. Tijdschr. Ent. 92 p. 121 1950.
Outer area of the forewings darkened from the postmedian line.

ab. extradentata Heydemann. Stett. Ent. Z. 102 p. 15 f. 15 1941.
Forewings with the transverse line in the fringe area very distinct.

mucronata Scopoli. aberrational forms etc.

subsp. umbrifera Prout. Seitz. 4 p. 158 1914.

The race occurring in England.

The description merely says "English specimens often show some dark shading proximally to the postmedian line."

subsp. scotica Cockayne. Proc. S. Lond. Ent. Nat. Hist. Soc. 1939-40 p. 60 pl. 4 f. 2

The race occurring in Scotland and Wales.

ab. pallidaria Lambillion. Cat. Lep. Belg. 1905 p. 257.

The ground colour whitish grey, the transverse lines of the forewings well marked.

ab. brunnescens Lempke. Tijdschr. Ent. 92 p. 119 1950.

Ground colour of the forewings pale brown-grey, the two transverse lines which border the central area, sharply contrasting.

ab. nigrita Lempke. Tijdschr. Ent. 92 p. 119 1950.

The whole ground colour of the forewings densely powdered with blackish scales, the central area partly darkened.

ab. luridaria Borkhausen. Eur. Schmett. 5 p. 59 1794.

= nigrescens Cockayne. Ent. Rec. 53 p. 26 1941.

The ground colour of the forewings blackish grey, only the subterminal line usually remaining pale. Hindwing also darkened.

ab. nigrita Lempke. Tijdschr. Ent. 92 p. 119 1950.

The whole ground colour of the forewings densely powdered with blackish scales, the central area partly darkened.

ab. luridata Heydemann. Stett. Ent. Z. 102 p. 14 fig. 8. 1941.

Forewings with the middle field entirely darkened, contrasting with the rest of the wing.

ab. multistrigaria Heydemann. Int. Ent. Z. 24 p. 127 pl. I f. 11-12 1930.

On the forewings four strong white lines on an unevenly darkened ground colour; on the hindwings two white lines.

ab. nigrolineata Heydemann. Stett. Ent. Ztg. 102 p. 14 1941.

The transverse lines on the wings are brown grey to black grey with a whitish border.

ab. approximata Heydemann. Stett. Ent. Ztg. 102 p. 14 1941.

The middle field strongly narrowed.

ab. costijuncta Richardson. Ent. Rec. 64 p. 270 1952. pl. II f. 5. 1952.

The basal and antemedian lines combining in the costal half of the forewings to form a thick cloudy line in which short pale lines can be seen along the costal nervures. The interval between the lines at the inner margin is almost normal. Described under umbrifera Prout.

ab. clausa Cockayne. Ent. Rec. 64 p. 68 pl. 3 f. 9 1952.

On the forewings the antemedian and postmedian lines meet on the inner margin thus forming a V. Described under subsp. scotica Cockayne.

ab. extradentata Prout. Seitz 4 p. 158 1914.

Ground colour normal but showing a conspicuous dark, dentate line in the distal area of the forewings, preceding the pale subterminal.

ab. latefasciata Lempke. Tijdschr. Ent. 92 p. 120 1950.

The central area or band of the forewings strongly enlarged.

ab. binuncta Lempke. Tijdschr. Ent. 92 p. 120 1950.

The discal spot of the forewings divided into two parts.

ab. juncta Lempke. Tijdschr. Ent. 92 p. 120 1950.

The basal and antemedian lines of the forewings connected on one or more spots, by a horizontal line or lines.

bipunctaria Schiff. aberrational forms etc.

ab. albida Cockerell. Entomologist 22 p. 3 1889.

= obliterated Prout. Seitz 4 p. 163 1914. (fig. Suppl. pl. 14 K.)

Ground colour white, the markings pale faded brown. Probably an albino.

ab. fasciata Prout. Seitz 4 p. 163 1914.

Ground colour almost pure white but the central band strongly darkened.

ab. reversa Prout. Seitz 4 p. 163 1914. = paradoxa Cockayne. Ent. Rec. 58 p. 92 1941

The basal and median bands whitish or grey but rest of wing almost black.

ab. griseescens Neuberger. Soc. Ent. 19 p. 44 1904.

Entirely without brown dusting in the median and basal areas, thus of a uniform grey tone.

ab. cretata Prout. Seitz. 4 Suppl. p. 77 pl. 7 h. 1957.

Very whitish ground colour and weakly marked

Described as a subspecies but is far from constant.

ab. nigrifasciaria Turati. Atti. Soc. Ital. Sci. Nat. 62 p. 56 fig.

The ground colour glaucescent slaty grey, the lines more accentuated, the basal and median bands of the forewings completely filled with black.

ab. pallidior Thiery-Meig. Misc. Ent. 23 p. 48 1916.

Almost entirely white, scarcely greyish, the lines faint, the median band remaining of the ground colour, the two lines which bind it weak.

ab. filigrammaria Dannehl. Ent. Z. 47 p. 87. 1933.

Ground colour light with a bluish tinge, the markings of the forewing sharp, all of nearly uniform strength and about equidistant.

ab. herberti Prout. Seitz. 4 p. 163 pl. 6 i. 1914.

Of normal ground colour but with the median band completely darkened, i. e. with no pale transverse line. Similar to fasciata Prout which however has a white ground.

ab. margaritata Lempke. Tijdschr. Ent. 92 p. 126 1950. (descript. vol. 90 p. 147)

The two thick transverse bands which border the central area of the forewings touch each other at more than one spot.

ab. cotangens Lempke. Tijdschr. 92 p. 126 1950 (descript. vol. 90 p. 147)

The two transverse lines which border the central area of the forewings touch each other below the middle and remain united.

ab. extrapunctata Dannehl. Ent. Z. 47 p. 87 1933.

The spots before the outer margin developed into strong cloudy connected ones, normally they are very small.

ab. tangens Wehrli. ~~Ent. Z. 47 p. 87 1933~~

The two transverse lines which border the central area of the forewings are confluent in the middle, then divided again.

ab. confluens Wehrli. Mitt. ent. Ver. Basel. no. 12 p. 5 fig. 26 1926.

The two cell dots united into a single streak.

ab. unipuncta Wehrli. Mitt. ent. Ver. Basel. no. 12 p. 5 fig. 25 1926.

A single cell dot instead of the normal double ones.

ab. nigra Turati.

Smoky grey, the lines and bands of the forewings of an intense black.

ab. erichi Schawerda. Z. Oest. Ent. Ver. 4 p. 32 1919. fig. 4.

Strikingly pale, whitish grey sometimes with a very weak violet tint. The wholly pale grey almost unmarked middle area with its double spot, is sharply defined by its two transverse lines. The completely unmarked outer area is wholly pale whitish grey only a white pre-marginal wavy line is visible. The figure shows the usual premarginal dots and markings, despite the description. The form is very close to pallidior Th. Meig.

Geom. 53. continued.

bipunctaria Schiff.

ab. gachtaria Ferr.

The ground colour darker grey with the markings correspondingly darkened.

ab. strangulata Hackray. Lambill. 38 p. 201 1938.

The central band, double in normal specimens, is transformed into a single narrow band containing the two discal dots.

ab. tangens Lempke. [? nom. praec. Wehrli?] Tijdschr. Ent. 1967. 110. p. 291.

The transverse lines which border the central area of the forewings touch each other a little above the inner margin, and then separate again.

It has not, as yet, been possible to verify the existence of ab. tangens Wehrli (p. 1 of these notes), but should it exist, this present form of Lempke's would become a synonym of it.

plagiata Linn. aberrational forms etc.

ab. tangens Fritsch. Int. Ent. Z. 5 p. 163 1911.

= conjuncta Krausse. Arch. Naturg. 78 A 7 p. 168 1912.

= interrupta Klemensiewicz. Spraw. Kom. fizyogr. Krakow. 47 p. 119 1913.

The two transverse lines of the forewing meet below the middle and then separate again, interrupting the normal fascia.

ab. fasciata Garbowski. Sitzler. Akad. Wiss. Wien. (Lep. Galiziens) 1892 p. 121.

= cotangens Fritsch. Int. Ent. Z. 5 p. 163 1911. (Sept.)

= conflua Hoffmann. Ent. Rundsch. 28 p. 189 1911. (Dec.)

The two transverse lines of the forewing meet in the middle and do not separate again, but form a broad posterior median band.

ab. ruberata Rebel. Berge's Schmett. 9 p. 332 1910. (fig. Barrett pl. 376 f. 1b.)

The transverse lines remain separate but the entire space between them is darkened by red-brown or brown-grey, forming a real fascia.

ab. suffusa Prout. Seitz 4 p. 177 1914.

= kautzi Schawerda. Z. Ost. ent. Ver. 4 p. 67 1919.

The ground colour shaded with brown, the bands confluent into a single wide blackish band, giving the impression of quite another species.

ab. nigrescens Hannemann. Int. Ent. Z. 26 p. 415 1932.

An extreme development of the preceding suffusa Prout, but is black-grey instead of brown, the median area and basal patch darker. The entire area outwards from the median broad band is strongly darkened.

ab. bifasciata Testout. Bull. Soc. Linn. Lyon. 8 p. 220.

ab. bellinchenensis Szent-Ivany. Folia ent. Hung. 7 p. 1942.

subsp. scotica Richardson. Ent. Rec. 64 p. 269 1952.

The Scottish race; differs markedly from southern specimens by its blue-grey colouring.

efformata Guenee. aberrational forms etc.

ab. tangens Hannemann. Int. Ent. Z. 24 p. 401.

The transverse lines in the centre of the forewings meet just below the middle and then separate again. Corresponds to tangens Fritsch of *A. plagiata*.

ab. fasciata Hannemann. Int. Ent. Z. 24 p. 401.

The entire median area of the forewing darkened except a small spot of ground colour about the cell dot. Corresponds to fasciata Garbsk. of *A. plagiata*.

ab. fuscofasciata Lempke. Ent. Ber. Amst. 9 p. 157. 1935.

Normal ground colour but the central band filled in with dark standing out in contrast.

ab. suffusa Prout. Seitz Suppl. 4 p. 87 1937

The ground colour shaded with brown, the bands forming a single blackish fascia.

ab. simplificata Lempke. Tijdschr. Ent. 92 p. 133 1950.

Of the postmedian band of the forewings only the outer line remains.

ab. obsoleta Lempke. Tijdschr. Ent. 92 p. 133 1950.

The markings of the forewings very feeble or even partially absent.

ab. fimbriata Cockayne. Ent. Rec. 58 p. 92 1946. pl. XI(2) f. 10.

On the forewings the basal, antemedian and postmedian lines are absent; in other respects normal.

ab. pauper Cockayne. Ent. Rec. 64 p. 68 pl. 3 f. II 1952.

On the forewing the antemedian line is narrow and the postmedian broad, both solid with the usual parallel thread like lines and both more oblique than usual; there are no markings in the marginal area and the pale submarginal line is absent but there is some darkening of the ground colour towards the margin.

ab. impuncta Lempke. Tijdschr. Ent. 92 p. 133 1950. (descript. vol. 90 p. 147)

The central spot of the forewings is absent.

sororiata Hbn.
subsp. anglica Prout.
 Aberrational forms etc.

ab. 8-signata Arch. Naturg. 85 A4 p. 34 1920. (Seitz 4 pl. 6 g. as *imbutata* Hbn.)
 The two bands of the median area become confluent for a short distance below the middle giving a figure-of-eight shape to the grey ground colour.

ab. obscurata Schoyen.

Much darker than type, the reddish shade altogether, obsolete.

ab. brunneofasciata Hannemann. Int. Ent. Z. 24 p. 401 1930.

The two bands of the forewing filled with red brown to form a single median band.

ab. obsoleta Brandt. Ent. Z. 47 p. 148 fig. 1933.

All secondary lines wanting, the slender subbasal and rather narrow ante and post-median strongly developed.

The figure shows only these three lines on a whitish ground.

ab. conflua Hannemann.

The two central bands of the forewings unite in the middle and remain so down to the inner margin.

ab. extensa Hannemann.

The two central bands of the forewing widely separated by a pale central area.

ab. coarctata Cockayne. Ent. Rec. 64 p. 68 1952. pl. 3 f. 10.

The two central lines of the forewing are brought in towards each other forming a very narrow central band of dark brown red.

subsp. anglica Prout. Seitz 4 Suppl. p. 88 1937.

The small sharply dark-marked British race of *imbutata* Hbn, the bands of the central area are very generally broad and thus produce a good percentage of *8-signata* Strand and *conflua* Hannemann forms.

virgata Hufn. aberrational forms etc.

ab. *impunctata* Petersen. Beitr. Kunde est.-Liv. u Kurlands Suppl. p. II 8 1902.
The black discal dot of the forewings absent.

ab. *obliquata* Thunberg. Diss. Ent. Ins. Suec. I p. 12 fig. 9 1784.
= *contrariata* Heydemann. Int. Ent. Z. 27 p. 373 1933.

The ante and postmedian lines accompanied by more definite shades which give the insect a much brighter, more variegated effect.

ab. *mediofasciata* Schwingenschuss. Verh. zool.-bot. Ges. Wien. 70 p. (84) 1920.
Whitish grey with the secondary lines obsolescent and a central band of almost unicolorous black brown as a result of the filling in of the two central transverse lines, there being a narrow patch of ground in its upper half.
(see ab. *planicolor* Lpk, p. 2.)

ab. *tangens* Lempke. Tijdschr. Ent. 92 p. 127 1950.

The two central transverse lines of the forewings touch each other below the middle and then separate again.

ab. *cotangens* Lempke. Tijdschr. Ent. 92 p. 127 1950.

The two central transverse lines of the forewings touch each other below the middle and remain united.

ab. *paradoxa* Cockayne. Ent. Rec. 58 p. 82 1946.

The space between the basal and antemedian lines, and the marginal area, (external to the postmedian line) are dark grey, leaving a median band of light grey, the normal appearance being reversed.

ab. *bicolorata* Cockayne. Ent. Rec. 64 p. 237 1952. pl. X. f. 1

Ground colour pure white, the basal and median areas dark grey bounded by thick blackish antemedian and postmedian lines. Hindwing basal half dark grey with a doubled blackish central transverse line, the marginal area whitish

ab. *infravirgata* Cockayne. Ent. Rec. 64 p. 237 1952. pl. X f. 2.

On the forewing the basal line and bands bounding the median area are blackish the median area is partly filled in with blackish and the marginal area is dark grey; there is a rather broad white band between the median and marginal areas. The hindwing is whitish with a broad blackish band ~~blackish band~~ across the middle and no other markings.

ab. *albofasciata* Cockayne. Ent. Rec. 64 p. 237 1952. pl. x. f. 3.

On the forewing the basal and median areas are dark grey; the basal and ante median lines are broad and blackish; bounding the median area externally is a very broad blackish band; the marginal area is dark grey; on each side of the median area is a conspicuous broad white stripe. On the hindwing the basal area is greyish, the postmedian band is dark with a dark line just internal to it; the marginal area is dark and separated from the postmedian band by a broad white stripe.

Heydemann.

ab. *infuscata* Ent. Z. 51 p. 392 1938.

All wings densely blackish grey as far as the distinct black grey line of the middle field, outwardly accompanied by a distinct dirty whitish band through all wings. Beyond it the marginal field dark grey with a marked black apical stripe on the forewings and blackish grey submarginal band on the hindwings. Underside not ochreous brownish or red grey but black grey dusted, with a faint brownish tinge.

ab. *obscurata* Lempke. Tijdschr. Ent. 92 p. 128 1950.

