**Brampton springback binder**

Directions for use:
1. Place inner back cover on table. Take front cover in left hand and press gently just enough to slide out inner container.
2. Insert contents into inner container and slide back.
3. Never force open binder more than necessary.
   Never try to pull the sides apart.

Stocked in the following sizes: (binding edge is given first)

<table>
<thead>
<tr>
<th>Ref</th>
<th>Taking sheets up to:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lms x mm</td>
</tr>
<tr>
<td>No 1</td>
<td>Octavo</td>
</tr>
<tr>
<td>No 2</td>
<td>Quarto</td>
</tr>
<tr>
<td>No 3</td>
<td>Foolscap</td>
</tr>
<tr>
<td>No 3</td>
<td>Foolscap oblong</td>
</tr>
<tr>
<td>No 4</td>
<td>Music</td>
</tr>
<tr>
<td>No 7</td>
<td>Brief</td>
</tr>
<tr>
<td>No 8</td>
<td>Demy</td>
</tr>
</tbody>
</table>

PIONEER
Regd in Great Britain
Made in Britain

SUPPLIER FOR THE PUBLIC SERVICE

---

406572-1300
ABERRATIONAL AND SUBSPECIFIC FORMS OF BRITISH LEPIDOPTERA

BY

A. L. GOODSON & D. K. READ.

FOR INTERNAL USE ONLY

Volume 6

Sphingidae & Bombycidae

Part 2
<table>
<thead>
<tr>
<th>Species</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>aerugina Linn.</td>
<td>21</td>
</tr>
<tr>
<td>abruma Schiff.</td>
<td>22</td>
</tr>
<tr>
<td>bauhina Ruiz.</td>
<td>23</td>
</tr>
<tr>
<td>caja Linn.</td>
<td>24</td>
</tr>
<tr>
<td>cardiastrum Ruiz.</td>
<td>25</td>
</tr>
<tr>
<td>cecropia Linn.</td>
<td>26</td>
</tr>
<tr>
<td>coccinea Ruiz.</td>
<td>27</td>
</tr>
<tr>
<td>cotinera Ruiz.</td>
<td>28</td>
</tr>
<tr>
<td>courbain Linn.</td>
<td>29</td>
</tr>
<tr>
<td>cyclosperma Linn.</td>
<td>30</td>
</tr>
<tr>
<td>cymulea Ruiz.</td>
<td>31</td>
</tr>
<tr>
<td>deplana Linn.</td>
<td>32</td>
</tr>
<tr>
<td>depressa Linn.</td>
<td>33</td>
</tr>
<tr>
<td>depilata Linn.</td>
<td>34</td>
</tr>
<tr>
<td>falcataria Linn.</td>
<td>35</td>
</tr>
<tr>
<td>fulgescens Linn.</td>
<td>36</td>
</tr>
<tr>
<td>glaucata Scop.</td>
<td>37</td>
</tr>
<tr>
<td>griesia Ruiz.</td>
<td>38</td>
</tr>
<tr>
<td>irrorella Linn.</td>
<td>39</td>
</tr>
<tr>
<td>jasminae Linn.</td>
<td>40</td>
</tr>
<tr>
<td>lagerstroemia Linn.</td>
<td>41</td>
</tr>
<tr>
<td>lutea Ruiz.</td>
<td>42</td>
</tr>
<tr>
<td>lucida Ruiz.</td>
<td>43</td>
</tr>
<tr>
<td>lucida Ruiz.</td>
<td>44</td>
</tr>
<tr>
<td>lucera Ruiz.</td>
<td>45</td>
</tr>
<tr>
<td>mendica Clerck.</td>
<td>46</td>
</tr>
<tr>
<td>manchastri Linn.</td>
<td>47</td>
</tr>
<tr>
<td>mimosae Linn.</td>
<td>48</td>
</tr>
<tr>
<td>mimosa Linn.</td>
<td>49</td>
</tr>
<tr>
<td>mimosa Ruiz.</td>
<td>50</td>
</tr>
<tr>
<td>mucronata Ruiz.</td>
<td>51</td>
</tr>
<tr>
<td>mucrona Ruiz.</td>
<td>52</td>
</tr>
<tr>
<td>plantaginis Linn.</td>
<td>53</td>
</tr>
<tr>
<td>pygmaea Ruiz.</td>
<td>54</td>
</tr>
</tbody>
</table>
Drepana Schrank.


*Schiffermuller.* *Men., Verz.* 1775. p. 64.

aberrational forms etc.

*Falcataria Lin.* typical form — ochreous or pale brownish wings with a spot near middle of forewing. The Linnaean type does not show any "blue-grey" which Linnaeus mentions in his Latin description—wings *falcatiae* glaucis. *Lempke* in *Lambillionia* 38, p. 3–6 states that in his opinion this was a mistake.

*ab. pallida* Stephan. *Iris* 1924, 38, p. 206.

*ab. pallida* Stephan. *Iris* 1924, 38, p. 206.

Quite pale examples, with almost obsolete markings on the hindwings.


Quite pale, dark ochre-yellow, without any trace of the normal yellow color, markings normal.


*ab. obscura* Stauder. *Its., Diss., Ins., Biol.* 1916, 12, p. 111.


*ab. lokii* Skala. *Ita., Ost., Ent., Ver.* 1929, 14, p. 36.

Both fore and hindwings strongly darkened, particularly the costa, apex, and marginal area of the forewing. Hindwings also darkened except at base and on costa. Stauder's *obscura* had the ground color so dark brown that one could take it for *curvatula* but the markings prove it to be *falcataria.*

Kaucki's *klemsiewiczii* was merely described as "Dark specimens."

Skala's *lokii* was described as "dark specimens resembling *curvatula* in color but not in markings.


Reminding one of *curvatula,* the wings dark violet-brown, the markings strong and darker. The hindwings do not show in the costal area the strong paling usually present and the transverse markings are not confined to the inner-marginal half of the wing but continue right up to the costa.

Very similar to the preceding and placed as a synonym by some authors but the hindwings lacking the usual pale costal half would seem to be sufficient to separate it, entirely brown hindwings being much less common.


More brown than the typical form but not so dark as *ab. infernalis* Hoffmann. The ground color brown, free from mixture.


The second and third transverse lines of the forewings are close together, sometimes even touching each other in various places, so that the median area is strongly narrowed.


The dark line running from the apex of forewing to the inner margin is completely absent.
ab. crassistrigaria Strand. Seitz Macrolep. 1911, 2, p. 199.
Primarily an underside form. The two transverse lines on the underside of both fore and hindwings are twice as broad as usual and also wider apart. The inner one crosses the end of the cell, running through the outer of the two small discal spots; normally this line is well separated from both this spot and the end of the cell. The upperside is darker than normal.

The summer generation. The line from the apex of forewing to the inner margin is narrower and less distinct than in the spring generation.

The race from Scotland. Differs from the typical form by its much lighter ground color, the lack of brownish suffusion and the very dark and distinct marks. It is not identical with ab. pallida Stephan as all the marks are very distinct.
Dropana Schrank,

binaria Hufnagel, Berl. Mag. 1767, 4, p. 316.
= hamula Schiffermüller, Wien. Ver. 1775, p. 64.

aberrational forms etc.

binaria Hufn. typical form — male — both fore and hindwings brownish yellow with two pale transverse lines. Female lighter, especially the hindwings which are yellow.

...culturioideae Dannehl, Mitt. Munch. Ent. Ges. 1929, 19, p. 103.
Forewings strongly violet-grey darkened, the central area only weakly tinted but the bordering transverse pale lines distinctly marked. Hindwings with only the central band darkened. Sex not stated.

...oranaria Strand, Seitz Macrolep. 1911, 2, p. 200, pl. 23, row i. (figured as oranula.)
Fore and hindwings greyish-violet, the costal margin of the forewing bright yellow, the distal transverse line present but the proximal one only slightly indicated.

...liliputaria Strand, Seitz Macrolep. 1911, 2, p. 200.
Male ground colour, hardly a trace of the normal dark colour on the outer border of apex of forewing. The specimen is very small, length of forewing only 13-14 mm.
Although the name is apparently given because of the small size, Strand links other characters which presumably must be present.

...umbratula Staudinger, Cat. Ed. 1901, p. 129.
Much darker, chestnut in colour.
Sex not stated.

Wings strongly darkened especially in the central area of the fore and hindwings, and before the outer border of the forewings.

The darkest of the dark forms, a deep brown predominating over the blue tones, the spots on the forewing hardly visible as, to a lesser degree, are the pale bands. Described from Italy and may be racial there. Sex not stated.

...impucta Lempke, Tijdschr. Ent. 1960, 103, p. 189.
Upperside of the forewings without the two dark discal spots.

...obsoleta Lempke, Tijdschr. Ent. 1960, 103, p. 188.
Unicolorous female, yellowish with obsolete transverse lines.

gen. aest. aestivaria Lempke, Lamb, 1938, 38, p. 12, pl. 1, f. 7.
The summer generation. The colour less warm, greyer, in both sexes; the two dark spots on the forewing smaller; the moths are smaller, the males are sometimes real dwarves.
cultraria Fabricius, Syst. Ent. 1775, p. 621. 
\[ = \text{sicula Esper, Eur. Schmett. 1787, p. 378, pl. 74, f. 4-5.} \]
\[ = \text{unguicula Hubner, Samml, Eur. Schmett. 1800-03, Bombyc, pl. 12, f. 4}. \]

aberrational forms etc.

cultraria Fab. typical form — the Spring generation. Orange yellow.

ab. flava, Lempke, Lamb, 1938, 38, p. 12. The ground colour of fore and hindwings yellow.

ab. obscura Lempke, Tijdschr. Ent. 1960, 103, p. 189. Ground colour dark brownish, about the same colour as the males of binaria Hufn., transverse lines weak or indistinct.

ab. latefasciata Lempke, Tijdschr. Ent. 1960, 103, p. 189. The central band on the forewings distinctly widened, because the inner transverse line is nearer to the base.

lacertinaria Linnaeus, typical form - yellowish with dusky speckling, the central area showing two dusky transverse lines. Hindwings paler without speckling. Spring gen.


Described as a subspecies from England but there appears to be no constant difference, Schulze named it on the strength of 3 68 and 2 99. It is placed as a synonym of the type form.


Specimens of the summer generation. Larger and paler.


Occurs in the summer generation. Ground colour of the forewings ochre-yellowish. I have not seen the original description. According to Schulze it should be the name for gen. aest. but all specimens of the summer generation are not ochreous and most authors treat it merely as an ab.

ab. internes Schulze, Berl. Ent. (1912) 1913. 57. p. 117. pl. 3. f. 4.

A specimen of the spring generation, taken in May, but with the appearance of the summer generation. The ground colour ochre-yellow but particularly in the distal part of the forewing strongly darkened. The dusting on the veins and the transverse lines are of the colour of the spring generation but the tooth in cell 13 is fails.

ab. conjuncta Rebel, Berge's Schmett. 1910. p. 137.

The two transverse lines of the forewing only present on the inner-marginal half and flow together just below the middle spot.

ab. conjuncta Richardson, (nom. prec. Rebel.) Ent. Rec. 1936. 64. p. 272. pl. 11. f. 17.