Fore and hindwings dark grey, bands and central spot still darker, the pale markings almost completely disappeared.

ab. *albescens* Lucas. Ent. Ber. (Amst.). 1960. 20. p. 230.

The ground colour whitish.

Lempke, in Tijdschr. Ent. 110, p. 274, places this form as a synonym of ab. *bicolorata* Cockayne; from the original descriptions, however, the two forms are different, for although *bicolorata* had a white ground colour, it also had additional characters apparently not present in *albescens*. The two are therefore kept separate in these notes.

ab. subtuslineata Lucas. Ent. Ber. (Amst.). 1960. 20. p. 230. (Fig'd. Tijdschr. Ent. 110; pl. 13, f. 11.).

On the underside of the forewing the line bordering the central area on its outer side [the postmedian] is very prominent. The same holds good for the corresponding line on the underside of the hindwing. The figure by Lempke is of the Holotype.

ab. approximata Lempke. Tijdschr. Ent. 1967. 110. p. 274.
The central area of the forewings strongly narrowed.

ab. unicolor Lempke. Tijdschr. Ent. 1967. 110. p. 275.
Forewings unicolorous dark greyish-brown, markings absent except for the discoidal spot and a feeble, somewhat paler subterminal line.

ab. brunnescens Lempke. Tijdschr. Ent. 1967. 110. p. 275.
The ground colour of the forewings pale brown.

ab. reducta Lempke. Tijdschr. Ent. 1967. 110. p. 275.
On the upperside of the forewings the central area is bordered on its inner side by a single line.

ab. planicolor Lempke. Tijdschr. Ent. 1967. 110. p. 274; pl. 13, f. 10.
Forewings with a completely dark central area which contrasts strongly with the pale ground colour; for the rest normal.
This is only slightly more extreme than *ab. mediofasciata* Schultz. (see p. 1.)

griseata Schiff. aberrational forms etc.

ab. duplicaria Hbn. Sammlg. Eur. Schm. Geom. fig. 208.

Forewing more strongly marked, the distal line being distinct right across the wing and forked at the costa, while a second dark double line is present in the middle of the wing.

ab. pseudosacraria Koschabek. Z. Ost. Ent. Ver. 24 p. 70 fig. 1939.

The line on the forewings runs from apex and transverses the entire wings, more weakly marked in the males, more strongly in the females. Somewhat reminiscent of *R. sacraria*.

ab. stockli Pillich. Rovart. Lap. 18 p. 86 1909.

= *grisearia* Hbn. Sammlg. Eur. Schm. Geom. fig. 216

A median line developed strongly on the forewing in addition to the postmedian.

ab. triplicaria Dioszeghy. Verh. Siebenburg Ver. Nat. 83-84 p. 1935.

ab. transversaria Bytinski-Daltz. Ent. Rec. 49 Suppl. p. (13) 1937.

Female with all transverse bands well developed, the antemedian single, the median broad and doubled with a continuous interspace; distal band also very broad.

ab. scripta Cockayne. Ent. Rec. 65 p. 243 pl. 13 f. 1 1953.

Ground colour normal pale grey; on the forewing an angulated line near the base and a wavy blackish grey transverse line near the termen; parallel with and just external to this is a broken line of similar character present at the costa, opposite the cell, and near the inner margin. Hindwing with no markings.

ab. bicolorata Koschabek. Z. ost. Ent. Ver. 24 p. 70 fig. 1939.

Bicoloured aberration. On the forewing there is a complete line in the post median area running completely across, the inner larger area being brownish, the outside grey, the two colours being divided by the line.

ab. obscurata Staudinger. Cat. Ed. 3 p. 284 1901.

= *odesaria* H.-Sch. nec. Bsd.

Unicolorous dark grey, much darker than type form.

ab. infuscata Eversmann.

= *brunnescens* Skala. Verh. Ver. Brunn. 51 p. 115-377

Weakly marked with the ground colour of the forewing wholly pale brown, only darker at the outer margin. Skala's *brunnescens* was light grey brown.

ab. abafii Uhryk. Rovart. Lap. 5 p. 7

Melanic. Forewing blackish with a whitish central spot and whitish subterminal line.

Chesias Tr.

legatella Schiff.
= spartiata Herbst.
Aberrational forms etc.

ab. nigrogriseata Heydemann. Int. Ent. 7. 27 p. 393 fig. 1933.

The rufous along the costa and marginal area and the ring around both transverse spots is almost wholly covered by uniform blackish grey of the forewing ground colour, the whitish markings however, remain, these specimens appear darker grey.

ab. obsoleta Lempke. Tijdschr. Ent. 92 p. 130 1950.

Specimens of the preceding nigrogriseata in which the pale markings also, have almost completely disappeared, so that the forewings are almost unicolorously dark brown grey.

rufata F. aberrational forms etc.

ab. *nigrescens* Heydemann. Int. Ent. Z. 27 p. 394 1933.

The forewing suffused with black grey, even the brown, where it is retained at all, is darker.

ab. *monotonica* Nordstrom. Svenska Fjarilar p. 241 pl. 34 f. 23 b. 1940.

Entire forewings dark red brown with indistinct markings, the basal field and undulate line light grey.

ab. *bombycata* Hubner. Beytr. I (2) p. 14 pl. (2) 2 f. K (1787)

= *ornata* Heydemann. Int. Ent. Z. 27 p. 393 1933. pl. I f. 24-25.

A mottled form. The postmedian line rather broad, black over the whole of its length, the white of the transverse lines strongly showing up or distinct.

ab. *tangens* Lempke. Tijdschr. Ent. 92 p. 131 1950. (descript. vol. 90 p. 147)

The transverse lines which border the central area of the forewing touch each other below the middle and then separate again. In this species the median line is rather weak and broken.

ab. *cotangens* Lempke. Tijdschr. Ent. 92 p. 131 1950. (descript. vol. 90 p. 147)

The transverse lines which border the central area of the forewings touch each other below the middle and remain united.

ab. *margaritata* Lempke. Tijdschr. Ent. 92 p. 131 1950. (descript. vol. 90 p. 147)

The two transverse lines which border the central area of the forewings touch each other at more than one spot.

ab. *pseudanaitis* Heydemann. Int. Ent. Z. 27 p. 394 1933 fig. pl. I f. 26.

The forewings light grey with all the red brown shading wanting, the lines on the other hand very sharply marked in black.

ab. *legatelloides* Hoffmeyer & Knudsen. Danske Storsommerfugle 1938 p. 220 & 310.

subsp. *scotica* Richardson. Ent. Rec. 64 p. 271 1952. pl. XI f. 16.

The subspecies from Scotland in which the ground colour is of a deeper bluish-grey than in the southern form.

viretata Hubner. aberrational forms etc.

ab. mediogrisea Warnecke. Z. Wien Ent. Ges. 29 p. 250 1944.

The middle field of the forewings unicolorous, or almost unicolorous, black grey or blackish.

ab. divisa Lempke. Tijdschr. Ent. 92 p. 135 1950.

The central area of the forewings bordered with black only along the two transverse lines so that from costa to inner margin a unicolorous green central band results.

ab. reducta Lempke. Tijdschr. Ent. 92 p. 135 1950.

The outer area of the forewings unicolorously green without black markings.

ab. approximata Lempke. Tijdschr. Ent. 92 p. 135 1950. (descript. vol. 90 p. 147)

The two transverse lines which border the central area of the forewings, are close together.

polycommata Schiff. aberrational forms etc.

ab. *prospicua* Prout. Seitz. 4 p. 183 1914

The white ground colour scarcely dark marked, the median band somewhat darkened, in consequence showing up very clearly and effectively.

ab. *albinea* Tgstr. Cat. Faun. Fenn. p. 319.

Said to be almost entirely white, the forewing only with very little fuscous marking.

ab. *caliginosa* Cockayne. Ent. Rec. 58 p. 92 1946. pl. 2 f. 3.

The ground colour of both fore and hindwings is uniformly brown, and all the markings are very indistinct. The absence of the lighter markings and the obsolescence of the darker ones gives it a very distinctive appearance.

ab. *cotangens* Lucas. Ent. Ber. (Amst.). 1959. 19. p. 206.

The two transverse lines which border the central area remain united after having touched each other.

Lucas, quite correctly, states that the typical form is of the "tangens"-form.

ab. *divisa* Lucas. Ent. Ber. (Amst.). 1959. 19. p. 206.

The two transverse lines which border the central area remain separate, instead of touching each other.

carpinata Borkh. aberrational forms etc.

ab. obscura Lempke. Tijdschr. Ent. 92 p. 136 1950.
Forewings black grey with normal markings.

ab. nigra Bretschneider. Int. Ent. Z. 20 p. 421 1927.
The whole insect is uniformly darkened but the deep black colour of the ab. doubledayaria of B. betularia is not reached. Wings and body are of a deep black grey as the lead of a pencil, a fatty shininess is present.

ab. fasciata Prout. Ent. Rec. 13 p. 336 1901.
The two central transverse bands of the forewing very much darker, sometimes quite deep fuscous, giving the effect of another species.

ab. unifasciata Rebel. Berge's Schmett. 9 p. 333 1910. (Barrett pl. 373 f. 1c)
The two transverse bands of the forewing ~~leaves~~ ^{leaves} leaving only a pale spot of ground colour above the middle, just below the costa, ⁱⁿ ~~in~~ the dark band.

ab. tangens Lempke. Tijdschr. Ent. 92 p. 136 1950. (descript. vol. 90 p. 147)
The two central transverse lines of the forewing touch each other below the middle and separate again.

ab. margaritata Lucas. Ent. Ber. (Amst.). 1959. 19. p. 206.
The two transverse lines which border the central area touch each other in more than one spot.

halterata Hufn. aberrational forms etc.

ab. unicolor Lempke. Tijdschr. Ent. 92 p. 137 1950.

Forewings unicolorously grey (not darkened), with only a narrow dark band at the base.

ab. variegata Lempke. Tijdschr. Ent. 92 p. 137 1950.

Forewings with a central area of normal ground colour which is bordered on both sides by a broad pale yellowish band.

ab. rudolphi Lampa. Ent. Tidskr. 6 p. 105 1885.

The forewing much darker than the type form, the median area little lighter than the rest.

ab. zonata Thunberg. Diss. Ent. Ins. Suec. 4 p. 60 1791.

The lines of the median area almost obliterated, the dark markings in the basal and distal areas on the contrary, are intensified.

ab. nigra Warnecke. Ent. Rdsch. 55 p. 345 1938.

Almost unicolorously black, with a whitish macular subterminal.

sexalata Retzius. aberrational forms etc.
= sexalisata Hbn.

ab. uniformata Lempke. Tijdschr. Ent. 92 p. 137 1950.

The two pale transverse bands bordering the central area of the forewing are of a brownish colour, therefore the wings appear more unicolorous.

ab. approximata Lempke. Tijdschr. Ent. 92 p. 137 1950. (descript. vol. 90 p. 147)

The two transverse lines which border the central area of the forewings, are close together.

ab. impuncta Lempke. Tijdschr. Ent. 92 p. 138 1950. (descript. vol. 90 p. 147)

The central spot of the forewings is absent.

fagata Scharf. aberrational forms etc.
=boreata Hbn.

ab.fasciata Petersen. Beitr.Kunde Est-Liv. U Kurlands 1902 Sep. p. 120.
The postmedian line of the forewing and the corresponding line on the hind wing, considerably darkened, giving it a somewhat banded appearance.

ab.isaaki Isaak. in Maslowscy Polsk. Pismo. Ent. 8 p. 9 fig.
Central area of the forewing entirely without markings, light whitish grey, proximal and distal areas grey brown.

ab.pygmaeata Isaak. in Maslowscy. Polsk. Pismo. Ent. 8 p. 9
Small, with obsolescent markings.

ab.harrisoni Prout. Seitz 4 Suppl. p. 95 1936.
A fully melanic variety. This presumably means unicolorously blackish brown, Prout does not say.

ab.unicolor Lambillion. Rev. Soc. Ent. Nam. 12 p. 112 1912.
Wings clear pale brown, unicolorous; traces of a darker median line, discal dot hardly indicated. Hindwings pale without markings except discoidal dot.

ab.fusca Lempke. Tijdschr. Ent. 92 p. 139 1950.
Ground colour of the wings dark brown.

ab.brunnea Lempke. Tijdschr. Ent. 92 p. 140 1950.
Ground colour of the wings pale brown, hindwings with a distinct discal band.

an.nigrescens Lempke. Tijdschr. Ent. 92 p. 140 1950.
Ground colour of the wings blackish grey without brown tint.

ab.huenei Prout. (nom. nov. pro. hyemata Huene nec. Hufn.) Seitz, 4 p. 194 1914.
Has the basal and median areas of the forewings darkened into bands. In extreme examples the intermediate area is also dark so that the entire proximal half is different in colour from the distal. Hindwing and underside somewhat more banded than in the type form.

ab.myricaria Cooke. Entomologist 15 p. 57 1882.
Forewings brown, tending to purple, with several wavy darker transverse lines and a darker central band; no central spot and rougher looking than type form and rather smaller. Difference in colour is more striking on the underside.

dilutata Schiff. aberrational forms etc.

ab. pallida Prout. Ent. Rec. II p. 122 1899.

The whitest form with the lines usually well expressed, ground colour dirty white.

ab. tectata Fuchs. Jahrb. Nassau Ver. 53 p. 58 1900.

= unicolorata Lambillon.

The transverse lines entirely or almost entirely effaced. Colour of wings lighter or darker grey-brown, sometimes with a yellowish tinge.

Lambillon's form was uniform whitish grey.

ab. albescens Cockayne. Ent. Rec. 65 p. 243 1953.

Albino. Ground colour very pale ochreous, the markings faint and of a darker ochreous.

ab. fimbriata Haworth. Lep. Brit. 1809 p. 320.

The markings of the median area are almost or altogether obliterated, while those of the terminal area remain darkened, suggesting a dark border.

ab. obscurata Stauginger. Cat. Ed. 2 p. 187 1871.

Ground colour infuscated but with the parts which are normally whitest remaining somewhat paler and the bands still discernible in the darker fuscous.

ab. melana Prout. Ent. Rec. II p. 122 1899.

The markings lost in the extremely darkened ground colour. Prout later says the forewings are glossy blackish, the hindwings more or less infuscated.

ab. regressa Harrison. Trans. North Nat. Union. I. 2. p. 116 (1932) 1933.

Ground colour blue black, markings practically obsolete, the median area showing a broad silvery band.

ab. latifasciata Prout. Ent. Rec. II p. 122 1899.

= bicinctata Fuchs. Jahrb. Nassau Ver. 53 p. 58 1900.

The basal and median areas of the forewing filled up with fuscous, the ground colour remaining pale, with the normal transverse lines.

ab. coarctata Prout. Ent. Rec. II p. 122 1899.

The median area narrow, the lines bounding it being closely approximated.

ab. precursaria Gregson. Zoologist 1859: 17: p. 6347. (See Prout. Ent. Rec. 1899: 11: p. 122.)

The ground colour more tinged with brown, the markings weak as in *C. boreata*. This is Prout's description: Gregson says f-ws are like *borearia* but h-ws show a band which is not parallel with the cilia.

ab. inscriptata Donovan. Nat. Hist. Brit. Ins. I 5 p. 25 pl. 517 1811.

The figure shows an insect little different from the type form, the bands perhaps rather well developed.

ab. virgata Lempke. Tijdschr. Ent. 92 p. 140 1950.