The two transverse lines of the forewing are drawn closer together and joined on the costa by a short bar. The basal area is pale.


The two transverse lines of the forewing are close together so that the central area is very narrow.

ab. fasciata Lemcke, Lamb. 1938. 38. p. 11. (fig. Tijdschr. Ent. 103. pl. 18. f. 6.)

On the forewing the space between the two transverse lines is filled up with dark so that a transverse band results.

ab. impuncta Lemcke, Lamb. 1938. 38. p. 11.

Forewing without the usual discoidal spot.


Forewings black-grey, with normal markings, without the brownish tint in the central area. Hindwings also darkened, especially along the outer border. Body black-grey.

ab. scincula Hubner, Samml. Eur. Schmett. Bombyc. 1800-03. pl. 12. f. 30. (c)

Some authors regard this as an aberration but it would appear to be the male of the typical form, the V, on the same plate, being lacertula. Both are placed here as synonyms of the type form.
ab. dimidiata, Tengstrom, Fauna & Flora Fenn., Forhld. 1869, 10, p. 302.
gilix Leach. glaucata Scopoli. Ent. Carn. 1763, p. 221.
= spinula Schiffermuller. Wien. Vers. 1775, p. 64.
= modesta Walch. Naturforsch. 1779, 13, p. 27, pl. 3, f. 4a & b.

aberrational forms etc.

Glaucata Scop. typical form — specimens of the summer generation. Wings white, with median fascia fuscous. Hindwings with fuscous border, otherwise white.

Gen, vern, obscurata Lempke. Lamb. 1938, 38, p. 14, pl. 1, t. 10. Specimens of the spring generation. Larger size, the oval spot in middle of forewing almost as dark as the inner-marginal spot, the marking on the outer border heavier. The hindwing crossed in the center by an obscure band with rather indistinct outline, which is lacking in the summer generation.

Ab, aeruginata Turati. Nat. Sic. 1907, 20, p. 22, pl. 1, f. 17 & 19. Forewings white, the marginal spots very weak; a brown triangular spot in the middle of the inner margin. Head, thorax, abdomen, legs, etc., white. The upper part of the middle mark on the forewings is absent, as it is in the following two forms.

Ab, angelina Dannehl. Ent. Z. 1925, 39, p. 119. Forewings with the middle band marking effaced except for a little triangular spot in the middle of the inner margin. In extreme specimens the submarginal row of spots is also absent. This form can only be separated in its extreme form with the submarginal spots absent, in the preceding form they are present but very weak.

Ab, albescens Lempke. Tijdschr. Ent. 1960, 103, p. 190. Forewing with the upper part of the middle band very weakly marked but the small triangle on the inner margin present and normal. The row of spots on the outer margin also normal. Differs from the preceding two forms by the presence of normal blackish marginal spots.
= Ludvigella Muller. Faun. Friedr. 1764, p. 36.
= palliola Schiffmer. ien Ver. 1775, p. 69.

aberrational forms etc.

cucullatella Linnaeus. typical form — wings whitish-grey, forewings with black curved stripe.

Wings smoky-bluish, with the base, and a very obscure central line, darker.

Basal area of the forewings not darkened but of the same grey colour of the rest of the wing, but the bordering of this area contrasts sharply.

The basal area and outer area of the forewings of about the same colour, the central area pale and contrasts strongly. The pale central band may reach to the central shade and is rather narrow in this case, or may reach the postmedian line when it is much broader.

ab. nigrofasciata Cockayne. Ent. Soc. 1934, 66, p. 65, pl. 2, f. 5.
Basal and marginal areas of the forewing are of the same pale brown colour, but the whole of the median area is black. Thus the area which is normally black at the base is pale and the median area which is usually pale is black.
albula Schiff. type form — Schiffermüller merely mentions the larva.

Forewings with a broad black-brown central area separated by the pale sharp wavy line from the dark grey-brown marginal area.

A dark brown sharply contrasting line runs through the yellow-brown central area from costa to inner margin.

The whole outer area of the forewings is unicolorous white.

Markings of the forewings strongly reduced, only one or two transverse lines remain, hindwings normal.

Forewings with the basal and distal areas pure white, the pale yellowish transverse band is narrow and stripe-like. On the costa and termen there are very small yellow streaks.

Bytinski-Salz described his albata as having the forewings chalk-white, entirely without dark scaling, the only visible pattern an extremely narrow basal streak, a very much reduced median band of brownish which narrows towards the hindmargin, and a series of small costal spots and very narrow marginal band which does not extend to the apex. Hindwings lighter than in the typical form. The v usually more distinctly marked.
strigula Schiffermuller. "tea, Verz. 1775, p. 69.


aberrational forms etc.
pl. 227, f. 7.

aberrational forms etc.

confusalis H.-Schaff. type form —

- = pulveraria Dufrane, Lamb. 1938, p. 50.
Forewings soft grey, showing no white except on the scale-tufts. Hindwings uniform silky grey. These grey forms are most inconspicuous on tree trunks in Epping Forest whilst the ordinary form shows up like a white snow-flake. Dufrane's pulveraria had the wings strongly charged with black atoms, they would thus be grey and almost certainly the same form as columbina.

The basal half of the forewings of the normal whitish-grey ground colour, the outer half dark grey.

The whole forewing tinged with rather dark grey, the markings normal. The hindwings are not mentioned so presumably are of the normal colour and not silky-grey as in columbina Image, otherwise the form would seem to be very similar.

Completely white, with weak transverse lines, otherwise without markings.

ab. fuscoaurvata Dannehl. Ent. 2, 1925, 39, p. 16.
A broad black-brown-filled, curved, transverse band, the borders of which stand out strikingly. This presumably is the postmedian band which normally is in the form of a double line not filled in with dark.
aberrational forms etc.

tuberculana Bose. type form — Forewings white, dotted and spotted with fuscous and grey, with three tubercules near the costa. Hindwings pale fuscous with central black spot.


The central area of the forewing completely filled up with pale brown.

The yellow-brown of the forewings replaced by black-brown.

The normally dark greyish-brown colour has changed into a yellowish-brown.
This description is puzzling. I would not say the species is normally "dark greyish-brown". Heydemann takes the opposite view and says the "yellow-brown" is normal.


The upperside of the forewings wholly unicolorous smoke-brown, however the three scale-tufts below the costae are distinctly visible.

Not only the central area is brown but the whole of the forewing also.
Possibly the same as the preceding but since Berger says furoasa is "smoke-brown" his form is possibly darker, spitzi presumably is of the same colour as the normal central area but the colour is spread all over the wings.

Forewings white with two weakly visible transverse lines.
Original description not yet seen.

Entirely white.
Original description not yet seen.

rubricollis Linn.  type form -- wings black, abdomen tip yellow-orange, collar red.

rubricollis Linn., type form -- wings black, abdomen tip yellow-orange, collar red.

ab. flavicollis Meuburger. Soc. Ent. 1903. 17. p. 159.
The collar pale yellow instead of red.

(nom. nov. pro ab. 1. Harrés. Cat. Lep. Fal. 3. p. 476.)
The hindwings pale gray.
aberrational forms etc.

ab. dilucida Spuler, Schmett. Eur. 1906, 2, p. 144. Less scaled than the type form, therefore more transparent.

ab. alpina Uffeln, Ent. 1912, 26, p. 13. Differs by the rather intense blackening of the wings, especially on the margins and veins. Taken flying among the type form in the Alpes and may be confined to such localities.

ab. hemerobia Hubner, Samml. Eur. Schmett. 1800-03, 2, p. 118, pl. 17, f. 63. The wings without pattern or scales. The figure shows the wings white without markings of any kind. Hubner says it is most probably an example of the present species.
Thumatha Walker.


aberrational forms etc.

senex Hub. type form — the figure shows the wings pale buff with prominent black discoidal spot on forewings and a marginal row of short streaks.

ab. fumosa Bankes. Entom. 1809, 42, p. 60.
Forewings smoky-brown, hindwings rather paler, the markings normal but rendered very inconspicuous by the darkness of the ground colour.

Darker buff, densely peppered with black, forewings with five black lines and a shaded submarginal band clouded with blackish.
I have not seen the original description.
aberrational forms etc.

miniata Forst. type form -- pale red, with undulate line near base and "character" line in middle; a series of black spots in margin.


ab. rosea Fabricius. Ent. 1775. p. 75.

ab. rubicunda Schiffmuller, Icon. 1799. p. 66.


Ground colour yellowish, the borders pale red. Hindwings very pale yellowish-rosy, the borders a little redder.


Ground colour of the forewings red, the costa and outer border dark red. Hindwings pale red, also with deep red outer border.

ab. fasciata Rebel. Berge's Schmett. 1910. p. 435. (Fig. in Soc. Ent. Belg. 1895. p. 27.) The area between the transverse line and the outer row of black spots on the forewing is filled up with blackish.


The ante and postmedian lines close together, the postmedian not sagitate. The lines are more or less confluent at vein V (outer) which is just above the inner margin. This narrowed median area is blackish and the normally small dots in the margin are in the form of fairly long little black lines.


The dentate line of the forewing confluent with the marginal dots. I have not seen the original description.


The fringes of the forewing black.


The black dentate transverse line and the basal line completely absent, the marginal spots remain.


Without any trace of black markings on the wings.
miniata Forst., continued.

ab. dentatelineata Lemke, Bemfortia 1964, II, p. 141.
The outermost rounded curves of the postmedian line changed into sharp points.
I do not understand Lemke's description, all our British specimens have sharp points.

aberrational forms etc.

irrorella Lin. type form — wings yellow, the forewings with three rows of black spots.

Ground colour of the wings orange-yellow, the head, patagiae and whole of the abdomen also tinted with orange.

Ground colour pale orange-yellow. This would seem to be little different from the type form.

The ground colour of the wings darkened to brownish. Hirschke's brunneascens was described as "smoky darkened". By the same brunneascens it would appear to be the same form.

The figure in Esper, which Borkhausen named, shows the spots of the forewing postmedian line rayed inwards to unite in streaks with the three spots of the antemedian line thus forming two horizontal black lines, one at costa and one at inner margin; in between these a Roman letter V placed sideways, its point towards the base.

Similar but more extreme than the following ab. andereggi. The veins of the forewing blackened from base right out to the subterminal spots, appearing like rays. Hindwing similar but to a lesser degree.

The veins of the forewing blackened from the base outwards for two thirds of the wing, the usual spots therefore not apparent, except the subterminal row.

All wings coffee-brown but the markings as in ab. andereggi which has the veins blackened from base as far as the postmedian row of spots.

All black spots of the hindwing absent.
In Britain this is a most frequent form and not worth separating.
irrorilla Linn. continued.


**Cybosia Hubner.**


= eborea Esper. An. Schmett. 1786. 4, p. 93. pl. 92. 2. 4-5.

aberrational forms etc.

*mesomella Lin. type form* -- the wings above white, underneath yellow and black internally.

Many authors state that the type form is yellow and consequently make the white form an aberration. See above synonym -albescens Closs and albida Catherine.


The forewings yellow instead of whitish.


The ground colour of the forewings greyish-yellow.


The ground colour of the forewings dark grey, the borders yellow.


The hindwings cream coloured with grey dusting in the basal third. Lempke's *postnallida* had the hindwings of the same colour as the forewings.


Hindwings blackish with yellow fringes.
quadra Linn. type form -- Forewings yellow with two black spots; hindwings yellow.

Forewings unicolorous yellow-grey without the usual dark border.

Forewings, particularly the central area, strongly blackish darkened, only the base is yellow.

ab. depauperata Henriot. Hmat. Pap. 1923. 1. p. 244.
= insolata Dannehl. Ent. Z. 1929. 42. p. 315.
The chief characteristic is the absence of the black basal costal streak of the forewing which is yellowish-grey instead of the normal dirty grey. The margin which normally darker is here lighter than the ground colour, in the hindwing the dark shade on the costa is absent.
The description of Dannehl's, insolata is practically the same.

ab. triangularis Lambe. Mjöseln. Ent. 1901. 104. p. 117.
The lower black spot of the forewing is triangular in shape.

The lower spot on the inner margin fails.

The lower spot of the forewing is absent and the upper one almost so. Since Spuler gives the German name as "Die Pointlose" it can be assumed that the upper spot can also be completely absent.

The spots of the forewing greatly extended lengthwise.

ab. confluaens Dumont. Ann. Soc. Ent. Fr. 1903. 7e. 9. 476. t. 3. f. 6.
Forewings with a black elbowed band across the middle connect the upper spot on the costa with the lower one on the inner margin.

Ground colour of the normal v yellow but the black spots of the forewing so confluent as to totally obscure most of the distal half of the wing. This part is all black, the position of the normal black spots being indicated by bright steel-blue shading with the normal costal shade much increased and darkened to bluish-grey.
The figure shows the outer third of the forewing from the costa outward to the margin, but showing a very wide marginal band.
The ground colour of the wings yellowish-white.
aberrational forms etc.

d $\text{deplana Esper.}$ type form -- forewings pale ochre-yellow mixed with reddish, hindwings blackish-suffused, with a red-yellow border.

$\delta$ $\text{depressa Esper.}$ unicolorous dark ash-grey, the borders (fringes) red-yellow, also the costa of forewings.

Forewings pale yellow, hindwings whitish-yellow, outer margin often slightly darker.

Forewings whitish-grey, hindwings whitish, outer border slightly darker.

d $\text{ab. plumbea Cockayne.}$ Ent. Fee. 1948, 50, p. 25 (fig. vol. 23, pi. 11b, c.).
Forewings uniformly deep brownish-grey, hindwings uniformly dark grey with the basal area no lighter than the marginal. Head, thorax, legs dull grey, abdomen wholly dark grey.

$\delta$ ab. $\text{foeminea Guenee.}$ Ann. Soc. Bnt. Fr. 18pl, p. 4.
Absolutely of the same colour as the female, the hindwings unicolorous grey without the appearance of a terminal band.

This would seem to be very similar to the preceding ab. $\text{plumbea.}$

= atra Forstenius, Ent. Meddr. 1956, 77, p. 112.
Unicolorous black-grey with a violet shimmer, the base, costa, a short streak in the inner third of the subcostal, and the fringes strikingly dark brown. Hindwing dark grey, the fringes as on forewing. Head, thorax, antennae dark brown, abdomen dark grey. Forstenius described his atra as uniformly black-brown, hindwing greyish-black.

Forewings pale yellow.

Forewings whitish-grey, hindwings whitish, outer border slightly darker.

$\delta$ ab. $\text{unicolora Quaasen.}$ Ann. Soc. Ent. Fr. 18pl, p. 54.
Forewings entirely bright yellow ochreous, hindwing yellow-ochreous.
Bänkes unicolor was wholly rich orange-buff, without any tinge of grey, hindwing orange-buff tinged grey.
The forewings without the pale costal streak, the ground colour normal.

Lithosia Fabricius, p.1.

grisola Hubner, Rev. Eur. Schmett. 1800-09,

aberrational forms etc.

grisola Hubn., type form — Forewings leaden-grey with pale yellowish costa, hindwings somewhat paler.

  = stramineola Doubleday, Ent. 1847, p. 1914.
Wings yellow or straw.
Oberthur's rondoli was said to have the wings more golden but does not seem worthy of separation.

Ground colour of the forewings and costal part of hindwings orange-yellow.

Forewings pale grey, a trifle darker than the hindwings.
Lithosia Fabricius.

= complana Boisduval. Lepes 1834, 2, p. 97.

Note. plumbeola Hbn. Samml. Sup. Schmett. 1800-03, p. 127, pl. 24, f. 100 may or may not be the present species, the author himself says it is complana Linna.

Forewings pale grey, costa whitish-yellow instead of yellow.
aberrational forms etc.

complana Linna, type form -- forewings greyish, the margins yellow, hindwings totally yellow.

Forewings pale grey, costa whitish-yellow instead of yellow.

Ground colour of the forewings yellow, with only a touch of grey, so that the broad yellow costal stripe is still visible. Hindwings of the same pale yellow shade as the costal stripe of forewings.

ab. postgrisescens Lempke. Bijschr. Nat. 1961, 104, p. 120.
Hindwings, for the greater part, of the same grey tint as the forewings. The normal yellow colour remains only visible along the borders, gradually changing into grey.
Lithosia Fabriciana.

sericoa Gregson, Phil. Trans. Intelligenc 1662, t. 11.

Lithosia Fabricius.


Observational forms etc.

pygnaeola Dbl. _type form — forewings grey, the costa pale straw near the apex, hindwings whitish, the upper part broadly shaded with grey.

Forewings unicolorous yellow, without the grey tint. Hindwings pale yellow with broad grey costal half.

Forewings dark grey, usually still with narrow yellow costa. Hindwings grey, costal half darker than the inner half.

pallifrons Feller. ?
There are many differences of opinion on the status of this form. Some authors place it as a subspecies of _pygnaeola_ Dbl., which is rather unlikely, other authors give it specific rank. For the time being the description is given here and its rank left open.
Forehead yellowish without any blackish mixture, the wings yellow, the antennae yellow. Hindwings shaded with ash-grey.
= vitellina Boisd. Bois., 1834. p. 199. t. 57. f. 10. (fig. 2.)
= vitellides Strandl. nov. ser. vitellina Bois., Loc. Cat., 1834. p. 13. f. 10 (neo. f. 3. )

aberrational forms etc.

camiola Huber. typ. form -- the figure shows the forewings grey, with orange-yellow costal stripe. Hindwings whitish, slightly tinged yellow.

ab.albeola Huber. Samml. Eur. Schmett. 1803-08. pl. 66. f. 264. (Bombya)
The figure shows an extremely pale example with the forewings practically white and hindwings of the same tint. The usual costal stripe is orange-yellow.
camiola Hambr is possibly the same form but is described as pearly-white. See below.

Forewings mouse-grey, as dark as the darkest complana, almost as dark as lurideola.

Forewings pearly-white. Hindwings similar with the upper part cream coloured. This may possibly be the same form as albeola Huber. See above.
aberrational forms etc.

sororcula Hufn. type form — wings orange-yellow.

ab. flavo Lempke. Tijdschr. Ent. 1938, 81, p. 263.
The forewings yellow instead of orange-yellow.

Forewings blue-grey, with only the costa and fringes yellow.
aberrational forms etc.

muscorda Hufn. type form —

— infumata Marquardt. Ent. 1960. 70, p. 103.

Forewings uniformly darkened, the pale costal area standing out distinctly, the flages and body of normal colour. The spots of the forewings strengthened and somewhat streak-like.

Marquardt's infumata was described from the same specimens as "blackish-grey, with the exception of the costa." The spots are not mentioned.

Ground colour of the forewings yellow-grey.

Several or all of the spots of the forewings lengthened into stripes. The form is not so extreme as ab. simonensis Logrand.

— ab. simonensis Logrand. Ent. 1936. 8, p. 120, pl. 1, f. 10.
The spots of the forewings elongated along the veins towards the outer margin. Besides this the two lowest of the oblique row of four, are elongated into two prongs, each prong following a vein.
The figure shows the costal spot lengthened into a long thick streak, the very small one below it into a very thin streak, and the two beneath this bifurcated, sending out two prongs to form a V placed sideways, its point towards the base. The two spots above the inner margin form long thick streaks.

— ab. demaburrata Dahumahl. Ent. 1925. 39, p. 16.
The three, or two, spots lying above the inner margin are absent, so that only the upper oblique row of three spots remain.

— ab. immaculata Oudemans. Tijdschr. 1899. 42, p. 19. (Descript. vol. 39, p. 82, fig. 40, pl. 12.)
Schultz described his concealer as having the oblique band of spots beyond the middle of the forewings and the two above the inner margin, completely absent. He cites the same figure in Tijdschr. 1909. 40, pl. 12, f. 2, which Oudemans gives.
Mendica Guen. Typical form - male: Clor, b. menl, dark grey brown with 8 spots. Female: antennae are pectinate, as is usual, and so is the male. The typical form is generally accepted to be dark brown with eight black spots. The female is white with a similar number of spots but the antennae varies a great deal.

Male with the ground colour of body and wings pale grey-brown.

Feamle. Formerly called calida, the hindwing normal milky-white. Table is light sandy-brown, we have one such example.

Male with the ground colour very much lighter in the male. The male only.

Like as before but the colour very much lighter in the male. The typical form shows this. The hindwing normal milky-white. Male is light sandy-brown, we have one such example.

Oberthur gives this name to specimens from Ireland which are creamy-white to light brown, the reason that Irish specimens are different from specimens from Western Europe. Oberthur has examined specimens from Hungary which have 8 rather than 4 spots and are identical with the typical form from Ireland. The form is almost racial in Ireland but also occurs in England and also in Scotland. The antennae have black spots in this form.

The interesting feature is the light sandy-brown form from Ireland which is very well yellowish-brown, we have one example.

Like Mendica, the antennae are pectinate, as is usual, and so is the male. The typical form shows this. The hindwing normal milky-white. Male is light sandy-brown, we have one such example.

Oberthur gives this name to specimens from Ireland which are creamy-white to light brown, the reason that Irish specimens are different from specimens from Western Europe. Oberthur has examined specimens from Hungary which have 8 rather than 4 spots and are identical with the typical form from Ireland. The form is almost racial in Ireland but also occurs in England and also in Scotland. The antennae have black spots in this form.

The interesting feature is the light sandy-brown form from Ireland which is very well yellowish-brown, we have one example.

Oberthur gives this name to specimens from Ireland which are creamy-white to light brown, the reason that Irish specimens are different from specimens from Western Europe. Oberthur has examined specimens from Hungary which have 8 rather than 4 spots and are identical with the typical form from Ireland. The form is almost racial in Ireland but also occurs in England and also in Scotland. The antennae have black spots in this form.

The interesting feature is the light sandy-brown form from Ireland which is very well yellowish-brown, we have one example.