The transverse lines of the median area of the forewings are joined into two dark bands. Chiefly a female form. These two bands stand out thicker and heavier.

ab. tangens Lempke. Tijdschr. Ent. 92 p. 141 1950. (descript. vol. 90 p. 147.)

The transverse lines which border the central area of the forewings, touch each other below the middle and then separate again.

ab. margaritata Lempke. Tijdschr. Ent. 92 p. 141 1950. (descript. vol. 90 p. 147.)

The transverse lines which border the central area of the forewings, touch each other at more than one spot.

ab. disjuncta Lempke. Tijdschr. Ent. 92 p. 141 1950.

The discal spot of the forewings is not connected with the transverse line.

ab. impuncta Lempke. Tijdschr. Ent. 92 p. 141 1950. (descript. vol. 90 p. 147.)

The central spot of the forewings is absent.

christyi Prout. aberrational forms etc.

ab. intermedia Heydemann. Z. Ost. Ent. Ver. 17 p. 26 1932.

More variegated than the type form with distinct grey bands on a white-grey ground colour.

ab. oblita Allen. Ent. Rec. 18 p. 86 1906.

The ground colour somewhat smoky but less brownish-smoky than in dilutata. Nothing so extreme as dilutata ab. obscurata and ab. melana is known in this species so far. (1914) Prout.

ab. latifasciata Prout. Seitz 4 p. 196 1914.

= bellieri Culot. Geom. I p. 207 pl. 29 f. 605 1917-19.

= rittichi Dioszeghy. Verh. Siebenburg Ver. Naturw. 79-80 p. 249 1930.

The basal and median areas of the forewing entirely fuscous, as in the ab. latifasciata of O. dilutata.

ab. nigra Harrison.

Wholly black form occurring in the north of England.

ab. clara Harrison. Trans. Northern Nat. Union. I p. 122 1933.

The bands of the median area of the forewings are obsolete, this area being grey lightly sprinkled with black. Similar to ab. fimbriata of dilutata.

ab. coarctata Harrison. Trans. Northern Nat. Union. I p. 122 1933.

The median area narrowed by the approximation of the two bands. Similar to ab. coarctata of dilutata.

ab. virgata Lempke. Tijdschr. Ent. 92 p. 143 1950.

The central area of the forewings bordered on both sides by a dark band, corresponding with the same form in dilutata.

ab. tangens Lempke. Tijdschr. Ent. 92 p. 143 1950. (descript. vol. 90 p. 147)

The two transverse lines which border the central area of the forewings, touch each other below the middle and then separate again.

autumnata Bkh. aberrational forms etc.

ab. pallida Clark. Ent. Rec. 7 p. 289 1896. pl. 3 f. 1-2.

The usual pale silvery grey form.

Described under *O. filigrammaria* but Cockayne places it in *autumnata*, the Type is in the R-C.K. coll., Brit. Museum. This applies to all Clark's Types.

ab. intermedia Clark. Ent. Rec. 7 p. 289 pl. 3 f. 7-8 1896.

Intermediate between the pale silvery *pallida* Clark and the more extreme melanic form *ab. melana*. In the figures the central band of ground colour remains whitish, also the discal lines; the rest dusky.

Described under *O. filigrammaria* but is *autumnaria*; Type in B.M.

ab. approximaria Weaver. Zoologist. 10 p. 3496 1852.

= *typica* Clark. Ent. Rec. 7 p. 289 pl. 3 f. 5-6 1896.

Ground colour rather dark, violet-grey, the markings moderately expressed in lines rather than bands.

ab. sandbergi Lampa. Ent. Tidskr. 6 p. III 1885.

= *virgata* Clark. Ent. Rec. 7 p. 290 1896. pl. 3 f. 9-10.

The pale brown lines of the forewings replaced by fuscous bars, the ground colour remaining pale.

ab. bifasciata Kolossow. Ent. Nachr. 10 p. 149 1936.

The two middle stripes are dark.

ab. schneideri Lampa. Ent. Tidskr. 6 p. III 1885.

= *melana* Clark. Ent. Rec. 7 p. 289 pl. 3 f. 3-4 1896.

= ? *obscura* Petersen. Beitr. Kunde. Est.-Liv. U Kurlands Sep. 131 1902.

The wings dark, the ground colour completely obscured by fuscous. Hindwings also darkened towards distal margin.

ab. unicinctata Strand. Myt. Mag. Naturv. 39 p. 69

Described under *dilutata* but according to Prout an extreme development of *ab. intermedia* Clark. Very dark with a distinct white-grey median band.

ab. albilineata Harrison. Trans. Northern. Nat. Union I p. 128 1922.

Blackish with a rather prominent, clear white subterminal line.

ab. nigerrima Harrison.

Jet black with no markings. Distinct from the nearly black *schneideri* forms.

ab. lofthousei Harrison. Entomologist 59 p. 123 1926.

Different from *schneideri*. Clear silky chocolate brown, unicolorous save for a white subterminal line.

ab. latifasciata Vorbrodtt. Mitt. Schweiz. ent. Ges. 12 p. 476 1917.

= *latifasciata* Nordstrom. Ent. Tidskr. 45 n. 187 1924.

= *latifasciata* Harrison. Journ. Genetics. 9 p. 250 1920.

The basal and median areas of the forewing fuscous, forming wide bands.

ab. schimae Schawerda. Mitt. munch. ent. Ges. 14 p. 25 1924

More variegated than *latifasciata*, the dark median band containing a pale patch proximal to the cell dot, while the presubterminal band is sharply blackened.

ab. similis Harrison.

Glossy light grey-brown, remarkable in that the first postmedian line strongly inclines to the form of that of *dilutata*.

ab. undulata Nordstrom.

All the brown-grey lines about equidistant and of about equal intensity, on a white grey ground colour.

ab. coarctata Nordstrom. Ent. Tidskr. 45 p. 187 figs. 18-19 1924.

The median area of the forewing narrowed by the approximation of the ante and postmedian groups of lines. Similar to *ab. coarctata* of *O. dilutata*.

ab. tangens Lempke. Tijdschr. Ent. 92 p. 144 1950. (descript. vol. 90 p. 147.)

The transverse lines of the central area of the forewing touch each other below the middle and then separate again.

ab. pinivoraria Harrison. (microgene) Entomologist 48 p. 33 1915.
Males always suffused, feebly marked; females very small, generally well marked.
When melanic, blue black. Egg smaller and not so pink.
Presumably a local race.

ab. alticolaria Harrison. (microgene) Entomologist 48 p. 33 1915.
Brown but grey mixed, markings more delicate than in type form, but still firm;
central area very broad, duller. Larger in size, the females, in proportion, larger
still. Egg more purple, etc. Presumably a local race.

filigrammaria H.-Sch. aberrational forms etc.

Trans. North. Nat. Union I. 2. p. 132 (1932) 1933.

ab. intermedia Harrison. Corresponds to the *intermedia* of *autumnata*; the wings dirty grey, the middle of central area whitish as also the subterminal lines; the transverse dark lines stand out. Hindwings whitish to the middle, the fuscous

ab. distincta Harrison. Trans. North. Nat. Union I. 2. p. 131 (1932) 1933.

Dark, with the pattern more or less obscured, corresponding to the *ab. schneideri* of *autumnata*.

ab. melana Harrison. Trans. North. Nat. Union. I. 2. p. 131. (1932) 1933.

The melanic tendency intensified, the markings almost suppressed.

ab. latifasciata Harrison. Trans. North. Nat. Union. I. 2. p. 131 (1932) 1933.

The median and basal areas of the forewing fuscous, forming bands, corresponding to *ab. latifasciata* of *autumnata*, *dilutata*, etc. A synonym of the type form.

ab. coarctata Harrison. Trans. North. Nat. Union. I. 2. p. 132 (1932) 1933.

The two central bands of the forewing approximated, the pale space between them consequently narrow.

ab. mixta Harrison.

Fasciae with individual striae diffuse.

ab. ovulariata Culot. *Geom.* 1917-19 p. 208 Pl. 30 f. 610.

Markings weak, except subbasal line and narrow dark median band which encloses two patches of ground colour, the posterior one narrow, divided into three by fine lines at the fold and second submedian.

ab. polata Westwood. Brit. Moths 2 p. 56 pl. 68 f. 9 1845.

Ground colour dusky, the bands darker and still conspicuous. The form is not so dark as *distincta* Harrison.

dubitata Linn. aberrational forms etc.

ab. cinerata Stephens. Ill. Brit. Haust. 3 p. 263 1820.
More weakly marked, without the vinous reflections; usually smaller.

ab. brunneosuffusa G. Smith. Ent. Rec. 66 p. 97 1954.
Forewing dark brown, tinted with pink and crimson; subterminal line normal.
Hindwings much darker than usual.
The Type is in the Brit. Museum and is much darker than the description suggests. The transverse bands are black and the subterminal line is more than usually well developed, a complete chain of yellowish spots which stand out in striking contrast.

ab. fasciata Schwingenschuss. Verh. zool.-bot. Ges. Wien. 68 p. (152) 1918.
Forewings with a black brown median band.

ab. pura Cockayne. Ent. Rec. 65 p. 244 pl. 13 f. 3 1953.
Similar to the above fasciata but the usual numerous thin transverse lines are absent leaving an expanse of shining brown ground. At the base of the forewing there is a single thick black transverse line instead of the usual pale thin ones, the median area shows a dark band bounded on both sides by a black line these two lines being united along the costa by black. Hindwings with a single dark median line, distinct, the other usual thin lines being absent with the exception of pale wavy subterminal.

ab. punctigera Strand. Arch. Math. og Nat. 25(9) p. 15 1903.
Hindwings without markings except for a discal dot and sometimes slight traces of dark dots on the veins.

ab. tangens Lempke. Tijdschr. Ent. 92 p. 147 1950 (descript. vol. 90 p. 147.)
The two transverse lines bordering the central area of the forewings touch each other below the middle and then separate again.

cervinalis Scop.
 = cervinata Hbn. Aberrational forms etc.
 = certata Hbn.

ab. *griseata* Bastelberger. Int. Ent. Z. 2 p. 98 1908.

Wings light blue-grey above and beneath; markings as sharp as in the type form.

ab. *rubescens* Rebel. Berge's Schmett, 9 p. 336 1910.

Forewings of a more uniform rust brown colour, without the dark lines but with a distinct dark median band.

ab. *infuscata* Rebel. Berge's Schmett, 9 p. 336 1910.

Forewing almost unicolorous dark brown, the hindwing also darkened.

ab. *variegata* Schwingenschuss. Verh. zool.-bot. Ges. Wien. 68 p. (152) 1918.

Forewing much variegated, bright brown red with white-grey or yellow-grey bands bounding the median area proximally and distally, the median area itself containing a clear yellowish patch anteriorly.

ab. *unicoloraria* Schwingenschuss. Verh. zool.-bot. Ges. Wien. 68 p. (152) 1918.

Uniform rust-brown colour, so that the median band has altogether vanished; the lines indicated by light spots along the costa of the forewing and marks on the veins.

ab. *atra* Kiefer. Ent. Jahrb. 28 p. 134 1916.

Forewing strongly blackened, slightly glossy; hindwing lighter, especially towards the base. Both wings without markings, the dark marginal line distinct, the fringes lighter, chequered. Rebel, in a note, doubts the chequered fringes.

ab. *mediofasciata* Bubacek. Verh. zool.-bot. Ges. Wien. 72 p. (34) 1922.

Median area of the forewing forming a solid brown band, the lighter parts of the wing comparatively free of markings.

ab. *flavonigrofasciata* Schepp. Ent. Z. 38 p. 46 1924.

Similar to the preceding *mediofasciata* with solid brown band on the forewing but the ground colour is clay yellow without the usual markings.

ab. *rebeli* Nitsche. Verh. zool.-bot. Ges. Wien. 73 p. (108) 1923.

Similar to *mediofasciata* Bub. but the median band is continued on the hindwings in a somewhat lighter colour. The complete absence of markings in the basal and marginal areas is characteristic of this form.

ab. *tangens* Lempke. Tijdschr. Ent. 92 p. 148 1950. (descript. vol. 90 p. 147)

The two transverse lines which border the median area of the forewing, touch each other below the middle and then separate again.

undulata Linn., aberrational forms etc.
= palaeartica Bryk.

ab. paucilineata Ljungdahl in Bryk. Int. Ent. Z. I4 p. 184 1921.

The lines of the forewing much weakened, in the more than ordinarily suffused proximal area scarcely traceable; cell mark conspicuous; hindwing also weakly marked. = ljungdahli Strand in Nordstrom. Ent. Tidskr. 48 p. 56 1927.

ab. heinrichi Hannemann, Int. Ent. Z. 24 p. 366 fig. 1930.

A very narrow dark central band on the forewings, formed by the filling in of the loop-like median markings.

ab. nordstromi Bryk. Int. Ent. Z. I4 p. 199 pl. I f. 4 1920.

= medioalba Maslowscy. Polsk. Pismo. Ent. 2 p. 131 1923.

The two central groups of lines on the forewings more widely separated than is normal, leaving a clear complete whitish band.

ab. divisa Heinrich. Dtsch. Ent. Z. p. 526 pl. 4 f. 16 1916. 1917.

Forewing with a whitish median band starting at the costa and tapering to a point towards the middle of wing, reappearing again at the inner margin after its interruption.

This form is frequently named tangens.

ab. culoti Bryk. Int. Ent. Z. I4 p. 199 1920. (fig. Culot's Noct. & Geoms. pl. 21 f. 420)

Forewing with a partial median, narrow whitish band, from costa to middle of wing, tapering to a point.

ab. subfasciata Reuter. Act. Soc. Faun. Flor. Fenn. 9 (6) p. 68 1893.

The median area of the forewing is darkened into a band while the other lines are weaker than usual, in extreme cases even obsolete.

ab. malaisei Bryk. Int. Ent. Z. I4 p. 199 1921.

The loop-like median markings confusedly double, perhaps through the insertion of an additional line of dark shading between them.

ab. quinqueundulata Bryk. Int. Ent. Z. I4 p. 199 1921.

The last two dark lines of the forewing, (bordering the whitish subterminal) confluent into a wavy band.

ab. septemlineata Bryk. Int. Ent. Z. I4 p. 198 1921.

The sixth line (proximal subterminal) of the hindwing cleft by a fine whitish line, bringing up the total to seven.

ab. octolineata Bryk. Int. Ent. Z. I4 p. 199 1921.

As in the preceding septemlineata but, in addition, the third line beyond the cell dot of the hindwing faintly duplicated.

Geom. 75.

Philereme Hbn.

vetulata Schiff. aberrational forms etc.

Geom. 76.

Philereme Hbn.

transversata Hufn. aberrational forms etc.
= rhamnata Schiff.

ab. hastedonensis Lambillon.

Melanic form. The brown ground colour of the type form is in a large measure replaced by blackish.

ab. depicturata Niepelt. Int. Ent. Z. 8 p. 144 1914.

Almost unicolorous grey, but with the pale subterminal line well developed.

ab. mediofasciata Bubacek. Verh. zool.-bot. Ges. Wien. 65 p. (108) 1915.

The median area developed into a broad solid black brown band, markings of outer area obsolete.

hastata Linn. aberrational forms etc.

ab. demolita Prout. Trans. City Lond. Ent. Soc. 1906 p. 32.