Noticeable on account of its many black spots. On the forewing there is a small elongated spot before the middle of the costa, a round and an elongated one below the lower middle vein, a round one at the lower angle of the cell, an elongated one in cell 5 near the outer margin and a very small one above the middle of the inner margin; also, there is a weak indication of a small one at the upper angle of the discoidal cell. Hindwing - a dull one on the outer border of the discoidal cell, a transverse row of three upwards from cell 5, of which the lowest is the largest and the upper the smallest, and a large and a small one close to the outer margin in cells 1b and 2. (German translation on p. 40-41.)
The black spot; on all wings absent, except the black central one.

The costa of the forewing, and the fringe of both hindwing, is black. The ground colour is usually slightly smoky.

On the forewing there are six equidistant black spots and a coronal row almost of uniform length. More spots than usual, on ab. quadripuncta Cosmovici, Lepeletier 1892, p. 280. The author describes this form under urticae and all other authors include it under that species, but, by the inscription, it would seem almost certainly to belong to mendica. The wings are semi-transparent and there are two spots just above the inner margin of the forewing, often present in mendica, almost unknown to me in urticae. The description reads —

On the forewing the two spots near the inner margin are united to form a longitudinal black streak.

In the hindwing there is a central dot and three small spots near it. There are thick dark streaks runnig out from beyond it, one along the costa, two inside the cell, each no short thick one just posterior to the median nervure, and a long thick one just anterior to the origin of nervure 2, and a long extension: beyond it, one along the costa, two inside the cell, each no short thick one just posterior to the median nervure, and a long thick one just anterior to the origin of nervure 2, and a long extension:

On the underside of the hindwing, anterior to the discal spot, there are thick dark streaks running out from it, which show faintly on the underside, which are referred to figures in Barrett, and this particular one almost certainly to be ab. atricolor Moseley. The hindwing has thick marginal bands on the hindwings. Both wings often clouded with large increase in the black marking which forms bands on the forewing. The ground colour is sooty fuscous. Lampson's numbers were referred to figures in Barrett: this particular one almost certainly to be ab. radiata Cockayne.
Cross-pairings between various 1st original form.


- Ground colour is brown on the forewing there are paler markings, in addition to the normal black spots.

Cross-pairings between various aberrational forms of mendica.


- Pale veining and fringes, so noticeable in the cd of ab. listura, are much less pronounced, but many retain the pale grey tone of colour, a few are rather heavily spotted; the proportion of dark males somewhat larger than in the broods of ab. listura.


- An aberration of the cross-pairing standfussi Caradja, darker than standfussi, the colour approaching that of normal mendica, but always of a noticeably lighter grey, often almost steel-grey, with sparser black spotting.


- A cross-pairing between ab. rustica Hbn. and mendica. The d is grey-brown which is suffused over the white ground of rustica to appear as a pale, almost bluish, pearl-grey. The d is closely related to mendica.


- An aberration of the cross-pairing standfussi Caradja, a light form, closely approaching the rustica c, of a uniform light yellow colour.


- An aberration of the cross-pairing standfussi Caradja. In the d the thorax, middle of cell of the forewing, as also the outer margin and fringe of all wings, light as to being of the palest colour in ab. clara (the preceding). The remainder of the wing is more or less thinly covered with black venation.


- A wing surfaces milk-white or light yellowy-dark surrounded, therefore to ab. mixta Caradja, but on almost undoubted! subhybrid between ab. standfussi, or one of its variations, and ab. rustica Hbn.


- An aberration of the cross-pairing standfussi Caradja. In the male, wings light as to be of the palest colour in ab. clara (the preceding). The remainder of the wing is more or less thinly covered with black venation.


- A wing surfaces milk-white or light yellowy-dark surrounded, therefore to ab. mixta Caradja. In the male, wings light as to be of the palest colour in ab. clara (the preceding). The remainder of the wing is more or less thinly covered with black venation.


- A wing surfaces milk-white or light yellowy-dark surrounded, therefore to ab. mixta Caradja. In the male, wings light as to be of the palest colour in ab. clara (the preceding). The remainder of the wing is more or less thinly covered with black venation.
Urtioae and the typical form must be taken as having two spots on the forewing, one just outside the end of the discoidal cell and another just above it, but somewhat more inward. Missing without spots.


All authors place this under urtioae since Gosmovici described it under this species, but in my opinion it is almost certainly mendica Glerck. The spots on the inner margin which Gosmovici mentions, are not seen in urtioae and the fact that the wings are "almost transparent" make one hesitate to link it with urtioae. It would appear to be the female of mendica and should not be treated as an aberration of urtioae. The description says: "Tings white, almost transparent. On the forewings two small black dots at the extremities of the cell and two others towards the internal border, kesenables L. auriflua (similis) except the anus which is white and by the almost transparent wings. The females have fine black dots on the dorsal face of the abdomen."


Forewing with six black dots, four near to: two, further within the wing, drawn out transversely. The figure shows a group of black spots near the apical tip, mostly very small, and another rounder spot at the tip of the hind wing, well separated, nearer the base. Maslowscy's anomala had the apical part of the forewing divided by a short oblique row of black spots, as in mendica.

Dr. Cockerell's description says only: "streaked or rayed varieties" and refers to the figure in Entom, 21., p. 97, which shows a black streak on the costa, just below it and somewhat broken in places into dribbled dots, and a third below this along the median vein also a little broken. This same figure is in the upper half of the forewing and extending for a short distance inward.


On the upperside of the forewing there are short black streaks, beginning on the fringe of the outer border and extending for a short distance inward.
urtica Esper. continued.

Rebel's description contained a very black discoidal dot on the hindwing. It is an oval dot placed on the underside of the hindwing, and a row of black dots along the inner margin.

This slight variation shows that the figure cited by Cockerell was the description of Rebel's pluripuncta because it was made up of dribbled spots. However, Rebel was not sure that the insect was urtica because it had a black discoidal dot on the hindwing. It is in fact urticaae, the specimen in the C.K. collection.

Spuler's radiata was described as having black streaks on costa, the edges of the discoidal cell, and a row of black dots along the inner margin.

This slight variation shows that the figure cited by Cockerell was the description of Rebel's pluripuncta because it was made up of black dots along the inner margin. It would somewhat futile to separate it merely on account of the row of dots on the inner margin.

Rebel's pluripuncta was described as having profuse black spots, flowing together into rays, and leaving the marginal area clear. As stated above, he cites the same figure as Cockerell.

Schawerda's nigrostriata had the black spots of the forewing forming a streak on the costa, with two other streaks or rays below it. He suggests that Schawerda's label should only be used for specimens with profuse black dots along the costa margins, similar to Rebel's pluripuncta. However, Schawerda's label is not the same as Cockerell's description.

All these forms are covered by Cockerell's description, and it would not be desirable to separate them into degrees of variation.


Ground colour creamy instead of white.


The upperside of the abdomen without black spots.

The coloured figures show the forewing pale yellow, and these followers, 1. hindings are very. In his text to vol. II he refers to these specimens as "creamy yellow" and states that they gradually lead up to an obscure brown, and 2. to named ab. brunnea.

The coloured figures in Lep. Comp. 6 show both the transition. The transitions have been named ab. ochrea by Seitz, see the preceding.

The coloured figures in Lep. Comp. 6 show both the transitions to ab. brunnea. As transitions have been named in, what, or with, see the following.

The coloured figures in Lep. Comp. 6 show both the transitions to ab. luxerii Godard.

The coloured figures in Lep. Comp. 6 show both the transitions to ab. venosa Cockayne.

On the following the costa and subcosta along the termen obsolete is b. The fore and hindwing both, were greyish-white, and the nervures are slightly darkened.
p. 1151, to continue.

Lubricipeda Linn. continued. 1151.

ab. nigrescens Cockayne. Ent. Pec. 1942.34. pl. 2. f. Q.

Fore and hind wings greyish-black, the abdomen normal, orange, with black dorsal spots, white on the sides and under surface, with the usual lateral black marks, very grey-black.

ab. nigrescens Cockayne. Ent. Pec. 1942.34. pl. 2. f. Q.

Thorax grey is black.


ab. flavotergata had no black spots on the yellow back of the abdomen.


On the hindwings the spots near the margin are very large and elongated, normal.


ab. nigrounula Cockayne. Ent. Pec. 1951. 13. p. 34. pl. 8.

In the hindwing the spots near the margin are very large and elongated, normal.

ab. nigrounula Cockayne. Ent. Pec. 1951. 13. p. 34. pl. 8.


ab. fasciata Lempke, rijdschr. Ent. 1351.104, p. 137.

ab. centfistriata Lempke, rijdschr. Ent. 1351.104, p. 137. pl. 9. f. 2.


On the forewing the costa, apex and upper half of the termen, including fringe, is smoky-black.
in the forewings the costa is smoky-black in the apical area and on the outer margin, as in ab. costa-nigra Lamb. The sides, along the entire edge of the marginal border, there is a black interrupted line formed by striae placed near the intercostal spaces, all parallel with the veins. These striae, wider and narrower from the apical angle to the internal angle, begin on the lag. 

The main character, by the name, would be the short marginal rays. Tie form not necessarily have the costa-nigra character.

In the hindwings the discoidal spot is large and black and there is a large spot between nervures 5 and 6.


Barrett 2. p. 177* f. If*.

Etudes Ent. 20. 19. 20. Fig. 108^-6.

Oberthur's first mention of the name godarti was for the figure in Barrett, the first mentioned, by Strand. Lep. Cat. 1919. Arctid. p. 188. (nom. pro ab. Hamp. Lep. Fhal. 3. P. 272). This can be separated if desired but since Oberthur gave the honour of Godart it would seem somewhat irrational to give it another name. 

The figure in Barrett, the first mentioned, by Stratford Wilson and Macquart, forms ray 1-3d i. vein, uid b3 str. 31 r and 6. The picture has 1. si ic. Tha

The figure in Barrett, the first mentioned, by Stratford Wilson and Macquart, forms ray 1-3d i. vein, uid b3 str. 31 r and 6. The picture has 1. si ic.
The most extreme forms, which are brown, reach a width of about 40 mm. The streamed or rated forms, which are black, reach a width of about 40 mm.

On the forewings the outer margin, is broadly bordered with bit cm; veins, his black area reaches into the cream area. In the median area, there is a cream spot separating the blade; in the median area, the inner margin is bordered with the edges of the costa right down to the base subcostal black.

There are five black which edges the vein; black into ab. paucipuncta "kick". Over the margin quite unmarked divided, otherwise unmarked. Hindwing with only a few small area before the margin quite unmarked divided, otherwise unmarked.

There are five black which edges the vein; black into ab. apicistrigata Kardakoff. The hindwing without black spots.*
Spilosoma Stephen 3. lutea Hufn. (1766, p. 412.)

-- abridged from auct. nec. Linnaeus.

L. lutea Hufnagel. typical form •—• the male tinged with orange-yellow, the female creamy-white tinged with yellow. Forewings with a few black dots on costa and inner margin and some smaller ones near apex, hindwings with black discoidal spot near anal angle.


Female form with the ground colour very pale whitish-yellow.


Female with the yellow-orange ground colour of the male, even brighter, the forewing, deeper coloured on costa, outer margin and on nervure Xb. A small black dot at base of costa on the right wing, otherwise without any trace of the usual spots of the typical form. Hindwings paler, without spots.