= reducta Osthelder. Mitt. munch. ent. Ges. 19. (Schmett. Sudbayern.) p. 453 pl. 17 1929
The black median band almost absent, all that remains is a small patch on the discocellulars and a small one at the hindmargin.

ab. laxata Krulikowsky. Rev. Ross. Ent. 9 p. 300 1909.

= latifasciata Hirschke. Verh. zool.-bot. Ges. Wien. 60 p. 415 1910.

The white areas still further widened. The postmedian white band much broader than usual, the black median markings narrowed and broken, no black dots in the white postmedian band.

ab. subalbida Marschner. Ent. Rdsch. 50 p. 201 fig. p. 202 1933.

The black of the marginal area greatly reduced, especially on the forewing where there remains only, outside the median band, a narrow section of the subterminal band, from the inner margin to about the first median vein.

ab. postalbidata Horhammer. Int. Ent. Z. 28 p. 88 pl. 1. f. 12 1934.

Forewing almost normal. Hindwing wholly white excepting a small irregular costal patch and some very narrow terminal markings.

ab. albopunctata Lange. Iris 35 p. 168 1921.

The black markings strongly developed especially on the hindwings, which have only the white band and a small white subterminal spot.

ab. depravata Galvagni. Z. Ost. Ent. Ver. 19 p. 50. pl. 9 f. 8 1934.

Hindwings with a solid black border even lacking the small white spot which shows in the preceding form, whilst the black border of the forewings shows only a minute central white dot and some subterminal remnants at and near the costa.

ab. semifusca Wagner. *Int. Ent. Z.* 1919. 13. p. 159. pl. 1. f. 10

The black border of the hindwings blurred where it meets the white band which projects some white dashes into it.

ab. completa Lempke. Tijdschr. Ent. 92 p. 202 1950.

Forewings with complete central black band as in *E. subhastata*.

ab. diluta Richardson. Ent. Rec. 64 p. 269 1952. (fig. Proc. S. Lond. 1949-50 pl. 3 f. D)

Forewings terminal quarter, thin parallel dark markings along nervures, apical blotch and subapical band lightly defined; basal area marked by blackish clouding extending outwards along the costal and subcostal veins and the inner margin. Hindwings with parallel dark markings along the nervures in the terminal third, blackish clouding in the basal third. Thinly scaled.

Described under *subhastata* which however, according to Fletcher, does not occur in Britain. (Corrected to ab. of *hastata* by Richardson - *Entom.* 1953, 91, p. 212.)

subsp. nigrescens Cockerell. Entomologist 22 p. 55 1889. (Newman Moths, p. 157 fig.

The Northern race which shows much more black patterning and hitherto thought to be *subhastata*.

reticulata Schiff. aberrational forms etc.

ab. ovulata Borgmann. Ent. Nachr. 6 p. 278 1880. (see Entom. 45 pl. I figs. 10 & 4.)
The two central lines of the forewing meet just before the costa and so form
an ovate patch with a dark centre, looking like a letter O.

ab. costimacula Prout. Entomologist 45 p. 3 pl. I f. 5 1912.

A broad, sometimes very broad, whitish suffusion runs along the middle of the
forewing from the 2nd. line to the 6th. or beyond, whilst the costal area where
4th. and 5th. lines are usually found, is obsolete, leaving a large dark costal
blotch between the 3rd. and 6th. lines.

prunata Linn. aberrational forms etc.

ab. obscurata Barca. Ent. Tidskr. 43 p. 39 fig. I 1922.

Both wings without any white, that of the forewings replaced by greyish brown, the hindwing grey, towards the termen the veins brownish.

ab. digna Thierry-Meig. Le Nat. 1904 p. 141.

= *ochraceata* Lambillon.

= *flavicata* Spar. Schneid.

The ground colour of the forewings pale ochre yellow with normal basal and central band but with the markings usually seen on the light areas very weakly expressed, causing the yellow to show in striking contrast with the bands. Hindwings also paler than type with blackish postmedian line.

ab. schwederi Teich. Karr.-Bl. Nat. Ver. Riga. 1908 p. 37.

Differs little from the type on upperside except that the distal margins are darker, especially on the hindwing. Beneath the wings are blackish grey, only with a yellowish white line beyond the postmedian.

ab. decolorata Kolossow. Ent. Nachr. 10 p. 149

Wings light reddish.

The description is not sufficient to place the form.

ab. constricta Strand. Nyt. Mag. Nat. 39 p. 58 1901.

= *interrupta* Hirsche. Verh. zool.-bot. Ges. Wien. 60 p. 417 1910.

The postmedian band of the forewings narrowed and broken, the part on inner margin being cut off as a separate oval spot.

ab. juncta Lempke. Tijdschr. Ent. 92 p. 150 1950.

On the forewings there is a rather broad junction between basal and central brown bands, so that the lower part of the pale antemedian band has been cut off.

ab. contrariata Lempke. Tijdschr. Ent. 92 p. 150 1950.

The pale antemedian band and the pale marginal area much paler than in the type form, brownish white, so that the normally coloured basal and central areas sharply contrast.

ab. clara Lempke. Tijdschr. Ent. 1967. 110. p. 308.

Upperside of the forewings with the basal and central areas, and the subapical spot of a beautiful clear brown, much paler than normal.

testata Linn. aberrational forms etc.

ab. *achatina* Hubner. Samml. Eur. Schmett. 1796-99 pl. 58 f. 301.

Much more brightly coloured than type form, the basal and median bands and the terminal patch on the forewing bright orange-yellow.

= *citrinata* Meves. Ent. Tidskr. 35 p. 131 1914.

ab. *insulicola* Staudinger. Cat. ed. 3 p. 291 1901.

The bands darker than in the type form inclining to reddish brown.

This form is racial in the Hebrides and Shetlands but occurs in England as an aberration.

ab. *fuscata* Meves. Ent. Tidskr. 35 p. 131. 1914.

Strongly dusted with brown except a narrow reddish costal streak from base to postmedian.

ab. *obscura* Bretschneider. Int. Ent. Z. 21 p. 199 1927.

The dark rust brown colour extending over the entire forewing, in part dusted with smoke-grey, the markings obliterated except the whitish lines which show in the apical region. Hindwing also dark, especially distally.

ab. *contraria* Heydemann. Ent. Z. 51 p. 393 (pl. I f. 6-7 in vol. 52) 1938.

Specimens of *insulicola* in which the basal field, middle field and apical mark are demarcated by a sharp white line whilst the light bands on each side of the middle field are ivory white so that the basal and median bands show up sharply.

The figure does not show the "sharp white lines".

ab. *hedgesaria* Cockayne. Ent. Rec. 66 p. 186 1954. (pl. 7 figs. 3-12.)

Ground colour in both sexes uniform orange; the forewing of the male is overlaid with glossy leaden grey especially towards termen and in the darkest specimen extends all over the wing, in others a streak of orange near the costa, another across the median area, and a third near the inner margin remains. Hindwing not so dark as the forewing but dark enough to make the normal border almost invisible. In the female the leaden overlay tends to be less extensive and not so dark. In both sexes the normal white markings are absent and the variegated appearance is lost. Underside of both wings very dark.

ab. *paradoxa* Cockayne. Ent. Rec. 65 p. 243 1953. (pl. 13 f. 8.)

Ground colour pale ochreous; on the forewing the extreme base and median area are pale ochreous, but the areas between the basal and antemedian lines and from the postmedian line to the termen are red brown; the discoidal spot is indistinct and many of the nervures have dark scales along them. Hindwing pale and unmarked with the exception of a broad border of the same brown as the dark parts of the forewing.

ab. *sperringi* Cockayne. Ent. Rec. 58 p. 93 pl. 2 figs. 4-5 1946.

On the forewing the basal area is smaller, the median area narrower than usual but both are purplish in colour and well defined. The ground colour in the male is greenish ochreous. The thin secondary line in the basal area and both those in the median area are absent, the female differs in having the ground colour and the middle of the median area orange like *achatinata* Hbn.

ab. *uniformata* Lempke. Tijdschr. Ent. 92 p. 152 1950.

The basal and discal bands not darkened but the transverse lines however strongly contrast with the paler ground colour.

ab. *convergens* Lempke. Tijdschr. Ent. 1967. 110. p. 309.

On the upperside of the forewings the basal and antemedian lines touch each other on the inner margin.

populata Linn. aberrational forms etc.

ab. dotata Linn. Syst. Nat. X p. 526 1758.

More uniformly coloured than type, the median area of the forewing, though sharply marked at its boundaries, encloses little or no dark filling.

ab. lutea Strand. Arch. Math. Naturv. 1901 p. 58.

Forewing almost uniform clear yellow, only the postmedian line distinctly indicated and even this sometimes nearly obsolete. Hindwing whitish, almost or quite unmarked.

ab. pallidata Lambillon.

Median band very narrow, hardly dulled with brown.

ab. rufescens Gumpfbg. Geom. 3 p. 322 1890.

Ferruginous-ochreous, the median area infuscated, not paler in the middle, the hindwing with a dentate dark line and reddish border.

ab. binderi Marschner. Deutsch. Ent. Z. 1914 p. 645 pl. I4 f. 9-10.

The yellow or ochreous ground colour of the forewing replaced by dark brown (the hindwing also smoky), the dark markings in part obliterated, the pale lines which define the median band, as well as the apical streak, still present.

ab. intermedia Schawerda.

The median band strongly darkened and generally the terminal area, but with the yellowish ground colour remaining at least in the subtriangular patch between the band and the apex.

ab. mediofasciata Nitsche. Z. Ost. Ent. Ver. II p. 74 1926. (fig. vol. 13 p. 3 pl. I f. 7)
Median area uniformly darkened, violet brown, but the darkening of the distal area faint.

ab. inversa Nordstrom. Ent. Tidskr. 37 p. 185 fig. 4. 1916.

The colours of the forewing reversed, so that the median and basal areas are yellow and the rest of the wing brown, with the apical streak hardly visible; the light yellow hindwing has a broad brown distal border.

ab. tatica Pruffer. Boll. Intern. Acad. Polon. Sci. B. 1922 p. 282 fig. 1923.
Uniform ochreous brown.

ab. circumscripta Strand. Nyt. Mag. Naturv. 23 p. 58 1901.

The basal and median areas of the forewing well developed and joined together both on costa and hind margin, enclosing a small pale area in the middle.

ab. musauaria Freyer. N. Beitr. 7 p. 112 pl. 664 f. 3. 1858.

Uniformly dark reddish-brown, the basal and median bands still darker, the median band in the figure shows one tooth-like projection instead of two. Hindwings with somewhat darker middle band on a greyish white ground.

ab. fuscata Prout. Seitz. 4 p. 212 1914. (fig. Barrett pl. 361 f. 3 C.)

Both wings uniformly blackish fuscous, the markings altogether obliterated.

ab. worelli Dioszeghy. Verh. Siebenburg Ver. Naturw. 83-84 p. 118 1935.

ab. atrociliata Warnecke. Z. Ost. Ent. Ver. 29 p. 250 1944.

Deep black fringes on the forewings.

pyraliata Schiff. aberrational forms etc.

ab. johansonii Lampa. Ent. Tidskr. 1885 p. 107.

The distal part of the forewing grey brown.

ab. aurantior Lempke. Tijdschr. Ent. 92 p. 155 1950.

The ground colour of the forewings orange yellow.

ab. deleta Strand. Arch. Math. Nat. 25 p. 15 1903.

Much more weakly marked than type, only the two lines of the forewing remaining on the upperside and even these usually weakened, the fringes not darkened.

ab. aurantiodéleta Schawerda. Verh. zool.-bot. Ges. Wien. 58 p. (29) 1918.

Like the preceding deleta Strand but the ground colour light reddish yellow.

ab. lunulata Cockayne. Entomologist. 83 p. 50 1950. (pl. I f. 21.)

= centrolineata Lempke. Tijdschr. Ent. 92 p. 154 1950.

The antemedian and postmedian lines of the forewing lie close together and are united near the costa and at nervure I, enclosing a space roughly semi-lunar in shape.

Lempke's centrolineata has the two central lines coalescing into one, rather broad, sharply contrasting line. All other markings fail except the basal line which is also present in lunulata Cockayne.

ab. obsoleta Lempke. Tijdschr. Ent. 92 p. 154 1950.

Forewings showing no reddish transverse lines.

ab. juncta Lempke. Tijdschr. Ent. 92 p. 154 1950.

On the forewings the basal line joined by one or more horizontal lines to the antemedian line.

ab. conjuncta Lempke. Tijdschr. Ent. 92 p. 154 1950.

On the forewing both lines bordering the central area are joined by one or more dark lines along the nervures.

ab. approximata Lempke. Tijdschr. Ent. 92 p. 154 1950. (descript. vol. 90 p. 147.)

On the forewings the two transverse lines which border the central area are close together.

ab. mediofasciata Lempke. Tijdschr. Ent. 92 p. 154 1950.

On the forewings the central area is wholly, or for the greater part, filled with a darker yellow brown colour.

ab. fasciata Loberbauer. Z. Wien. Ent. Ges. 37 p. 26 1952.

Described as a local race in Austria appears merely to have the markings heavier and darker.

ab. convergens Lempke. Tijdschr. Ent. 1967. 110. p. 312.

On the upperside of the forewings the basal and antemedian lines touch each other on the inner margin.

ab. clausa Lempke. Tijdschr. Ent. 1967. 110. p. 312.

On the upperside of the forewings the ante- and postmedian lines touch each other at the inner margin.

ab. maculata Lempke. Tijdschr. Ent. 1967. 110. p. 312.

On the upperside of the forewings the ante- and postmedian lines are absent, but the submarginal spots are enlarged and touch each other to form a complete band.

mellinata Fabr., aberrational forms, etc.

ab. *approxinata* Lempke. Tijdschr. Ent. (1949) 1950. 92. p. 153.

On the forewings the two transverse lines which border the central area are close together.

ab. *obsoleta* Lempke. Tijdschr. Ent. 1967. 110. p. 311.

Forewings with the markings obsolescent.

Lempke's English translation says "obsolete" when he means "obsolescent", as the original Dutch description shows.

fulvata Forst. aberrational forms etc.

ab. rufescens Lempke. Tijdschr. Ent. 92 p. 155 1950.
Central band of the forewings dark reddish.

ab. lineata Wehrli. Int. Ent. Z. II p. 242. 1918.
Hindwing with a distinct postmedian line.

ab. arearuptata Sitovski.

= degenerata Prout. Seitz 4 p. 215 1914. (fig. Barrett pl. 361 f. I A.)

= deguttata Dannehl. Ent. Z. 39 p. 15 1925.

The median band narrow and cut in the middle, leaving a larger upper section and smaller lower section at the inner margin.

ab. costovata Nitsche. Verh. zool.-bot. Ges. Wien. 74-75 p. (64) 1924.

= kolari Drenowski. Mitt. Bulgar Ent. Ges. 5 p. 115

The median band absent except for a small costal spot.

ocellata Lim. aberrational forms etc.

ab. caeruleotaenia Dannehl. Ent. Z. 47 p. 88 1933.

The median band with an exceptional blue tone.

ab. robiginata Dannehl. Ent. Z. 47 p. 88 1933.

Distal area of the forewing almost completely suffused with rust-brown, only remaining whitish at the apex. Hindwing with the brownish border very broad.

ab. coarctata Prout. Entomologist 37 p. 154 1904. (fig. Barrett pl. 338 f. 2 B.)

= stenotaenia Hellweger. Jahrb. Gymnas. Brixen 39 p. 1-164 1914.

The median band extremely narrow.

ab. divisa Cockayne. Ent. Rec. 65 p. 161 1953.

The median band of the forewing is divided into two parts, a costal and an inner marginal one.

ab. costimacula Cockayne. Ent. Rec. 65 p. 161 1953.

Only the costal part of the median band of the forewing remains.

ab. obscura Lempke. Tijdschr. Ent. 92 p. 189 1950.

The whitish band between the basal and central area of the forewing strongly darkened.

ab. albomarginata Lempke. Tijdschr. Ent. 92 p. 189 1950.

The outer margins of fore and hindwings without dark markings with the exception of the blackish spot near the apex which may also fail.

rubiginata Schiff. aberrational forms etc.
= bicolorata Hufn.

race or ab.? plumbata Curtis. Brit. Ent. I4 p. 643 1837.

= virgata Tutt. Ent. Rec. I p. 321 1891.

White; head and thorax brown and grey; forewings inclining to cream with a patch at the base and a fascia across the middle generally broadest at the costa, outer margins lead coloured with a pale crenated striga and a long patch at the tip much darker. Hindwings with a similar fimbria and striga, a curved fuscous line across the middle with a black dot towards the base.

The males frequently have the forewings of a dark lead colour with the usual brown markings, the hindwings having a broad plain fimbria of the same colour; in the females the fascia is generally broad throughout but it is sometimes divided towards the inner margin in the males. Accepted as the Northern race. The figure shows a white insect with the middle fascia almost complete only divided by white on one of the veins just above the inner margin. The variations have since been named by various authors as follows.

ab. completa Rebel. Berge's Schmett. 9 p. 339 1910. (see Barrett pl. 338 f. 1 B.)

The central band of the forewing complete except for a very slender interruption at the median fold. This may well be a synonym of plumbata Curtis.

ab. fumosa Prout. Ent. Rec. 9 p. 201 1897.

A smoky-blue colour more or less spread over the wings. Belongs to the northern form plumbata Curtis

ab. parvula Retzius. Gen. et Spec. Ins. 1783, p. 42. (See De Greer 2 pl. 6 f. 2.)

The central fascia broken, starting at costa and finishing in middle of wing but showing a small dark spot again at the inner margin.

Type form rubiginata Schiff.

Only the costal half of the median band present.

ab. guttata Huene. Berl. Ent. Z. 46 p. 318 pl. 6 f. 7 1901.

The median band reduced to a mere spot surrounding the discal dot.

ab. bipunctata Hannemann. Int. Ent. Z. I4 p. 122 1920.

= diadelphata Stauder. Int. Ent. Z. I7, p. 92 1923.

The costal part of the median band present and beneath it two spots, situated above the inner margin and on the inner margin, thus making a transition to completa Rebel which has the band complete.

ab. peralbata Stauder. Int. Ent. Z. I7 p. 92 1923.

Upperside of the hindwing clear white or with only the cell dot showing.

ab. rosarium Stauder. Int. Ent. Z. I7 p. 92 1923.

Hindwing with the dark terminal shade wanting but the subterminal greyish shading is retained as a chain of spots.

ab. albovittata Cockayne. Ent. Rec. 65 p. 161 1953. (pl. 12 f. 8.)

The part of the forewing external to the median band is smoky grey but the part between the basal and median bands is pure white. Hindwing very pale grey with a dark border.

ab. semifumosa Cockayne. Entomologist 85 p. 266 pl. 4 f. 21-23 1952.

Forewings smoky, often very dark and usually with well developed white submarginal line, but the hindwings in contrast are milky white with a dark border, often divided into two parts by the white submarginal line. Distinguished from fumosa Prout by its white hindwings which in fumosa are smoky.

ab. pallidaria Cockayne. Entomologist 85 p. 267 1952. (pl. 4 f. 24.)

On the forewing in the basal area there are dark brown transverse lines separated by whitish lines; in the median area the discoidal spot is black and the usual broken median band is replaced by an area bordered externally by two brown lines and powdered with white scales; the small inner marginal part of the band is outlined by a brown line and is very indistinct; the subapical mark is nearly black and above it and internal to it are faint grey shades; below the subapical mark the marginal area is palest grey divided into two by the white submarginal line. Hindwing pure white with a very pale grey border along the costal half of the termen. Thorax brown plentifully mixed with white scales and much paler than usual.

(see also ab. postalbata Lempke, p. 2 of these notes.)

ab.postalbata Lempke. Tijdschr.Ent.1967.110.p.320.

Forewings with the lower half of the dark marginal band obsolescent. Hindwings unicolorous white.

Lempke uses "obsolete" in his English translation, where he in fact means "obsolescent", as reference to his original Dutch description shows. This must be a very similar form to the preceding ab.pallidaria Cockayne. (p.1 of these notes.).

ab.postgrisescens Lempke. Tijdschr.Ent.1967.110.p.320.

Hindwings with a distinct central band, and basal of it unicolorous grey.

firmata Hbn., aberrational forms, etc.

ab.brunneofasciata Lempke. Tijdschr.Ent.(1949)1950.92.p.163.
The bands of the forewings dark brown, sharply contrasting.

ab.grisescens Lempke. Tijdschr.Ent.(1949)1950.92.p.163; (fig'd. vol.110,pl.16,f.2.)
The ground colour of the forewings pure grey.

ab.approximata Lempke. Tijdschr.Ent.(1949)1950.92.p.163.(descript. vol.90,p.147.)
The two central transverse lines of the forewings are close together.

ab.interrupta Lempke. Tijdschr.Ent. (1949)1950.92.p.163.
The central band of the forewings interrupted below the middle.

ab.purpureobrunnea Cockayne. Entomologist 1952.85.p.267; pl.4, f.7 & 8.
Thorax, abdomen and forewing dark purplish-brown; the normal markings on the forewing are visible; the basal area is slightly paler than the marginal. Hindwing darker than normal, with the border slightly smoky.

ab.nigrosignata Lempke. Tijdschr.Ent.1967.110.p.320.
On the upperside of the forewings the subcostal and median nervures are black, and, in the central area, the space between the subcostal nervure and the costa is completely black.

obeliscata Hbn. aberrational forms etc.

ab. castanea Lempke. Tijdschr. Ent. 92 p. 160 1950.
Forewings dark red brown, markings obsolete.

ab. obsoleta Lempke. Tijdschr. Ent. 92 p. 160 1950.
Forewings unicolorously grey-brown, markings very feeble, or even almost vanished

ab. nigrescens Lempke. Tijdschr. Ent. 92 p. 160 1950.
Forewings black-grey to black, basal and central area brown-black to blackish distinctly contrasting.

ab. medionigricans Reutti. Lep. Fauna Baden. Ed. 2 p. 135 1898.
Brownish white with unicolorous blackish median area.

ab. pseudovariata Heydemann. Int. Ent. Z. 27 p. 396 1933.
The ground colour more dulled with grey, both the basal and the median area edged with black, the latter also with the veins and the hindmargin in particular, edged with black, giving the appearance of *T. variata*.

ab. mediolucens Rossler. Jahrb. Nass. Ver. 33 p. 154 1880.
The ground colour appreciably darkened whilst the median band remains fulvous, thus appearing lighter or brighter than the adjoining areas.

ab. herrichi Hofer. Verh. zool.-bot. Ges. Wien. 70 p. (22) fig. 8 1920.
= firmatoides Nordstrom. Svenska Fjarilar 1940. p. 255 pl. 36 f. 14 C.
Described from the figure in Herrich-Schaeffer 3 pl. 39 Geom. f. 240.
The figure shows the forewings grey brown with the median band distinct and somewhat tinted with orange.

ab. nigrolucens Lempke. Tijdschr. Ent. 92 p. 160 1950.
Ground colour of the forewings black-brown, basal and central areas remaining pale brown and not bordered by black lines.
This must be very similar to *mediolucens* Rossler, but is presumably darker.

ab. brunneoalbata Heydemann. Int. Ent. Z. 27 p. 397 1933.
The ground colour strongly whitened on each side of the well developed brown median band.

ab. nigrolineata Cockayne. Ent. Rec. 58 p. 93 1946. (pl. 2 f. 6.)
Forewings uniform red-brown, crossed by three narrow blackish lines, the basal antemedian and postmedian, and fine blackish lines run inwards from the postmedian along the nervures in the median area.

ab. obliterata Buchanan-White. Scot. Nat. 4 p. 216 1878.
= scotica Staudinger. Cat. Ed. 3 p. 292 1901.
Almost unicolorously brown-black

ab. tristrigaria Donovan. Nat. Hist. Brit. Ins. 13 p. 60 pl. 461 f. 2 1802.
Forewing with three unusually well developed elongate internoural submarginal streaks between the fifth subcostal and third radial veins, (near the apex)

ab. approximata Lempke. Tijdschr. Ent. 92 p. 160 1950. (descript. vol. 90 p. 147.)
The two central transverse lines of the forewings are close together.

ab. interrupta Lempke. Tijdschr. Ent. 92 p. 160 1950.
The central band of the forewings broken up into two parts.

ab. dissoluta Lempke. Tijdschr. Ent. 92 p. 161 1950.
The central band of the forewings broken up into more than two parts.

ab. reducta Hofer. Verh. zool.-bot. Ges. Wien. 70 p. (22) fig. 9 1920.
The median band of the forewing reduced to a costal blotch.

ab. juniperoides Strand. Arch. Naturg. 85 A4 p. 27 1920.
Small and rather dark, transitional towards *obliterata* B.-White, which according to Prout, Strand confused with a form of *juniperata* Linn.

ab. cinerea Lempke. Tijdschr. Ent. 1967. 110. p. 323.
Ground colour of the forewings pure pale grey, the basal area and the central band of a somewhat darker grey.



variata Schiff. aberrational forms etc.
 subsp. britannica Turner. Ent. Rec. 37 p. 25 1925.

ab. nigrofasciata Gumpenburger. Nova Acta Acad. Leop.-Carol. 54 p. 440 1890.
 The ground colour is greyish white or pale wood colour whilst the central band is decidedly darkened, blackish.

ab. brunneofasciata Lempke. Tijdschr. Ent. 92 p. 157 1950.
 The colour of the band of the forewing pure clear brown without grey tint.

ab. obscura Hofer. Verh. zool.-bot. Ges. Wien. 74-75 p. (5) f. I-2 1924. Ent. Rec. 36 p. 40
 = scotica Hofer nec Staudinger. Verh. zool.-bot. Ges. Wien. 74-75 p. (6) 1924.
 Forewings dark, uniform, greyish-black.
 Hofer settles the question of this form in Ent. Rec. 36 p. 40 1924.

ab. albata Lempke. Tijdschr. Ent. 92 p. 157 1950.
 Ground colour of the forewings pure white, the dark markings sharply contrasting.

ab. albonigrata Hofer. Verh. zool.-bot. Ges. Wien. 70 p. (20) figs. I-2 1920
 See Ent. Rec. 36 p. 88 1924.

Pure white ground colour with dark, almost black discal area.
 According to Lempke this form is not true variata but possibly a species, the name therefore should not be used in variata, ab. albata Lempke being the correct one for this white form.

ab. tenuifasciata Osthelder. Mitt. münch. Ent. Ges. 19 (Sudbayern Sep.) p. 419 1929.
 The median band narrowed strikingly throughout, its posterior part almost thread-like.

ab. interrupta Schawerda. Jahresber. Wien Ent. Ver. 24 p. 146 1914.
 = divisa Hofer. Ent. Rec. 36 p. 89 1924.
 The median band broken or interrupted at the fold.

ab. dissoluta Hofer. Verh. zool.-bot. Ges. Wien. 70 p. (20) 1920.
 = interrupta Hoffmann nec. Schawerda.
 = maculata Hofer. Ent. Rec. 36 p. 89 1924.
 The median band broken or interrupted twice, the posterior half being broken up into isolated spots, sometimes the whole band is broken by numerous interruptions.

ab. costimaculata Hofer. Verh. zool.-bot. Ges. Wien. 70 p. (21) 1920.
 Only the costal half of the median band developed, i. e. about as far as the median vein.

ab. nigrosignata Prout. Ent. Rec. 38 p. 37 1926.
 Differs from typical britannica in having the principle markings (ante and post median line, vein marks on posterior half of median area, proximal-subterminal shade and apical dash) sharply black, the basal patch obsolete, the line or narrow band between it and the median area intensified. Hindwing rather darker than normal with a very distinct postmedian line.

ab. stragulata Hubner. Samml. Eur. Schmett. Geom. fig.
 This is now treated as a separate species by Prout.

ab. grisescens Hofer. Verh. zool.-bot. Ges. Wien. 70 p. (21) 1920.
 A form of stragulata Hbn. which is probably separate from variata.

ab. peterfii Dioszeghy. Verh. Siebenburg Ver. Naturw. 79-80 p. 251

juniperata Linn. aberrational forms etc.

ab. caeca Osthelder. Mitt. munch. Ent. Ges. (Schmett. Sudbayern) p. 422 1929.
Without any trace of the cell spots.

ab. approximata Lempke. Tijdschr. Ent. 92 p. 162 1950. (descript. vol. 90 p. 147.)
The two central transverse lines of the forewing are close together.

ab. costa juncta Lempke. Tijdschr. Ent. 92 p. 162 1950.
The basal patch and the central band of the forewings broadly connected with each other along the costa.

ab. costaclosa Lempke. Tijdschr. Ent. 92 p. 162 1950.
The basal patch and central band of the forewings meet and touch each other at the costa.

ab. obscura Lempke. Tijdschr. Ent. 92 p. 163 1950.
Ground colour dark grey, the lines bordering the basal and central area are, on their inner side, broadly set off by black grey which even completely fills the lower half of the central area.

ab. istriana Naufock. Boll. Soc. Adriat. Sci. Nat. 27 (1) p. 101 fig. 1913.
The apical streak of the forewing heavy and continued conspicuously across the median band. Said to be a local race but Lempke treats it as an ab.

ab. minor Maslowecy. Polsk. Pismo. Ent. 2 p. 133
Smaller and paler.

ab. infuscata Schwingenschuss. Verh. zool.-bot. Ges. Wien. 74-75 p. 142 1926.
= *nigra* Cockayne. Proc. Roy. Ent. Soc. Lond. 8 p. 135 1933.
Both wings uniformly darkened with smoke brown, the median band of the forewing only shown definitely by its fine white edgings.

ab. divisa Strand. Nyt. Mag. Nat. 39 (1) p. 60 1901.
= *kardakovi* Krulikovskij. Rev. Russe Ent. 8 p. 273
The median band broken into two or more parts, being interrupted, at least on the fold, by the ground colour.

ab. privata Prout. Seitz. 4 Suppl. p. 114 1938.
Described as an ab. of subsp. *scotica* B. White. The posterior part of the median band of the forewing absent. Cockayne says 10% of the subspecies belong to this form.

Fauna Perthensis 1871. p. 25

subsp. *scotica* Buchanan-White. (Scot. Nat. 4 p. 175 1878.)
The small suffused Scottish race, the blackening most obvious on the abdomen and underside.

subsp. *orcadensis* Cockayne. Ent. Rec. 62 p. 27 1950.
Ground colour clearer and more cream coloured than in subsp. *scotica*; sub-basal and basal lines very distinct and the space between them filled in with brown-grey, rich brown, or blackish-brown; antemedian and postmedian lines blacker and broader than in *scotica*; the median area of the same colour as the band between the sub-basal and basal lines; the submarginal shade more distinct than in *scotica* and usually forming a well marked band. Hindwing postmedian line thick and very distinct. The subspecies from Orkney.

f. A 7-8

ab. completa Bergmann. Grossschmett. Mitteldeutschl. 1955. 5. (1) p. 317; pl. 208,
Forewings with the central area strikingly broadened.
This is the description given by Lempke at Tijdschr. Ent. 110, p. 326; we have not seen the original.

ab. juncta Lempke. Tijdschr. Ent. 1967. 110. p. 326.
On the upperside of the forewings the basal and central areas are connected with each other in one or more places along the nervures.

ab. brunnescens Lempke. Tijdschr. Ent. 1967. 110. p. 326.
Ground colour of the wings pale brown; the bands of the forewings darker brown.