The ground colour of the wings, thorax and abdomen is brown, the markings normal.

L. fasciata Tugwell. Eaton. 1892, p. 96. (fig. p. 2 "g. f. 3."

On the forewing the postmedian row of black spots are considerably increased in size and united with each other to form a clear broad fascia which does not run to the apex of the wing but curves to reach the middle black spot on the costa. Hindwings with a similar fascia.


The black spots fall along different lines. The ground colour is much lighter and the hindwing margin is red.

L. bucculenta Breyoll, Ent. 1924, p. 76. (fig. 2.)

The forewing has a black curved fascia intersected by pale veins running from the inner margin to the central costal spot, not to the apex of the wing. Hindwings with a similar fascia.


Hindwings with a black curved fascia but not intersected by pale veins running from the inner margin to the central costal spot. Not to the apex of the wing. Hindwings with a similar fascia.

L. bucculenta Breyoll, Ent. 1924, p. 76. (fig. 2.)

Hindwings with a black curved fascia but not intersected by pale veins running from the inner margin to the central costal spot. Not to the apex of the wing. Hindwings with a similar fascia.
The forewings are characterized by the row of strong black submarginal spots near the inner margin. The row of spots is set off by a prominent black streak on the costa and inner margin. The row of spots is not curved as in Fasciata Tugwell but runs in a straight line from inner margin to apex, there are however remnants of the curved band in the form of one or two black spots near the costa. The hindwings show a row of well-developed submarginal spots.

**ab. Hartigi** Dannehl. Ent. 1928, p. 88.

This extreme form of Fasciata Tugwell in which the spots of the fascia on the forewing are drawn out into more or less thick radiating streaks—a parallel with the **ab. Walkeri** of **Lubricipeda (menthastri)**. These examples have on the costa a broad black stripe from the inner costal spot to the base of the wing.

The hindwings are black with yellow veins as in **Zatima Stoll**. The thorax is yellow, the abdomen dark yellow, heavily ringed with black except the third and fourth segments which are black with large lob-shaped apical areas. The hindwings are not mentioned but fortunately we have historical data and descriptions of these forms.
The abdomen and thorax remain completely yellow-brown as in the typical form, while the colour and pattern of the wings are as in *Zatima* Stoll, however with a black abdomen. The figure by Stoll shows the abdomen dark but not black as Puller states. There is every degree of variation in the abdomens of *Zatima* from very light yellow with short black dorsal bars, to deep yellow with complete black rings. In my opinion, *Frisia* is unworthy of separation from *Zatima*.

Depuiset’s first description was “an aberration of *Zatima* Stoll which has become entirely melanistic.” His second description, together with the coloured figure, is more detailed. The fuscous black of *Zatima* has completely invaded all four wings, the veins remaining finely pale. The extreme tip of the abdomen, the head, and thorax alone remain paler, but not so yellow as in normal *Zatima*. The very fine coloured figure shows the wings completely brownish-black with the veins extremely finely yellow. The thorax and tip of the abdomen are brownish-yellow, the rest of the abdomen being black, the same as the wings.

A form of *Zatima* in which however the thorax is also blackened. This form was sold by Staudinger as *ab. unicolor*, a name already used by Homberg for a female *Lutea* with the orange colour of the male, so *Staudinger*'s dark form requires another name. Seitz is quite right in naming this form but wrong in his remark that *Unicolor* Homberg was an "entirely white" form.

The underside of both fore and hind wings is like that of *Zatima*.

The ground colour of the scales on the hindwing is less dusky, being more lightly dusted, due to a powder in the scales.
Phraginatobia otephenp S. 4

All the red colour on both fore and hind wings is replaced by orange, the borders deeper in that towards the outer margin and fringes of the hind wing.

Ground colour of the forewings clear brownish, hind wings black with black spots along the outer margin, Figure 1. Figure 2.

Ground colour of the forewings clear brownish, hind wings with a complete black submarginal band.

Ground colour of the forewings clear brownish, hind wings black with a red triangle at the inner margin.

Ground colour of the forewings clear brownish, hind wings black with a narrow stripe of red along the inner margin.

Ground colour of the forewings clear brownish, hind wings black with a row of black submarginal spots and the red of the fringes to be carried forward encroaching on the black of the band but not sufficiently to break up the continuity. In short the form has a black marginal band on otherwise red hind wings.
A southern race has the marginal band to be broken into distinct spots. In this the forewings are reddish, densely scaled. Hindwings reserved, the colour of the fringes, the main edges of the discoidal cell, and the humeral line black. Described as a race from the southern counties of England but it is not constant. The main character would seem to be the broken up marginal band of the hindwing, which thus forms a row of isolated spots. Sibille's clara laid the black band broken up into five spots, as a synonym.

The forewings are reddish, without brown tint, whereas the hindwings show more red. Lempke regards specimens with the hindwings broken up into spots as the typical fuliginosa, bearing out the Linnaean description.
The ground color of the handling salmon.

On the hindwings, the basal part, up to the twin-spots, is scaleless and transparent; the twin-spots clearly marked; along the outer margin, black bands, fringes red, sharply contrasting.

The figure shows a broad blackish longitudinal fascia reaching from the base across the middle of the wing to join the outer marginal band, forming a more or less black marking.

On the hindwings, all black markings absent or nearly so, with the exception of two discal spots. Abdomen normally spotted. The form is very near totirubra Vorbr., but the body in obliterata shows the usual black markings.

On the hindwings, all black markings absent or nearly so, with the exception of two discal spots. Abdomen normally spotted. This joining-up of the spots has been named ab. lineata Hackray, see below.

On the forewing near the margin there are 1 to 3 grey-brown or black spots, irregular in shape, which can be separate or slightly connected with each other. In the later case it is rarer.

The forewing without the black discal spots.

On the forewings, there is a blackish spot or mark towards the end of the cell. This is in addition to the blackish comma next at the end of the cell. Lempke gives kolari as a synonym of this form. I do not agree, since kolari with only one spot is comparatively frequent, whereas kolari with a row of five spots must be extremely rare; we have no specimen showing more than one spot.

On the forewing, the two black discal spots are connected by a blackish spot, which is as thick as the two spots.

On the forewing, there is a well-marked black line, leaving the costa and reaching the inner margin parallel with the outer border. This is the extreme form of the preceding ab. kolari and must be very rare.

On the forewing, there is a blackish spot or mark towards the end of the cell. This is in addition to the blackish comma next at the end of the cell. Lempke gives kolari as a synonym of this form. I do not agree, since kolari with only one spot is comparatively frequent, whereas kolari with five spots must be extremely rare; we have no specimen showing more than one spot.

On the forewing, there is a blackish spot or mark towards the end of the cell. This is in addition to the blackish comma next at the end of the cell. Lempke gives kolari as a synonym of this form. I do not agree, since kolari with only one spot is comparatively frequent, whereas kolari with five spots must be extremely rare; we have no specimen showing more than one spot.

On the forewing, there is a blackish spot or mark towards the end of the cell. This is in addition to the blackish comma next at the end of the cell. Lempke gives kolari as a synonym of this form. I do not agree, since kolari with only one spot is comparatively frequent, whereas kolari with five spots must be extremely rare; we have no specimen showing more than one spot.

On the forewing, there is a blackish spot or mark towards the end of the cell. This is in addition to the blackish comma next at the end of the cell. Lempke gives kolari as a synonym of this form. I do not agree, since kolari with only one spot is comparatively frequent, whereas kolari with five spots must be extremely rare; we have no specimen showing more than one spot.

On the forewing, there is a blackish spot or mark towards the end of the cell. This is in addition to the blackish comma next at the end of the cell. Lempke gives kolari as a synonym of this form. I do not agree, since kolari with only one spot is comparatively frequent, whereas kolari with five spots must be extremely rare; we have no specimen showing more than one spot.
On the hindwing the veins arising from the upper corner of the discal cell are forked at some distance from cell.

On the hindwing the lowest of the three veins arising from the lower end of the discal cell is atrophoid or lost.

Described as an aberration of the subsp. meridionalis and as such considered so. Since there is no reason why it should not occur in other species the description is given here. The ground colour of the forewings yellowish to reddish in meridionalis colour, with large black spots.

Upperside of the abdomen without black spots.
ab. nigriciliata Tutt. Ent. 66,190,56. 308.
The cilia of the hind wings intense black instead of the usual rosy-red.

ab. violascens Tutt. Ent. 66,190,56. 308.
Forewings instead of being smoky-red as in typical borealis, are bright red, approaching the colour of the more southern British forms.

ab. typica " rufa ' Tutt. Ent. 66,190,56. 62.
Forewings, instead of being smoky-red as in typical borealis, are bright red, approaching the colour of the more southern British forms.

ab. rufextensa L r i e. Eos. 1044,20, p, 34.
The hindwings ides red colour, usually confined to the inner margin, has spread over a large part of the wings.

Somewhat on the German spring generation and more fiery hindwings half, or mostly completely, black, with a narrower red margin.

The black marginal band is never broken up into spots, apparently merely a name for the second generation of borealis. I can see no particular reason for giving it.
5. Stenopala Ictechata Linnaeus - a rare species found in Russia.

6. Lineus, yst. rat. 3.7p8, 3rd. 10. «

7. Lepidoptera - a large order of insects known for their colorful wings.

8. Id.

9. The aberrational forms etc.

10. discoidal spot fuscous. Underside of hindwings Immaculate.

11. russula - a species known for its distinctive reddish markings.

12. Id.

13. The re-winged - marked by pale yellow. Occurs in both the male and the female.

14. A peculiar spot, which are noticeably darker than the ground color, without any trace of red dusting.

15. The fringes yellowish.


17. ab. anterorufa Lempke. dijd sohr.Ent.1910. 10--4

18. The ground color of all wings of the male, for the fore and hindwings is pale huff or deep crsain, with no pink along the costa or on the discoidal strip.

19. The fringes yellowish.

20. ab. deoolorata Cockayne, Ent. dec. 1951, p. 30.

21. The ground color of all wings of the male, for the fore and hindwings is pale huff or deep crsain, with no pink along the costa or on the discoidal strip.

22. The fringes yellowish.

23. ab. rubeacans - the wings are suffused with pink, without any of the normal black and the marginal fringes on Id wings are lot rose-red but bright brick-red; the inner margin shows an increase of red dusting to a point beyond the cell-spot, which are noticeably darker than the ground color, without any trace of red dusting.

24. The fringes yellowish.


26. Cockaynes rosea had the hindwings suffused with pink, without any of the normal black and the marginal fringes on Id wings are lot rose-red but bright brick-red; the inner margin shows an increase of red dusting to a point beyond the cell-spot, which are noticeably darker than the ground color, without any trace of red dusting.

27. The fringes yellowish.
Sannio Linn., continued.

Ab. Pindwings unicolorous ash-grey-brown, the discoidal spot just visible and a broad marginal band at the outer margin, the ground colour. See fig. 114.

Ab. Pindwings almost entirely ash-grey-brown, the discoidal spot just visible and a broad marginal band at the outer margin, the ground colour. See fig. 114.