Geom.90.
p.2.

T. juniperata Lin., aberrational forms, etc.(cont'd.).

ab.diluta Lempke. Tijdschr.Ent.1967.110.p.326.

The bands of the forewings pale grey, only a little darker than the ground colour.

Geom. 91.

Thera Steph.

cognata Thnbg.

= *simulata* Hbn.

aberrational forms etc.

ab. *nigrofasciata* Hoffmann.

The median band of the forewing completely blackened.

ab. *perversa* Hirsche. Verh. zool.-bot. Ges. Wien. 60 p. 415

The basal and median areas of the forewing, instead of being darker than the ground colour, are lighter. Described under the subsp. *geneata* Feisth.

Geom. 92.

Chloroclysta Hbn.

miata Linn. aberrational forms etc.

ab. *radiata* Messling. Notul. Ent. 5 p. 97

Basal and median areas darker green, strongly bounded with white; all the veins dusted (especially on the median band?) with black-green. Hindwing rather white.

ab. *albifasciata* Hoegh-Guldberg. Flora og Fauna 61 p. 17

siterata Hufn. aberrational forms etc.

ab. phaiolata Schawerda. Verh. zool.-bot. Ges. Wien. 71 p. 160 1922.

= perfuscata Dannehl. Ent. Z. 47 p. 88 1933.

Deep brown without a trace of green. Dannehl's perfuscata was brown-black.

ab. caerulata Cockayne. Ent. Rec. 65 p. 161 1953.

The usual olive green of the ground colour and the markings, is replaced by blue-green.

ab. trivirgata Cockayne. Ent. Rec. 65 p. 161 1953.

Forewing with three dark transverse bands across the greenish-black ground-colour, a basal, antemedian and postmedian, standing out sharply. Hindwing with a prominent rather broad median band.

ab. fasciata Cockayne. Ent. Rec. 54 p. 34 pl. 2 f. 4 1942.

The ground colour of the forewing is much paler than usual and almost devoid of markings but the basal and median band are blackish-green except for a light green area round the discoidal spot.

race *pythonissata* Milliere. Icon. 3 p. 120 pl. III f. 9. 1870.

From Shetland Isles. Very variable but always recognizable by the white spots in the median area, (at least about the discal dot), the sharply white lines and very sharply marked underside with prevailing brownish tinge.

The following aberrations were described under race *pythonissata* Mill.

ab. *strigulata* Prout. Seitz 4 Suppl. p. 121 1937.

The median area of the forewing black, not as in typical *pythonissata*, mottled.

ab. *ferruginea* Prout. Trans. City Lond. Ent. Nat. Hist. Soc. p. 50 1908.

= *unifulvata* Culot. Geom. 3 p. 162 pl. 24 f. 492 1917-19.

The whole forewing suffused with rust colour or dull reddish-ochreous.

Culot's figure is unicolorous reddish ochreous with very faint markings.

ab. *fusca* Prout. Trans. City Lond. Ent. Nat. Hist. Soc. p. 50 1908.

Unicolorous fuscous.

See remarks concerning ab. *nigricans* Prout Seitz 4 Suppl. p. 121.

ab. *cjornensis* Walker. Entomologist 23 p. 66 1890.

Intermediate between *marmorata* F. and *thingvallata* Stgr.

The former has a white ground colour with thin dark lines, the latter, much more distinctive, has a black median band and basal line, the rest of wing whitish-ochreous with practically no marking in the terminal part except some subapical remnants.

Since Walker says that his *cjornensis* had been named *thingvallata* previously by Staudinger it follows that *cjornensis* is very similar to it.

ab. *aurantiaca* Cockayne. Ent. Rec. 65 p. 161 1953.

All markings of the forewings are clear orange on a pale orange ground. Hindwings very pale orange with a somewhat darker orange border and fringe; thorax and abdomen also orange.

ab. *dimidiata* Muller. Ent. Rdsch. 48 p. 163 1931.

Both lateral shades of the median area are, in the costal portion, dark and are fused with one another so that only around the middle dot there usually remains a little lightening of the colour; in the inner-marginal half it is just as markingless as in *inumbata*, the following form.

ab. *inumbata* Muller. Ent. Rdsch. 48 p. 162 1931.

The grey middle area completely without markings, even the costal blotch of the outer transverse shade is absent; at most the middle area is cut through by blackish veins.

ab. *bicolor* Muller. Ent. Rdsch. 48 p. 182 1931.

The median area blackish but the two outside bands are very broad dark ochreous (wood colour) the outer band wholly without markings and unicolorous, running from costa to inner margin and merely cut through by dark veins; the entire wing appears simply two-coloured, contrasting black and wood-colour.

ab. *cervina* Ent. Rdsch. 49 p. 34 1932.

The ground form is *imannata* Haworth, but with a dense brown suffusion in such a way that the whole surface of the forewing appears almost unicolorous brown; the shading is duller as in *griseonotata* Lange, but brown instead of grey.

ab. *nigerrima* Schawerda. Verh. zool.-bot. Ges. Wien. 70 p. (95) 1920.

The forewing almost entirely blackened, even the two brown bands are overlaid with dark suffusion, no white remaining except three punctiform spots on inner margin and a very narrow remnant of the outer costal blotch.

ab. *melaneata* Groth. Ent. Z. 55 p. 19 1941.

The name for melanistic *citrata*.

Groth mentions the two melanic forms in this species, *nigricans* Prout and *nigerrima* Schawerda but proceeds to give a further name for melanic examples. It would seem to be a synonym of *nigerrima* Schaw.

ab. *griseonotata* Lange. Iris 35 p. 150 1921. (pl. I f. 24.)

Intermediate between *citrata* and *strigulata*, the brown bands distinct, the white costal blotch narrow, the median band less deep black than in *strigulata*.

ab. *csehi* Dioszeghy. Verh. Siebenburg. Ver. Naturw. 79-80 p. 252 .

Strikingly narrowed forewing with produced apex, apparently greyer and less sharply marked than in *krassnojarscensis* Fuchs.

ab. *acutata* Guen.

(figured Seitz 4 Suppl. pl. II f. G.)

The forewings apparently more pointed.

ab. *obsolescens* Richardson. Ent. Rec. 64 p. 271. 1952. (pl. XI f. 8.)

The dark markings in the apical area and the subterminal line of white dots remain but the rest of the forewing is pink, in which can be seen a faint dark subbasal cross line, dark markings along the nervures, black discal marks and a paler patch between discal and apical areas. In this particular specimen there is on the left forewing a short black bar running parallel with the costa above the discal mark.

ab. *pseudopythonissata* Muller. Ent. Rdsch. 48 p. 183 1931.

The third step in lightening of the pattern. Like *amoenata* Steph. with more contrasting white marking but also the black median area lightened by a small whitish or grey, usually characteristically angled spot, around the middle dot, which however never reaches the inner margin.

citrata Linn.

= immanata Haworth. aberrational forms etc.

ab. *variata* Thunberg. Ins. Suecica I p. II 1784. = *marmorata* F. Ent. Syst. 1794. 3. 192.
The middle field of the forewings white with dark lines. = *passeraria* Freyer.
Neu Beitr. 1852: 6: 10: 17486 f. 3.

ab. *punctum-notata* Haworth. Lep. Brit. 1809 p. 324.

~~= *passeraria* Fr.~~

1846.

The central area clear white, usually purer than in the corresponding form of *truncata*.

There seems to be very little to separate these two forms, *variata* and *punctum-notata*.

ab. *tricolorata* Culot. Geom. 1917 p. 163 pl. 24 f. 490.

Also with a white median band but presumably named on account of its three colours, black, white and rufous. The figure shows a black line near the base, followed by a rufous line set in white, an antemedian clear cut in black and a median white fascia bounded on its outer side by another black line edged externally with a line white line; this in turn is edged rather broadly with rufous, with grey outer margin.

ab. *krassnojarscensis* Fuchs. Jahrb. Nass. Ver. 52 p. 155 1899.

Forewings nearly uniform whitish with the transverse lines sharply marked.

ab. *albofasciata* Muller. Ent. Rdsch. 48 p. 164 1931.

The middle band running through the central area is white and very contrasting. Parallel form to *ab. insolida* Prout in which this middle band is grey.

ab. *incompleta* Culot. Geom. 1917 p. 164 pl. 24 f. 493.

The lines and markings almost exactly as in *ab. tricolorata* Culot but the rufous lines replaced by grey ones and the white median band tinted faintly with grey more so at the costal part.

ab. *alba-effusa* Muller. Z. Ost. Ent. Ver. 15 p. 94 pl. 12 f. 1 1930.

The outer boundary of the median area is not definite but becomes diffusely confluent with the region beyond. The name is from the white banded examples.

ab. *grisea-effusa* Muller. Z. Ost. Ent. Ver. 15 p. 94 pl. 12 1930.

The same as preceding but for grey banded examples.

ab. *simpliciata* Walker. List Lep. Ins. Brit. Mus. 25 p. 1422 1862.

The middle area black with grey or white spots in the central part.

ab. *insolida* Prout. Trans. City Lond. Ent. Nat. Hist Soc. 18 p. 48 1909.

The black central band of the forewing divided by a large middle cloud of some shade of grey or grey-white. The type is the figure in Barrett 8 pl. 357 f. 1 G. This form is very similar to *incompleta* Culot which has the median band rather whiter and narrower.

ab. *inumbata* Muller. Ent. Rdsch. 48 p. 162 1931.

The grey median area completely without markings, even the costal part of the outer transverse shade is absent. There are some longitudinal marks (darkened veins) on the grey of the median area.

ab. *grisea* Muller. Ent. Rdsch. 48 p. 162 1931.

The median area distinctly grey, often quite dark, the lateral shades reach the inner margin; outer third usually light shaded, outer band orange or pale brown.

ab. *saturata* Muller. Ent. Rdsch. 48 p. 162 1931.

Similar to the preceding *grisea* but of very strong melanic development, the outer third also darker and insistent. The entire form more contrasted.

ab. *strigulata* F. Ent. Syst. 3 p. 192 1794.

= *anoenata* Stephens. Ill. Haust. 3 p. 228 1831.

The median area black with rather pronounced whitish blotch on costa towards apex.

ab. *intermedia* Muller. Ent. Rdsch. 48 p. 182 1931.

Like *strigulata* F. but the pale costal blotch of the outer band less strikingly developed, only a more weakly developed *strigulata*.

ab. *confluens* Muller. Ent. Rdsch. 48 p. 162 1931.

The two lateral shades of the grey middle area are broad and band-like, densely black and confluent in the inner-marginal half.

ab. nigrobrunneata Heydemann. Mitt. munch. Ent. Ges. 19 p. 220 figs. 10-10A 1929.
The median and terminal areas of the forewing deep black, the basal and antemedian together forming a rust-brown area.

ab. nigerrimata Fuchs. Jahrb. Nass. Ver. Nat. 53 p. 57 1900
= nigerrima Schawerda.
= melaina Muller. Ent. Rdsch. 48 p. 136 1931.
Almost unicolorous black or dark grey form

ab. rufescens Strom. Kong. danske Vidensk. Selsk. Skrifter, Nye Samling 2 p. 85 1783.
= comanotata Haworth. Lep. Brit. 1809 p. 325.
= mediorufaria Fuchs. Jahrb. Nass. Ver. Naturf. 52 p. 155 1899.
The median area yellowish-orange to yellowish-brown.

ab. ochreatea Schille. Soc. Ent. 15 p. 113 1900.
The median area light ochreous, in a varying degree mixed with whitish.

ab. mixta Prout. Trans. City Lond. Ent. Nat. Hist. Soc. 18 p. 44 1909.
= composita Muller. Ent. Rdsch. 48 p. 232 1931.
The central area tawny, as in rufescens, the basal and marginal areas dark fuscous. Hindwings somewhat darkened.

ab. fusco-rufescens Prout. Seitz 4 Suppl. p. 117 fig. 8 i 1938.
Similar to the preceding mixta Prout but differs in the retention of some white markings in the proximal and distal areas and in the non-melanic hindwing.

[ab. effusa Lempke. Tijdschr. Ent. 92 p. 167 1950.] see below.
[The white line which borders the central area distally, passes vaguely into the brown tint of the outer area.]

ab. angustifasciata Groth. Flora og Fauna 4 extra part p. 102 fig. 1937.
The median band considerably narrowed being confined between the innermost lines of the median area, the distal and proximal portions being lost.

ab. depuncta Romaniszyn. Polsk. Pismo. Ent. 4 p. 198 1925.
Without the black dots on the venules of the forewing Prout thinks that this means the cell dots.

subsp. or species concinnata Stephens. Ill. Haust. 3 p. 229 1831.
= oressigera Wild. Scot. Nat. 1931 p. 115 f. 3.
There is much argument as to whether this is a separate species or a subspecies of truncata. Cockayne in his recent arrangement makes it the latter. Recognized by the mixture of white and fuscous in the central area, arranged in very irregular spots, patches or broken bands, the hindwings as dark as truncata sometimes darker and showing a row of white subterminal spots. Chiefly from the I. of Arran, some have been recorded from the West Mainland of Scotland. Cockayne includes Hebrides.

ab. effusa Lempke. Tijdschr. Ent. (1949) 1950. 92. p. 167. amended 1967. 110. p. 318;
pl. 13, f. 15.
Lempke says his description in 1950 was not correct, and gives a new one in 1967: - Forewings with the central band narrow, bordered on both sides by white lines, and distad of this a broad yellow-brown band, which passes suffusedly into the dark bordering of the subterminal line. After the specimen had been photographed, a slide of the genitalia was made.



truncata Hufn. aberrational forms etc.

ab. russata Hubner. Samml. Eur. Schmett. fig. 305 I796-99.

= albofasciata Muller. Ent. Rdsch. 48 p. 120 I93I.

The central part of the median area white, free from grey dusting.

ab. albata Culot. Noct. et Geom. 3 p. 160 pl. 23 f. 479 I917.

The median area of the forewings broadly white, almost or altogether without the dark lines which narrow it in the preceding form.

ab. latefasciata Dahlstrom.

The median area very broad, pale yellow or white.

Possibly a synonym of the preceding.

ab. modesta Muller. Ent. Rdsch. 48 p. 119 I93I.

Ground colour distinctly grey, inner markings of the middle area however paler, particularly towards the inner margin almost absent; only the costal part of the lateral shade present.

ab. griseofasciata Mull. Ent. Rdsch. 48 p. 120 I93I.

Without the insulata markings so that in the middle area there is an unbroken grey band from costa to inner margin.

ab. wellmani Cockayne. Ent. Rec. 58 p. 93 pl. 2 f. 7 I946.

On the forewing the median area is narrower than usual, the black postmedian line touching the discoidal spot in the ♀ and nearly touching it in the ♂; the ante and post median lines unite just before reaching the inner margin in the ♂ and almost unite in the ♀; the median area is without markings and lightly sprinkled with black scales in the ♀, more heavily sprinkled in the ♂; the antemedian is bordered internally and the postmedian externally by a narrow white line; the basal area is dark grey, and between it and the antemedian is a red brown band and there is another red-brown band external to the postmedian; the marginal area is dark grey.

ab. nigroalbata Culot. Noct. et Geom. 3 pl. 27 f. 482 I917-19.