Ab. Pindwings unicolorous chestnut-brown, marking on the forewings and thorax unicolorous black without any distinct marking; along the ab. obsoleta Lempke. Tijdschr. Ent. 1911, 104, p. 14b.

Ab. Pindwings unicolorous black without any distinct marking; along the costa, as far as the cell-spot, a narrow yellow stripe. Abdorae also black.

Ab. Pindwings almost entirely suffused with sooty black to moerens Strand, renamed the form unnecessarily.Occurs in both ab. montana Gianalle. Similar to the preceding moerens, but the description is not available. It might appear to be a synonym of moerens.

Ab. Pindwings unicolorous black without any distinct marking; along the costa, as far as the cell-spot, a narrow yellow stripe. Abdorae also black.

Ab. Pindwings almost entirely suffused with sooty black to moerens Strand, renamed the form unnecessarily. It is not available. It might appear to be a synonym of moerens.

Ab. Pindwings unicolorous black without any distinct marking; along the costa, as far as the cell-spot, a narrow yellow stripe. Abdorae also black.

Ab. Pindwings unicolorous black without any distinct marking; along the costa, as far as the cell-spot, a narrow yellow stripe. Abdorae also black.

Ab. Pindwings unicolorous black without any distinct marking; along the costa, as far as the cell-spot, a narrow yellow stripe. Abdorae also black.

Ab. Pindwings unicolorous black without any distinct marking; along the costa, as far as the cell-spot, a narrow yellow stripe. Abdorae also black.
Male. The discoidal spot of the forewing is entirely red. The description is presumably of female since the discoidal spot is not constantly red in the male.

Hindwings largely bordered with black. Oberthur is naming the figure in Barrett which he considered to be the true form of sannio. The figure shows a male with an extremely broad and solid marginal band, not interrupted by pale veins.

Hindwings with the marginal band completely black, almost in the manner of the intestinal spot. Described from the preceding in the hindwing occupied by the marginal spot.

Hindwings with the marginal band completely black, almost in the manner of the intestinal spot. Described from the figure in Barrett which shows a male with an extremely broad and solid marginal band, not interrupted by pale veins.

Hindwings with the black marginal band completely black, almost in the manner of the intestinal spot. Described from the figure in Barrett which shows a male with an extremely broad and solid marginal band, not interrupted by pale veins.

Hindwings with the black marginal band completely black, almost in the manner of the intestinal spot. Described from the figure in Barrett which shows a male with an extremely broad and solid marginal band, not interrupted by pale veins.

Hindwings with the black marginal band completely black, almost in the manner of the intestinal spot. Described from the figure in Barrett which shows a male with an extremely broad and solid marginal band, not interrupted by pale veins.

Received from the Swedish Entomological Society.
The text is about the characteristics and variations of a specific species of butterfly, focusing on the appearance of the wings and the coloration patterns. It mentions various forms and subforms, such as:

- *plantaginis* Linn., with topical form, and several subforms like:
  - Male with the hind ring.
  - Various shades of orange-yellow in English specimens.
  - The white horizontal stripe on the inner margin is interrupted.
  - On the forewing, the white horizontal stripe on the inner margin is interrupted.
  - The central white spot of the forewing fails completely.
  - The white central spot of the forewing fails completely.
  - Hindwings black, the only yellow present being at the margin in the form of spots or a thin band.
  - Hindwings bright yellow, the dark streaks normally in the centre of the wing.

The text also mentions the division of the species into different forms and subforms, with varying characteristics and color patterns, providing a detailed description of the butterfly's appearance.
Hindwings pale yellow, the dark streaks in the centre almost obsolete.

Hindwings red, the dark streaks in the centre almost obsolete.

Hindwings bluish with maroon tinge but only showing the red longitudinal streaks running out from the base, of which the upper (shorter) one lies in the middle cell.

Hindwings pale yellow, the dark streaks in the centre almost obsolete.

Hindwings red, the dark streaks in the centre almost obsolete.

Hindwings black, as in matronalis but only showing two yellow longitudinal streaks running out from the base, of which the upper (shorter) one lies in the middle cell.

Hindwings blackened as in matronalis but only showing two yellow longitudinal streaks running out from the base, of which the upper (shorter) one lies in the middle cell.

Hindwings red, the dark streaks in the centre almost obsolete.

Hindwings black, as in matronalis but only showing two yellow longitudinal streaks running out from the base, of which the upper (shorter) one lies in the middle cell.

Female form. In the lower part of the broad black band across the middle of the hindwing, there is a very large black spot extending to the outer margin of the wing. The fringes are orange, the thorax black, and the ground colour of the hindwing is dark yellow, the typical form.

Male form. A strong reduction of the black markings of both wings, forewings predominantly creamy white, of the black markings there only remains the black surround to the large white middle spot and narrow black filtering also the base of the costa and along the outer hindwing there are the black marks. The inner markings towards the base, the outer near the hindwing. Hindwings very broad, the ground colour of the hindwing is very large, the typical form.

Male form. In the lower part of the broad black band across the middle of the hindwing, there is a very large black spot extending to the outer margin of the wing. The fringes are orange, the thorax black, and the ground colour of the hindwing is dark yellow, the typical form.

Male form. A strong reduction of the black markings of both wings, forewings predominantly creamy white, of the black markings there only remains the black surround to the large white middle spot and narrow black filtering also the base of the costa and along the outer hindwing there are the black marks. The inner markings towards the base, the outer near the hindwing. Hindwings very broad, the ground colour of the hindwing is very large, the typical form.
p. 3.

Plantaginis Linn. continued.


Male form, 111 the white-yellow of the fore-rings and yellow markings of the hind-wings are suffused with smoke-black, the fringes blackened. Head/flora except its tip which is yellow, are black; there are suffused blackish stripes along the sides of the abdomen, the yellow weakly visible.


The description in both cases the forewings are dull blackish brown, called markings in the outer area there is no line of color the "X" shape, in the outer area there is a short axial band and in front a parallel transverse band. This is not made with the intersecting horizontal lines and the hindwings in front the outer area has the yellow markings in which the forest wood becomes the marginal areas. I have not seen the original description.


Male form. Distinguished by its dull coloration; the normal black has grey-black and on the hindwings the light yolk-yellow is replaced by muddy olive-yellow.


Porewing ground color milk-white or straw yellow, the normal markings only in ochre color, very weakly but somewhat stronger. Hindwings cinnamon, the markings in a somewhat darker tone weakly showing. Diorax milk-yellow, collar cinnamon-red, abdomen red it!

Phisis would appear to be a pure albino, there being no black pigment present. Remie f. lambillionii seems also to be an albino. The description says the forewings ground color whitish-yellow, the black markings replaced by yellow-ochre. Hindwings pale red with the basal area yellow-ochre instead of black as in the spots and outer border, abdomen red with the dorsal line yellow-ochre instead of black.


Male. Porewings creamy with a few vestiges of blackish spots at the costa and apex, Hindwings yellow with fs black large Narlark .

Ab. Flava Putt. -t., dec. 1897. 9. x 1-1.

O form. Hindwings pale yellow, not bright yellow as in the typical form "3. paler seems hardly necessary.

Ab. Fulva Putt. -t. 1889. 12.

O form. Hindwings vivid yellow-red. Description, from Seitz, I have not seen the original.

Ab. Læmmei"runni Oberth. I p. 1911.5 (fig. Lep. Comp., pl. 6).

Hind rings on the upper side tinted red and showing underside a bright red streak or stripe along the costal margin.


Male and female form. Hindwings brown and the costal margin of the forewings brown.


O form. On the forewings the normal bands and stripes are not light white but strong yellow-red. Hindwings intensive light yellow, the black marking more or less agrees with that of matronalis, the yellow that remains is interrupted with olive.
Plantaginis Linn., continued

**ab. aurantiaca** Schafer da.


Female form. Hindwings of range yellow, not blood-red as in the type or pure as in the male type. Sometimes they are orange-red.


Female form. Hindwings beautiful light rose colour, abdomen darker rose.

**ab. flavipennis** Sdwerda. Verh. zool.-bot. Ges. 1906. p. 211.

Female form. Hindwings with yellow ground colour on the outer area, instead of red, sides of the abdomen reddish with yellow tinge.


Female form. Hindwings yellow and the abdomen with yellow stripes. The yellow has suppressed all red colour on the upper and under side.

**ab. rufa** Finlin. Ent. Ber. (must, 1897-1907, 1911. p. 22.

Since this was a female form it is synonymous with the type. The hindwings not red, but yellow. Most of our British specimens are not red, and the type does not equal to those that are red on the hindwings, as all of them lack the suppression of the type form.

**ab. rufabdominata** Van Disselh. Ent. Ber. (must, 1911. p. 21.

Female form. Sides of the abdomen red instead of yellow.

This must be a rare form in the male sex.

**subsp. insularum** Beits. boro-Lep. IQLOको. p. 81 pl. lb. 9.

The race from Orkney Islands. In the male the black markings are so extended, and the ground colour is so dark, that it reminds one of the female.
forms with white hindwings in the following two categories.


- A genus of butterflies with the hindwings black, except for some white spots on the submarginal area. In the margin, the white spots are usually restricted to a small area.

- **ab. hospita** Schiller. *Ital. ent.** 1. 1776, 177. 318.

  - The ground color of the hindwings white. The markings of both wings are normal.

- **ab. alba** Schiller. *Ital. ent.** 1. 1776, 177. 324.

  - Forms of *hospita* with the hindwings black, except for some spots of the submarginal area, sometimes forming a band. The marginal spots are sometimes restricted, as in *ab. alba*.

- **ab. melas** Schiller. *Ital. ent.** 1. 1776, 177. 324.

  - Forms of *hospita* with the hindwings black, except for some very small spots in the margins, which are usually broader.

- **ab. alba obsoleta** Tutt. *Ent. Rec.** 1897, 189. 219.

  - In the forewings, the white bands are usually broader.

- **ab. alba alba** Kaucki. *Polské Pismo Ent.** 1922, 1922. 11.

  - Forms of *hospita*. Both wings unicolorous white, almost devoid of any sign of markings. This is the description given in Seitz, but I have not seen the original. If the specimen is almost certainly an albino of *hospita.*

- **ab. raetzeri** Schawerda. *Jahresb. * 1900. 1900. 67.

  - In error, Schawerda used this name for two different aberrations. He withdraws the first in the *Jahresb.* because it is a synonym of *ab. lutea obsoleta* and applied the name to his second *raetzeri* in the *Jahresb.* This is a form of *hospita*.

- **ab. melas** Christoph. *Iris.** 1893, 189. 88.

  - Forms of *hospita*. Hindwings black except for some very small spots in the margins, which are usually broader.

- **ab. borensis** Schaller. *Ent. Rec.** 1897, 189. 91.

  - Forms of *hospita*. The hindwing white, the dark stripes in the centre of the wings almost obsolete, sometimes completely, and the marginal spots remaining weakly defined. In the forewings, the white bands are usually broader.

- **ab. borussia** Schawerda. *Jahresb.* 1906, 1906. 239.