The median area pure white with black cell dot, the borders of the median area broadly black especially the antemedian, rest of wing grey-brown.

ab. saturata Stephens. Ill. Haust. 3 p. 231 I831.

Forewings fuscous-ash, with an indistinct unsolid broad central fascia, towards the outer margin is an indistinct ferruginous fascia and some dusky clouds with an undulated white striga. Hindwings fuscous.

ab. tysfjordensis Strand. Nyt. Mag. Nat. 39 p. 61 I901.

Dark grey to blackish with somewhat white mottled median band.

ab. cervina Muller. Ent. Rdsch. 48 p. 141 I93I.

Forewings appear unicolorous rufous-brown. On the forewings suffusion is so strong that the markings are entirely covered and only seen in an oblique light as remnants. Hindwings distinctly lighter, marginal lightened weakly on the underside.

ab. perfuscata Haworth. Lep. Brit. 1809, p. 325.

The median area black.

ab. fuliginosa Prout. Trans. City Lond. Ent. Nat. Hist. Soc. 18 p. 46 I909.

Forewings dull brownish suffused over the distal area so as to obliterate the the ferruginous prosubterminal shade. See the figure I J plate 356 in Barrett vol. 8. Muller's ab. cervina may be the same form.

ab. albonigrata Lempke. Tijdschr. Ent. 92 p. 166 I950.

Basal and central areas of the forewings black; antemedian band white, powdered with black; marginal area white, feebly powdered with black, through which the white submarginal line is still visible.

ab. fumata Lange. Iris 35 p. 147 pl. I f. 29 I921.

Strongly suffused with smoky-grey. Basal area unicolorous grey-brown, median band on both sides (innermost) broadly shaded with blackish. Through the middle between the black, however, there runs an indistinct greyish white band; marginal area also somewhat darkened but the whitish wavy band still appears distinctly. Hindwing unicolorous blackish grey with extremely slight indications of the ante marginal row of lunules characteristic of truncata

munitata Hbn. aberrational forms etc.

ab. infuscata Prout. Seitz 4 p. 222 1914.

Forewing much infuscated, dirty grey-brown with a slight tinge of yellow, the median band weakly expressed, more reddish; hindwing dark smoke coloured.

ab. algidata Moschl.? Staudinger. Stett. Ent. Z. 1874 p. 162. (Stgr. Cat. 3 p. 294 1901)
The median band almost obsolete, being chiefly indicated by the principle lines which traverse it.

ab. strigata Pack.

The median band black.

ab. interrupta Prout. Seitz 4 Suppl. p. 123 1937.

= algidata Culot. nec. Moschl. Geom. 3 p. 168 pl. 24 f. 502 1917-19.

The median band much narrowed and interrupted below its middle.

ab. nigroalbata Heydemann.

= fuscifascia Prout. Seitz 4 Suppl. p. 123 1937.

The median band blackish, the rest of the forewing and at least the distal part of the hindwing remaining whitish.

ab. pauperrimata Christ.

Ground colour pale ochreous, the median band uniformly reddish fuscous. Similar to the Shetland race hethlandica Prout.

race hethlandica Prout. Ent. Rec. 13 p. 336 1901.

The race from Shetland and Orkney Isles. The ground colour strongly yellow-ochreous. Similar, but less extreme forms, occur on the mainland of Scotland.

ab. defasciata Cockayne. Ent. Rec. 65 p. 161 1953.

The median area of the forewing, although bounded by dark ante and postmedian lines, is of the same colour as the rest of the wing
This must be very similar to algidata Moschl. (above)

Geom. 97 continued.

fluctuata Linn.

p. 2.

ab. fumata Cockayne. Ent. Rec. 65 p. 162 1953.

The whole insect, head, thorax, abdomen and both wings are of a dark uniform smoke colour. On the forewing the dark basal and median markings are present, the subapical mark indistinct, and the usual wavy lines obsolete.

race thules Prout. Ent. Rec. 8 p. 163 1896.

The race from Shetland Isles. Very dark, almost black.

ab. obsolescens Cockayne. Entomologist 85 p. 268 pl. 4 f. 5-6 1952.

Forewing dark grey speckled with white atoms; the median band almost absent though it is just visible. Appears to be confined to the female sex.

ab. marginata Lucas. Ent. Ber. (Amst.) 1959. 19. p. 206.

Along the hind [outer] margin of both fore- and hindwings there is a broad dark shade.

ab. latefasciata Lempke. Tijdschr. Ent. 1967. 110. p. 288.

Forewings with a complete, strikingly enlarged central band.

This is possibly the same as ab. geomella Woodforde. (see p. 1 of these notes.)

ab. tangens Lempke. Tijdschr. Ent. 1967. 110. p. 288.

On the upperside of the forewings the central band is so strongly narrowed in its lower half, that its outer edges touch each other a little above the inner margin.

ab. effusa Lempke. Tijdschr. Ent. 1967. 110. p. 288.

On the upperside of the forewings all the dark markings (basal area, central band, subapical patch) indistinctly edged.

Lempke's English translation says "unsharply defined".

ab. reducta Lempke. Tijdschr. Ent. 1967. 110. p. 288; pl. 14, f. 10.

On the upperside of the forewings the basal area is normal, and the other markings are: a dark line along the transverse nervure [the discoidal mark], a small point above it on the costa, and a dark suffusion near the apex. Hindwings (in the Holotype) with a dark central point and a very weak band along the outer margin.

This must be very close to ab. immaculata Tutt. (see p. 1 of these notes.)

ab. conjuncta Lempke. Tijdschr. Ent. 1967. 110. p. 289.

On the upperside of the forewings the basal area is connected to the central band by dark streaks along the nervures.

fluctuata Linn. aberrational forms etc.

ab. ochreata Prout. Ent. Rec. 8 p. 162 1896.

= ochreata Culot. Geom. 3 p. 185 pl. 27 f. 547 1917-19.

The ground colour ochreous.

ab. neapolisata Milliere. Ann. Soc. Ent. Fr. (6) 7 p. 218 pl. 5 f. 7 1887.

The ground colour much darkened by brown-grey, faintly washed on the forewing with greenish.

The figure shows no greenish tinge and appears to be merely a dark ground colour aberration.

ab. albescens Lempke. Tijdschr. Ent. 92 p. 172 1950.

Ground colour of the wings pure white.

ab. immaculata Tutt. Ent. Rec. I p. 322 1891.

Pure white with the median band entirely obsolete.

ab. abstersata Herrich-Schaffer. Deutschl. Ins. pl. 165 f. 2 1839.

= incanata Reuter. Acta Soc. F. F. F. 9 p. 72 1893.

= fasciata Tutt. Brit. Moths. 1896 p. 275.

The median band is complete, darkened from costa to inner margin.

ab. geomella Woodforde. Trans. S. Lond. Ent. Nat. Hist. Soc. 76 p. 529 ?

The median band unusually broad, grey, with some white markings on the veins, both the band and the basal patch only blackened at their edges; the distal area is suffused with grey.

ab. costovata Haworth. Lep. Brit. 1809 p. 334.

= rimata Nowicki. *Enom. Lep. Hb. Suppl. 6. V. 1865: 182.*

= semifasciata Huene. *Berl. Ent. Z. 1901: 46: 318: 17.6 f. 8.*

The median band much narrowed and shortened.

ab. undulata Prout. Ent. Rec. 8 p. 163 1896.

The darkening of the forewing produced by numerous tolerably distinct dark waved lines on the paler ground.

ab. confusa Prout. Ent. Rec. 8 p. 164 1896.

The outer area of the forewings, especially on the costal half, longitudinally smeared with the dark colour, presenting the appearance of having had water poured on the central fascia which has caused the colour to run.

ab. putridaria Herrich-Schaffer. Schmett. Eur. 3 pl. 87 f. 535 1847.

The median black band showing a white patch in the costal area.

ab. fibulata Hufnagel. Berl. Mag. 4 p. 604 1767.

Darker dusted than typical, the central fascia continued by dark rings, or slight dusky shading, down to the inner margin.

ab. insolida Prout. Ent. Rec. 8 p. 163 1896.

The median band complete from costa to inner margin but unsolid, greyish, especially in the middle.

ab. deleta Cockerell. Entomologist 22 p. 100 1889.

Markings reduced almost to vanishing point, only a small roundish spot remaining, on costa.

ab. approximata Lempke. Tijdschr. Ent. 92 p. 172 1950. (described vol. 90 p. 147.

The two transverse lines which border the central fascia of the forewings are close together. The fascia can be either complete or halved (typical)

ab. degenerata Lempke. Tijdschr. Ent. 92 p. 172 1950.

Of the central band or fascia two small spots are left, one on the costa, the other on the inner margin.

ab. rosata Guiart,

The ground colour rosy.

ab. costijuncta Cockayne. Ent. Rec. 65 p. 162 pl. 12 f. II. 1953.

On the forewing the basal and median areas are united along costa by a dark stripe.

montanata Schiff. aberrational forms etc.

ab. continuata Krulikovsky. Soc. Ent. 23 p. II 1908.

The median band solid, brown or blackish, not interrupted by any white patch.

ab. nigrofasciata Osthelder. Mitt. munch. Ent. Ges. Suppl. (Sch. Bayern) p. 434 pl. I7 1929

The median band blackish instead of the usual brownish tint.

ab. lutescens Lempke. Tijdschr. Ent. 92 p. I72 1950.

The median band of the forewings yellow-brown.

ab. divisa Osthelder. Mitt. munch. Ent. Ges. Suppl. (Sch. Sudbayern) p. 434 pl. I7 1929.

The median band more or less broadly pale throughout its central part.

ab. pseudolaoponica Osthelder. Mitt. munch. Ent. Ges. (Schmett. Sudbayern) p. 434 1929.

The median band weaker, lighter, sometimes almost evanescent.

ab. approximata Lempke. Tijdschr. Ent. 92 p. I74 1950. (described vol. 90 p. I47)

The two transverse lines which border the median area of the forewings are close together.

ab. tangens Lempke. Tijdschr. Ent. 92 p. I74 1950. (described vol. 90 p. I47)

The two transverse lines which border the median area of the forewings, touch each other below the middle and then separate again.

ab. degenerata Prout. Ent. Rec. 7 p. 249 1896.

= constricta Strand. Arch. Naturw. Christian 25 no. 9 p. 21

The median band broken into two blotches, a costal and inner marginal.

ab. costimaculata Rebel. Berge's Schmett. Ed. 9 p. 345 1910. (Barrett pl. 34I f. I D)

Only the costal half of the median band present.

ab. fuscomarginata Staudinger. Cat. Ed. 2 p. I86 1871.

The margins of both wings are broadly fuscous with a distinct white subterminal line.

ab. albomarginata Lempke. Tijdschr. Ent. 92 p. I74 1950.

Outer margin of forewings and hindwings unicolorously white without a trace of dark markings.

ab. lacticolor Lempke. Tijdschr. Ent. 92 p. I74 1950.

Ground colour of the wings creamy.

ab. candidata Nitsche. Verh. zool.-bot. Ges. Wien. 84 p. (5) 1934.

The median band only represented by a quite weakly indicated triangular spot near the costa.

ab. limbaria Hubner. Samml. Eur. Schmett. I824-25 pl. I01 f. 522.

The figure shows the median band reduced to a small patch on the discocellulars and the margins very broadly fuscous with a white subterminal line

ab. albicans Strand. Nyt. Mag. Naturw. 39 p. 59 1901.

The markings, except the discal dot not, or scarcely, visible.

ab. feisthamelaria Boisd. Ind. Meth. I846 p. 316.

(Culot Geom. pl. 28 f. 570.)

The median band broad and rather bright brown, other markings very weak.

Very similar to continua Krul.

ab. unicolor Rebel. Berge's Schmett. 1910 p. 345. (Barrett pl. 34I f. I E.)

The wings entirely suffused with smoky-black, the median band of the forewing faintly indicated.

ab. radiata Cockayne. Entomologist 83 p. 50 1950. (fig. Ent. Rec. 57 pl. 3 f. f.)

Forewing: Base white, bounded externally by a broad black stripe; the narrow median area white speckled with some grey scales and bounded by broad black antemedian and postmedian stripes; the discal spot black and distinct; the areas between the antemedian and basal stripes and the postmedian stripe and the border are pale dull rufous; there is a row of whitish interneural subterminal spots and a narrow black border; the nervures between the postmedian and the border are blackish; the costa between the basal and antemedian and the postmedian and the border is blackish. Hindwing: From the base to the postmedian line the wing is white and from the postmedian to the border pale dull rufous; postmedian line black and indistinct, with black running a short distance basad along the nervures; the nervures between the postmedian and the border are blackish.

ab. reticulata Cockayne. Ent. Rec. 65 p. 162 1953. (pl. 12 f. 15.)

On the forewing the median area is filled in with wavy lines; in the space between the basal and antemedian lines is a band formed of wavy lines giving the insect a reticulated appearance. Near the margin there are three well marked parallel lines, the outermost dentated on its innermost aspect, and internal to these is a thin dark line along the termen. On the hindwing near the margin there are two parallel wavy lines and external to them is a dark band dentated on its inner aspect, and there is also a thin dark marginal line.

race shetlandica Weir. Entomologist 13 p. 290 pl. 4 f. 10-11 1880.

The race from Shetland Isles. Forewing much more variegated, the ground colour suffused with ochreous between the basal and median lines and distally, the median band sharply marked at least at its edges, sometimes pale in the centre, sometimes mixed with bright ochreous-brown.

biriviata Borkh. aberrational forms etc.

f. *aestiva* Fuchs. *Stett. Ent. Z.* 45 p. 269 1884.

The summer generation with somewhat darker colouring, especially in the distal area of the forewing and on the hindwing.

ab. *abditaria* Herrich-Schaffer. *Syst. Schmett. Eur.* 6 p. 183 fig.

The median band narrow, curved proximally at the costa and scarcely projecting posteriorly.

ab. *tatianaria* Krulikowsky.

Basal area of the forewing yellowish-grey, with lighter lines very weakly marked, marginal area the same, with the postmedian double stripe very little lighter, apical region strongly darkened.

ab. *reduplicata* Heinrich.

The median band divided into two separate bands by a grey central part or stripe.

ab. *tangens* Lempke. *Tijdschr. Ent.* 92 p. 179 1950. (descript. vol. 90 p. 147.)

The two transverse lines bordering the median band touch each other below the middle and then separate again.

ab. *tristis* Lempke. *Tijdschr. Ent.* 1967. 110. p. 279.

On the upperside of the forewings the space between the basal area and the median band, and between this band and the subterminal line dark brown, without transverse lines. The median band is not bordered by a pale line on its outer side.

quadrifasciata Clerck. aberrational forms etc.

type form quadrifasciata Clerck. Icon. 1759 pl.6 f.4.

The figure shows the median band blackish-grey, the outer area rather bright ochreous-brown with fine undulated lines.

Lempke in Tijdschr. Ent. 92 p. 181 suggests using the aberrational name of thedenii Lampa for this form and fixing a new description of the type. I do not follow his argument so retain Clerck's figure as the type form.

ab. thedenii Lampa. Tidskr. Ent. 6 p. 110 1885.

= atrofasciaria Schille. Soc. Ent. 15 p. 112 1900.