  - Forms of *hospita*. Forewing with the white middle spot of the costa surrounded by black, like an island. Hindwing deep black from base to just beyond middle and reaching the anal angle on its inner-marginal portion. As in the females of most *plantaginis* leva, it is caused by the marginal spots being swallowed. This is transitional to the "matronalis" forms; the black is not fully developed, reaching the inner marginal spot. It is usually smaller.


  - Forms of *hospita*. The hindwings white. The dark stripes in the centre of the wings almost obsolete, sometimes completely, and the marginal spots remaining weakly defined.


  - Forms of *hospita*. The hindwings white. The dark stripes in the centre of the wings almost obsolete, sometimes completely, and the marginal spots remaining weakly defined.

- **ab. matronalis** Schiller. *Ital. ent.** 1. 1776, 177. 320.

  - Forms of *hospita*. The hindwings white. The dark stripes in the centre of the wings almost obsolete, sometimes completely, and the marginal spots remaining weakly defined.
<table>
<thead>
<tr>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>abdominalis Smith</td>
<td>5</td>
</tr>
<tr>
<td>achlyoessa Smith</td>
<td>4</td>
</tr>
<tr>
<td>aclea Smith</td>
<td>3</td>
</tr>
<tr>
<td>alba Ckyne</td>
<td>2</td>
</tr>
<tr>
<td>albescens Neun.</td>
<td>9</td>
</tr>
<tr>
<td>albisignata Smith</td>
<td>13</td>
</tr>
<tr>
<td>albistriga Ckyne</td>
<td>15</td>
</tr>
<tr>
<td>albobasalis Ckyne</td>
<td>10</td>
</tr>
<tr>
<td>albociliata Stätt</td>
<td>10</td>
</tr>
<tr>
<td>albofrontalis Stätt</td>
<td>10</td>
</tr>
<tr>
<td>albonedia Ckyne</td>
<td>5</td>
</tr>
<tr>
<td>astramenisca Smith</td>
<td>3</td>
</tr>
<tr>
<td>atribasalis Ckyne</td>
<td>16</td>
</tr>
<tr>
<td>atrimargo Ckyne</td>
<td>16</td>
</tr>
<tr>
<td>aurantiaca Engl.</td>
<td>1</td>
</tr>
<tr>
<td>aurantiaca Klea.</td>
<td>1</td>
</tr>
<tr>
<td>aurantior Lempke</td>
<td>1</td>
</tr>
<tr>
<td>badia Saut.</td>
<td>6</td>
</tr>
<tr>
<td>basicincta Ckyne</td>
<td>20</td>
</tr>
<tr>
<td>biconjuncta Stätt</td>
<td>15</td>
</tr>
<tr>
<td>bijuncta Smith</td>
<td>15</td>
</tr>
<tr>
<td>biculata melj</td>
<td>20</td>
</tr>
<tr>
<td>bolga Th.-lig.</td>
<td>8</td>
</tr>
<tr>
<td>brunneobasalis Ckyne</td>
<td>17</td>
</tr>
<tr>
<td>brunneociliata Stätt</td>
<td>21</td>
</tr>
<tr>
<td>brunneosparsa Ckyne</td>
<td>7</td>
</tr>
<tr>
<td>brunnescens Stätt</td>
<td>2</td>
</tr>
<tr>
<td>caeca Stätt</td>
<td>20</td>
</tr>
<tr>
<td>catarryta Smith</td>
<td>15</td>
</tr>
<tr>
<td>cingulata Stätt</td>
<td>23</td>
</tr>
<tr>
<td>cinnamonea Ckyne</td>
<td>7</td>
</tr>
<tr>
<td>clarki Tutt.</td>
<td>18</td>
</tr>
<tr>
<td>clostera Smith</td>
<td>4</td>
</tr>
<tr>
<td>confluens Carb</td>
<td>20</td>
</tr>
<tr>
<td>confluens Rebel</td>
<td>20</td>
</tr>
<tr>
<td>conjuncta Stätt</td>
<td>15</td>
</tr>
<tr>
<td>consolidata Ckyne</td>
<td>15</td>
</tr>
<tr>
<td>costa juncta Lempke</td>
<td>11</td>
</tr>
<tr>
<td>coxeyi Smith &amp; Boyes</td>
<td>13</td>
</tr>
<tr>
<td>cuneigeria Ckyne</td>
<td>21</td>
</tr>
<tr>
<td>Species</td>
<td>Count</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>dealbata Schultz</td>
<td>8</td>
</tr>
<tr>
<td>decolor Ckyne</td>
<td>19</td>
</tr>
<tr>
<td>defrescens Ckyne</td>
<td>9</td>
</tr>
<tr>
<td>deficiens Lepke</td>
<td>11</td>
</tr>
<tr>
<td>diaphana Ckyne</td>
<td>8</td>
</tr>
<tr>
<td>discojuncta Ckyne</td>
<td>20</td>
</tr>
<tr>
<td>discolor Ckyne</td>
<td>19</td>
</tr>
<tr>
<td>disconulla Lepke</td>
<td>20</td>
</tr>
<tr>
<td>ditta Smith</td>
<td>22</td>
</tr>
<tr>
<td>divisa Ckyne</td>
<td>12</td>
</tr>
<tr>
<td>duthula Th.-Nag.</td>
<td>9</td>
</tr>
<tr>
<td>effingeri Aue</td>
<td>21</td>
</tr>
<tr>
<td>excellens Closs</td>
<td>18</td>
</tr>
<tr>
<td>exotica Smith</td>
<td>19</td>
</tr>
<tr>
<td>flavo Aign</td>
<td>1</td>
</tr>
<tr>
<td>flavescens Newnham</td>
<td>1</td>
</tr>
<tr>
<td>flavirosea Smith</td>
<td>14</td>
</tr>
<tr>
<td>flavomacula Cab.</td>
<td>21</td>
</tr>
<tr>
<td>flavonigriscens Ckyne</td>
<td>18</td>
</tr>
<tr>
<td>flavonotata Ckyne</td>
<td>11</td>
</tr>
<tr>
<td>flavosignata Closs</td>
<td>6</td>
</tr>
<tr>
<td>fringsi Sm. &amp; Boyes</td>
<td>3</td>
</tr>
<tr>
<td>fumosa Hörh.</td>
<td>2</td>
</tr>
<tr>
<td>fusata Smith</td>
<td>13</td>
</tr>
<tr>
<td>fusca Smith</td>
<td>4</td>
</tr>
<tr>
<td>fuscolimbata Ckyne</td>
<td>17</td>
</tr>
<tr>
<td>fuscorhabda Smith</td>
<td>13</td>
</tr>
<tr>
<td>futura Pickert</td>
<td>18</td>
</tr>
<tr>
<td>gebhardtii Hörh</td>
<td>6</td>
</tr>
<tr>
<td>glaseri Stichel</td>
<td>18</td>
</tr>
<tr>
<td>gloriosa Ckyne</td>
<td>21</td>
</tr>
<tr>
<td>gravesi Baynes</td>
<td>7</td>
</tr>
<tr>
<td>grebi Pfeiffer</td>
<td>6</td>
</tr>
<tr>
<td>hebeoides Stütt</td>
<td>16</td>
</tr>
<tr>
<td>hectaploa Smith</td>
<td>12</td>
</tr>
<tr>
<td>hepialoides Sm. &amp; Boyes</td>
<td>19</td>
</tr>
<tr>
<td>hexacha Smith</td>
<td>3</td>
</tr>
<tr>
<td>illustris Ckyne</td>
<td>8</td>
</tr>
<tr>
<td>insolita Ckyne</td>
<td>12</td>
</tr>
<tr>
<td>iuncta Biez. see iuncta</td>
<td>20</td>
</tr>
<tr>
<td>jeuneti Oberth</td>
<td>6</td>
</tr>
<tr>
<td>juncta Biez</td>
<td>20</td>
</tr>
<tr>
<td>Species</td>
<td>Number</td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Kadosceae sezae</td>
<td>23</td>
</tr>
<tr>
<td>Lacticolor Impke</td>
<td>6</td>
</tr>
<tr>
<td>Lactipennis Ckyne</td>
<td>11</td>
</tr>
<tr>
<td>Lacogensis Strand</td>
<td>20</td>
</tr>
<tr>
<td>Lamprogenys Smith</td>
<td>3</td>
</tr>
<tr>
<td>Leinfesti Kbl.</td>
<td>10</td>
</tr>
<tr>
<td>Leucorhabda Smith</td>
<td>13</td>
</tr>
<tr>
<td>Linae Kraml</td>
<td>11</td>
</tr>
<tr>
<td>Lucensburgensis Mack &amp; Stein</td>
<td>9</td>
</tr>
<tr>
<td>Luna Smith &amp; Royes</td>
<td>13</td>
</tr>
<tr>
<td>Lunulata Smith</td>
<td>4</td>
</tr>
<tr>
<td>Lunulata</td>
<td>1</td>
</tr>
<tr>
<td>Lusitanica Spul</td>
<td>1</td>
</tr>
<tr>
<td>Lutescens Chil</td>
<td>1</td>
</tr>
<tr>
<td>Lutulenta Smith</td>
<td>14</td>
</tr>
<tr>
<td>Margarethae Ave</td>
<td>17</td>
</tr>
<tr>
<td>Mediodeleta Ckyne</td>
<td>10</td>
</tr>
<tr>
<td>Melanolimbata Smith</td>
<td>14</td>
</tr>
<tr>
<td>Melanozoster Ckyne</td>
<td>16</td>
</tr>
<tr>
<td>Miranulis Ckyne</td>
<td>7</td>
</tr>
<tr>
<td>Monosema Smith</td>
<td>22</td>
</tr>
<tr>
<td>Mücki Kraal</td>
<td>20</td>
</tr>
<tr>
<td>Migrata Smith</td>
<td>4</td>
</tr>
<tr>
<td>Migrascens Lamb</td>
<td>16</td>
</tr>
<tr>
<td>Migrociilata Hoffm.</td>
<td>21</td>
</tr>
<tr>
<td>Migromarginaria Smith</td>
<td>13</td>
</tr>
<tr>
<td>Michropennalis Stätt</td>
<td>21</td>
</tr>
<tr>
<td>Migrovenosa Smith</td>
<td>14</td>
</tr>
<tr>
<td>Nobilis Ckyne</td>
<td>7</td>
</tr>
<tr>
<td>Nubilata Smith</td>
<td>15</td>
</tr>
<tr>
<td>Obliterata Smith</td>
<td>15</td>
</tr>
<tr>
<td>Obscura Chll.</td>
<td>18</td>
</tr>
<tr>
<td>Ocellata Stätt</td>
<td>20</td>
</tr>
<tr>
<td>Olivacoussufusa Smith</td>
<td>2</td>
</tr>
<tr>
<td>Osta Smith</td>
<td>13</td>
</tr>
<tr>
<td>Paliscia Smith</td>
<td>3</td>
</tr>
<tr>
<td>Pallens Schultz</td>
<td>19</td>
</tr>
<tr>
<td>Paralinae Ckyne</td>
<td>11</td>
</tr>
<tr>
<td>Parvimanula Stätt</td>
<td>20</td>
</tr>
<tr>
<td>Pauccimacula Smith</td>
<td>6</td>
</tr>
<tr>
<td>Paurobalia Smith</td>
<td>5</td>
</tr>
<tr>
<td>Pelodes Smith</td>
<td>3</td>
</tr>
<tr>
<td>Pentacha Smith</td>
<td>12</td>
</tr>
<tr>
<td>Pentaploa Smith</td>
<td>3</td>
</tr>
<tr>
<td>Pentapunctata Smith</td>
<td>14</td>
</tr>
<tr>
<td>Petriburgensis Ckyne</td>
<td>11</td>
</tr>
<tr>
<td>Phantasma Niep</td>
<td>8</td>
</tr>
<tr>
<td>Pinax Smith</td>
<td>4</td>
</tr>
<tr>
<td>Plankii Wize</td>
<td>17</td>
</tr>
<tr>
<td>Poveyi Smith</td>
<td>19</td>
</tr>
<tr>
<td>Prosopia Smith</td>
<td>13</td>
</tr>
<tr>
<td>Pulchra Ckyne</td>
<td>8</td>
</tr>
<tr>
<td>Species</td>
<td>Author</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>quadricornuta Smith</td>
<td></td>
</tr>
<tr>
<td>quadrimaculata Stätt</td>
<td></td>
</tr>
<tr>
<td>quasimonochromica Biez</td>
<td></td>
</tr>
<tr>
<td>radiata Gram.</td>
<td></td>
</tr>
<tr>
<td>rebellis Knuk</td>
<td></td>
</tr>
<tr>
<td>rosacea Newn</td>
<td></td>
</tr>
<tr>
<td>rosae Gram.</td>
<td></td>
</tr>
<tr>
<td>rubra Ckyne</td>
<td></td>
</tr>
<tr>
<td>rubrociliata Smith</td>
<td></td>
</tr>
<tr>
<td>rubrodorsalis Schulte</td>
<td></td>
</tr>
<tr>
<td>rufa Smith</td>
<td></td>
</tr>
<tr>
<td>ruminicis de Henn.</td>
<td></td>
</tr>
<tr>
<td>schizonacula Smith</td>
<td></td>
</tr>
<tr>
<td>schultzii Frings</td>
<td></td>
</tr>
<tr>
<td>semiconfluens Lke.</td>
<td></td>
</tr>
<tr>
<td>septata Smith</td>
<td></td>
</tr>
<tr>
<td>similis Szulcz.</td>
<td></td>
</tr>
<tr>
<td>sordida Smith</td>
<td></td>
</tr>
<tr>
<td>splendens Ckyne</td>
<td></td>
</tr>
<tr>
<td>s-signatum Smith</td>
<td></td>
</tr>
<tr>
<td>staettermayeri Sm &amp; Boyes</td>
<td></td>
</tr>
<tr>
<td>standfussi Röber</td>
<td></td>
</tr>
<tr>
<td>straminea Ckyne</td>
<td></td>
</tr>
<tr>
<td>stygia Ckyne</td>
<td></td>
</tr>
<tr>
<td>syltica Werneb.</td>
<td></td>
</tr>
</tbody>
</table>
As a helpful assistant, I can provide a summary of the content. The text describes various forms of the insect Arctia Schrank. It includes details about the typical form, aberrational forms, and specific names like ab. aurantiaca Englisch and ab. lusitanica Spuler. The text also mentions the ground color of the wings and the presence of black dorsal marks on the abdomen. There are references to historical descriptions and classifications, such as by Linnaeus and Lempke.