= contrastaria Fuchs. Stett. Ent. Z. 62 p. 378 1901.

= brunneofasciata Hoffmann. Mitt. Naturw. Ver. Steiermark 53 p. 151 1917.

Median area of the forewings almost black, edged distally by a narrow white transverse stripe; distal area brownish ochre-yellow without markings, only the apex itself with grey spots and a short subterminal.

ab. tristis Warnecke. Z. Wien. Ent. Ges. 29 p. 250 1944.

Uniformly darkened, the middle field no darker than the inner and outer areas.

ab. brunneomarginata Lempke. Tijdschr. Ent. 92 p. 181 1950.

As in the type form but the outer area brown.

ab. nigromarginata Lempke. Tijdschr. Ent. 92 p. 182 1950.

The outer area blackish.

ab. obscura Lempke. Tijdschr. Ent. 92 p. 182 1950.

Central area of forewings black, the ground colour for the rest dark grey.

ab. stenotaenia Kautz. Verh. zool.-bot. Ges. Wien. 73 p. (158) 1924.

The median band strongly narrowed, only 2 mm. in width and black-brown.

ab. assignaria Nitsche. Verh. zool.-bot. Ges. Wien. 74-75 p. (19) 1924.

Distinguished from type form by a tendency to be unicolorous. The middle field narrower, unicolorous, the marginal area unmarked.

ab. reduplicata Heinrich. Deutsch. Ent. Z. 1916 p. 527 pl. 4 f. 21 1917

The black median band cut into two stripes by a complete, moderately broad, grey central transverse stripe.

ab. dissolutaria Petersen. Beitr. Kunde Est.-Liv. U Kurlands 1902 Sep. p. 127.

The median band altogether dissolved into black lines.

ab. tangens Lempke. Tijdschr. Ent. 92 p. 182 1950. (descript. vol. 90 p. 147.)

The two transverse lines which border the central area touch each other below the middle and then separate again.

ab. cotangens Lempke. Tijdschr. Ent. 92 p. 182 1950. (descript. vol. 90 p. 147.)

The two transverse lines which border the central area touch each other below the middle and remain united.

ferrugata Clerck. aberrational forms etc.

ab. unidentaria Haworth. Lep. Brit. 1809 p. 308.
= eximiata Fuchs. Ent. Z. 18 no. 32 1905.
= strandi Krulik. *Soc. Ent. 23* 1.12 1908.
The median band black, not reddish.

ab. coarctata Prout. Entomologist 37 p. 154 1904.
The median band greatly narrowed, only 1-2 mm. in width.

ab. ruficostata Prout. Trans. City Lond Ent. nat Hist Soc. 8 p. 30 1898.
The median band, predominantly black, definitely reddened at the costa.

ab. obscura Dahlstrom. *(Lep. Brit. 1809 p. 308)*
Forewing with median area dark red, base and outer margin dark ochreous, almost brown; hindwings dark grey.
Prout says there is no certainty that this form does not belong to spadicearia.

ab. violacearia Vorbrodtt. Mitt. Schweiz Ent. Ges. 12 p. 475 1917. (fig. vol. 14 pl. 9)
Dark violet grey, without the cell dot, a broad violet-grey shade developed proximally to the subterminal, the distal border of the forewing grey. Recalls unifasciata.

ab. hoyeri Pruffer. Ann. Zool. Mus. Pol. Hist. Nat. 1 p. 140 pl. II f. 6 1922.
Median band uniformly black, cell dot obsolescent, distal area orange-brownish, feebly marked, space between basal patch and median band also distinctly orange tinted.

ab. unicolor Lempke. Tijdschr. Ent. 92 p. 177 1950.
Forewings unicolorously purplish red without bands or transverse lines.

ab. divisa Lempke. Tijdschr. Ent. 92 p. 177 1950.
The central area of the forewings divided in the middle by a pale transverse line. Occurs in both red and black colour forms.

ab. livinaria La Harpe. Faun. Suisse Lep. Suppl. 2 p. 14 pl. I f. 3 1853.
Extreme form with threadlike median band and broadly darkened distal area. Prout says it is similar to the example figured in Barrett pl. 344 f. 3 G. but places it under spadicearia Schiff.

ab. salicaria Haworth. Lep. Brit. 1809 p. 309.
Wings cinereous fuscous with various undulate lines. No pronounced band.

ab. georgi Meissl. Jahres-Ber. Wien. Ent. Ver. (1908) 1909. 19. p. 48; pl. 1, f. 2.
Forewing ground colour dark tawny, with a narrow, black, obsolescent transverse band before the base, and a broad, black, obsolescent marginal band along the outer margin, which shows, along the veins at the margin elongated rusty-brown spots, which are enlarged at the apex. Hindwings smoky-brown, with small rusty-brown spots along the ends of the veins at the margin. Fringes of all wings unicolorous smoky-brown.
The figure shows the forewing ground colour deep red-brown, with a narrow black basal line, followed by a thicker antemedian one; the discoidal spot is present, and beyond this there is a black triangular mark on the costa, in the position of the postmedian line, which is absent, and finally there is a row of neural black streaks before the marginal black line. The hindwings are deep brown-grey, with only a row of neural black streaks before the black marginal line. Fringes of all wings smoky-brown. The specimen is slightly asymmetrical.

ab. brunnescens Lempke. Tijdschr. Ent. 1967. 110. p. 284.
Forewings unicolorous brownish as far as the subterminal line, the area between this line and the outer margin pale grey, sharply contrasting, and the ante- and postmedian lines black, distinctly visible. Hindwings grey, with the area between the postdiscal and subterminal lines brownish.

ab. albescens Lempke. Tijdschr. Ent. 1967. 110. p. 285; pl. 14, f. 6.
Forewings with the basal and central areas (which are of normal purplish colour) separated by a white-grey band, the central area bordered externally by a white band and the marginal area white-grey. Hindwings pale grey with darker discal lines and a white postdiscal band.

~~ab. medio fasciata Schwingenschuss. Verh. zool.-bot. Ges. Wien. 1920~~

ab. diluta Lempke. Tijdschr. Ent. 1967. 110. p. 285; pl. 14, f. 9.

Ground colour of fore- and hindwings dull, the markings obsolescent.

Once again, Lempke's English translation says "obsolete", when he in fact means "obsolescent".

ab. nigrolineata Lempke. Tijdschr. Ent. 1967. 110. p. 285.

Fore- and hindwings with a continuous black line before the fringe.

ab. obscura Lempke. [? nom. praec. Dahlstr. ?] Tijdschr. Ent. 1967. 110. p. 285; pl. 14, f. 7.

Forewings with the ground colour brown, basal area only bordered by a black line, the central area unicolorous black, a black-brown subapical patch on the costa and a row of black dots along the pale subterminal line. Hindwings brownish with a broad black-grey discal band, the subterminal line bordered by dark grey.

Since it has not been possible to locate the original reference of ab. obscura Dahlstr., and therefore not the original description either, the present form is, for the present, kept separate, as there is also some doubt as to whether Dahlstrom's form belongs to this species or to spadicearia Schiff. Should, however, it prove to belong here, Lempke's name will be preoccupied.

ab. fuscata Nordstrom. Svenska Fjarilar 1940. p. 259.

ab. confixaria H.-Sch. Schmott. Eur. 3 p. 152 pl. 55 f. 334 1847.

The median band narrowed and the distal area somewhat weakly marked and rather uniformly ochreous.

ab. deletata Fuchs. Jahrb. Nass. Ver. 53 p. 58 1900.

Nearly unicolorous grey, forewing with a reddish tinge basally and along the costal margin. Markings absent.

ab. brunnescens Lempke. Tijdschr. Ent. 92 p. 175 1950.

Between the basal and central area a broad yellow-brown band, the whole outer area of the forewings also yellow-brown.

ab. planicolor Lempke. Tijdschr. Ent. 92 p. 175 1950. (descript. vol. 90 n. 147)

The central area of the forewings of a unicolorous dark tint, the normal tint being paler.

ab. griseocamparia Vorbrodt. Mitt. Schweiz Ent. Ges. 12 p. 475 1917.

= contrastaria Nordstrom. Svenska Fjar. 1940 p. 259 pl. 37 f. 8 C.

Unusually variegated, markings sharp and contrasted, particularly characterised by the narrow pale grey middle area which is bordered on both sides by cherry-red in which the dark spot lies.

Lempke makes contrastaria Nordst. a synonym.

ab. effusa Muller. Z. Ost. Ent. Ver. 15 p. 94 pl. 12 f. 5-6 1930.

The outer white boundary line of the middle area of the forewings indistinct (suffused) on outer side, thus the next appears broader and is mixed up indistinctly with the otherwise completely markingless rufous outer band. Hindwing unusually pale without markings.

ab. extrema Schneider. Ent. Rdsch. 49 p. 146 fig. 2 1932.

Forewings with basal area normal but the middle band wholly obliterated merging with the almost markingless grey outer area.

ab. griseofasciata Lempke. Tijdschr. Ent. 92 p. 175 1950.

All markings normal, but the ground colour of the basal and central area dark greyish instead of reddish.

ab. nigrofasciata Djakonov. Jahrb. Wirtjan. Staatsmus. 4 p. 35 1926.

The central band of the forewings black.

ab. emutata Wagner. *Int. Ent. Z.* 1919: 13: p. 158 pl. 1. f. 7-8.

Mainly yellowish white, the centre of the median area broadly pale, the markings standing out strongly by contrast.

ab. radiata Dioszeghy.

Dirty white-yellow, the lines obsolete, median band brown-grey, its distal teeth rounded off, the terminal area rayed with brown on the veins.

ab. radiata Czokelius. Verh. Mitt. Siebenburg. V. Nat. 72-74 p. 252 1924.

ab. tangens Lempke. Tijdschr. Ent. 92 p. 175 1950. (descript. vol. 90 n. 147)

The two transverse lines which border the central area of the forewings, touch each other below the middle and then separate again.

ab. coarctata Cockayne. Ent. Rec. 65 p. 163 1953.

= approximata Lempke. Tijdschr. Ent. 1967. 110. p. 283.

The median band of the forewings is narrow.

ab. lilacina Lempke. Tijdschr. Ent. 1967. 110. p. 282.

Forewings with the central area pale lilac, bordered by the dark bands.

ab. rufofasciata Lempke. Tijdschr. Ent. 1967. 110. p. 282.

Forewings with the central area clear red, contrasting beautifully with a pale whitish ground colour.

ab. *brevifasciata* Lempke. Tijdschr. Ent. 1967. 110. p. 283; pl. 14, f. 2.
On the forewings the dark central band does not reach the costa, but is separated from it by a pale band.

ab. *margaritata* Lempke. Tijdschr. Ent. 1967. 110. p. 283; pl. 14, f. 3.
Forewings with the central band reduced to a number of separate spots.

ab. *nigrescens* Lempke. Tijdschr. Ent. 1967. 110. p. 283.
Forewings almost unicolorous blackish; hindwings also strongly darkened.

ab. *postmarginata* Lempke. Tijdschr. Ent. 1967. 110. p. 283; pl. 14, f. 4.
Hindwings with a broad, dark, strongly contrasting band along the outer margin.

ab. fumata Smith. Ent. Rec. 66 p. 97 1954.

The whole surface of fore and hindwings suffused with smoky grey.

ab. planicolor Lempke. Tijdschr. Ent. 92 p. 180 1950. (descript. vol. 90 p. 147.)

The central area of the forewings of a unicolorous dark tint, in normal specimens this area is paler.

ab. binderi Stauder. Int. Ent. 2, 17 p. 113 1923.

The central band delicate rosy flesh colour, with its dark markings relatively weak.

ab. hafneri Stauder. Int. Ent. 3, 17 p. 113 1923.

The central band paler than usual, the ground colour also pale.

ab. suffusa Hannemann. Suppl. Ent. 6 p. 17 fig. 16 1917.

Forewings brownish-grey with washed out markings, hindwings whitish.

ab. inversa Vorbrodtt.

Dark ash-grey, suffused with chestnut-brown, the median band of the forewing white slightly dusted with yellow-brown.

ab. coarctata Prout. Scitz 4 p. 228 1914.

= coarctata Lumna Ent. 2, 52 p. 96 fig. 8 1938.

The central band greatly narrowed, usually very dark.

ab. interrupta Hannemann. Suppl. Ent. 6 p. 17 fig. 17 1917.

The figure shows the central band greatly narrowed and split in the middle into two parts.

ab. tangens Lempke. Tijdschr. Ent. 92 p. 181 1950. (descript. vol. 90 p. 147)

The two transverse lines which border the central area of the forewings, touch each other below the middle and then separate again.

ab. cotangens Lempke. Tijdschr. Ent. 92 p. 181 1950. (descript. vol. 90 p. 147)

The two transverse lines which border the central area of the forewings, touch each other below the middle and remain united.

ab. divisa Lempke. Tijdschr. Ent. 92 p. 180 1950.

The central area of the forewings showing the normal border lines but the central part pale, similar in tint to the rest of the wing.

ab. costimacula Cockayne. Ent. Rec. 65 p. 163 pl. 12 f. 14 1953.

The median band reduced to a large dark mark on the costa.

ab. nigrolineata Lempke. Tijdschr. Ent. 1967. 110. p. 280.

Forewings with the central band bordered on both sides by thick black lines.

ab. latefasciata Lempke. Tijdschr. Ent. 1967. 110. p. 281.

Forewings with the central band strikingly widened.

ab. defasciata Lempke. Tijdschr. Ent. 1967. 110. p. 281; pl. 14, f. 1.

Forewings unicolorous pale grey, the nervures white; the basal area and the subterminal line being the only markings present, the latter obsolescent towards the inner margin and marked by a brown dash on the costa. Hindwings uniform pale grey, with an obsolescent subterminal line.

The figure shows traces of markings along the costa, outer and inner margins of the forewings, and also in the basal area of the hindwings.

In both places where Lempke's English translation says "obsolete", he means "obsolescent".

obstinata F.
= fluviata Hbn. aberrational forms etc.

ab. purpurea Dannehl. Ent. Z. 41 p. 19 1927.

In the female deep purple red without the black-grey median band or grey-brown shades. In the male a strong red suffusion.

ab. olivacea Mathew. Ent. Rec. 18 p. 283 1906.

Female in which the purple brown is replaced by olive brown.

ab. marginata Mathew. Ent. Rec. 18 p. 282 1906.

The fringes conspicuously pearly grey.

ab. obsolota Mathew. Ent. Rec. 18 p. 283 1906.

Male in which the dark median band is nearly or quite absent.

ab. inoellata Lempke. Tijdschr. Ent. 92 p. 184 1950.

Forewings without the white ring round the central spot. Female form.

ab. kuthyi Szent-Ivany. Ent. Z. 52 p. 57 fig. 1938.

= costovata Foltin. Z. Ost. Ent. Ver. 23 p. 126 1938.

Median band strongly interrupted, more so than in ab. interrupta Schawd. Male.

ab. interrupta Schawerda. Iris 35 p. 124 1921.

Male in which the median band is interrupted in the middle.

ab. delineata Lempke. Tijdschr. Ent. 1967. 110. p. 278.

With the exception of the darker central area all transverse lines on the forewings obsolescent or absent.

Lempke uses "obsolete" in his English translation when referring to the transverse lines; as before, he means "obsolescent".

♀ ab. obscura Lempke. Tijdschr. Ent. 1967. 110. p. 279.

Female in which the ground colour of the forewings is blackish red-brown, and the median band, hindwings and body are black-grey.