Hindwings pale whitish-yellow or straw, with a variable suffusion of pale salmon-pink at the base, along the costa, the cilia, and in the centre of the large whitish-yellow, obselen whitish-yellow with salmon-pink at the base, along the sides, and at the extremity. In some cases salmon-pink covers the greater part of the wing. In males the whitish-yellow is predominant, in females salmon-pink, covering more


Hindwings with all parts normally red, pure white. The type is the forewing in Butterflies: "Wings of the Countryside," 1970, p. 106, by Hulme. The abdomen in the type is pale buff without markings but this is not so in others. The brown of the forewings clay-coloured, giving a washed-out appearance.


Hindwings with all parts normally red, pure white. The type is the forewing in Butterflies: "Wings of the Countryside," 1970, p. 106, by Hulme. The abdomen in the type is pale buff without markings but this is not so in others. The brown of the forewings clay-coloured, giving a washed-out appearance.

ab. brunescens Stuttermayer, Ent. Mz. 1924, p. 71.

Hindwings suffused or overlaid with smoky-brown.


The ground colour of the hindwings instead of the normal red colour, is a deep sooty brown, from which the sharply defined black spots stand out. The thorax, abdomen, and extremities of the wing are of a similar black-brown colour to the hindwings, the antennae also browned. The whole insect is darkened by this sooty suffusion, the normal white markings of the forewings are still visible and the blue-black spots of the hindwings are still apparent.

Cockayne gives a wrong translation of the colour of the hindwing in Proc., S. Lond. Ent. Soc., 1947-8, 1949, p. 161. He says the hindwings arc "sooty red-brown" whereas the author says "sooty-brown", there is no trace of red in our long series of fumosa.

The following forms named by Gordon Smith are all of the "brunnescens" and "fumosa" variegated with various other forms.


Hindwings with all parts normally red, pure white. More brown rather light-coloured, giving a washed-out appearance.


Hindwings suffused or overlaid with smoky-brown.


Forewing ground colour slightly altered to very light brownish white, the limit clear, except that the median spot is on the anal margin consists of a transverse mark just pointing towards the costa, with surrounding black spot.Landing vinaceous-buff on the usual black spot.


Forewing ground colour carmine-red suffused with vinaceous pattern onfly, notable for the breaking up of the median band into three costal bars and two inner marginal spots. Landing vinaceous-buff suffused with fuscescent and tinged with carmine; small black basal spot ; very, very, very large black spots with bluish sheen in the subcostal area.

Very similar to hestongola smith but with the hue brown-carmin and receiving the ring.

ab. adusta smith. Ent. Gaz. 1957. 10. p. 126. pi. 2. f. 3.

Forewing ground colour darkened by a fuscous suffusion which has scene added to the normal pattern; pale markings rich sepia, the terminal band represented only by an anal spot and a trace at the middle of the termen. Hindwing dull carmine-buff suffused with vinaceous, the spots prominent, with hardly a trace of the bluish sheen.

Litch: subadulta with introduced by the brunnescens-fumosa strain.


Forewing with the pattern of adusta Smith but the ground colour carmine-red and marked with fuscous. Landing vinaceous-buff buffy, the post-medial zone unmarked.

The form is adusta Smith with fumosa strain introduced.


Forewing with the pattern of adusta Smith but the ground colour carmine-red and marked with fuscous, the outer and basal zone.

Landing vinaceous-buff suffused with fuscous, the spots prominent, with large black spots with bluish sheen in the subcostal area.


Forewing ground colour slightly altered to very light brownish white, the limit clear, except that the median spot is on the anal margin consists of a transverse mark just pointing towards the costa, with surrounding black spot. Landing vinaceous-buff on the usual black spot.


Forewing ground colour slightly altered to very light brownish white, the limit clear, except that the median spot is on the anal margin consists of a transverse mark just pointing towards the costa, with surrounding black spot. Landing vinaceous-buff on the usual black spot. The form is adusta Smith with fumosa strain introduced.

The description is not good and the figure does not show the main feature clearly. The normally white ground is replaced on the forewing by carmine-red type, but a white line is left, which outlines all the dark markings.


Forewing characterized by the feature of the dark brown markings being outline by lighter colour than the darkened ground colour. Landing vinaceous-buff, dark suffused with fuscous, the spots prominent, with large black spots with bluish sheen in the subcostal area.

Landing vinaceous-buff on the dark brown spot. The form is adusta Smith with introduction by fumosa, but a white line is left, which outlines all the dark markings.


Forewing ground colour carmine-red and marked with fuscous, the limit clear, except that the median spot is on the anal margin consists of a transverse mark just pointing towards the costa, with surrounding black spot. Landing vinaceous-buff on the usual black spot. The form is adusta Smith with fumosa strain introduced.
ab. laiusa Smith. Ent. Gaz. 1957, 8, p. 91. pi. 3. f. 2.

Forewing ground colour cartridge-buff moderately darkened with fuscous, the subterminal area sepia; the terminal band extensively with fuscous as to obscure the lighter colour, the markings sepia, the figure for scale. Hindwing fuscous-black, with one null basal spot and three large outer costal black. Abdomen fuscous.

This does not point out the main character of this aberration, possibly it is the very much darkened ground of the forewings, yet the figure of his paratype is hardly darkened in this respect.


Forewing ground colour fuscous, the markings sepia; the subterminal area extensively with fuscous-black. Abdomen fuscous.

Smith has named the various degrees of darkening in the ab. fumosa-pattern, this one is merely a few degrees darker than his ab. fumosa.


Forewing ground colour bistre, the dark markings sepia. Hindwing fuscous, spots normal. Abdomen fuscous.

There is so little difference between this form and fumosa Schmetz that the name is quite unnecessary, especially with considerable variation amongst forms, which Smith describes as "fuscous" or "fuscous-soft." In this aberration he calls it "bister," which, in my opinion, gives much lighter impression.
caja Linn., continued, ab. paurobalia Smith, Ent. Gaz. 7*P* 127* pi, 4, f 3.
Forewings ground colour rich fuscous, the dark markings small and largely lacking. Hindwing fuscous-black, the spots blue-black, abdomen fuscous. See figure for pattern.

ab. nigrito Smith. Enton, 1955. 2b, p. 22, pl. 6, 7, 1 & 2.
Forewings almost uniformly smoky, the edges of the pattern darker. Hindwings fuscous-black, accentuated on the veins and terman, the spots obsolescent, the blue sheen evanescent.
The type shows the spots of the hindwing suffused, but still blacker than the ground colour.

ab. abdominalis Smith. Ent, 1934. 7, p. 127, pl. 3. 2.
Forewings ground colour white somewhat darkened with fuscous, the markings bone-brown. Hindwing fuscous-black with a suspicion of an ochre red tinge from the base to the two largest spots, the spots themselves prominent, black, and without the blue sheen. Thorax bone-brown, abdomen ochre-red with black dorsal bar. We have the type at King, there is much more than a "suspicion" of ochre-red.

Forewings ground colour almost white, the markings almost black. Hindwing light ochraceous-buff, almost obliterated by drab suffusion, except in the middle of the wing.
This form is extremely like the preceding abdominalis, merely lighter in the ground colour of both fore and hindwing. The abdomen is of the same colour as abdominalis.

Similar to ab. brunnescens Stattermayer with varying degrees of smoky-brownish suffusion but with the orange-red ground of the hindwing replaced by yellow, the abdomen of the same colour.
A combination of brunnescens Statt. and lutescens Cockerell.
The white markings of the forewings beautifully suffused with a rosy blush. Oberthur's description is similar but his coloured figure shows a thin white outer edge to the rose colour. This white edge also shows in the figure given by Barrett, but is not pronounced in a very similar insect. The name could apply to all examples showing a definite rose colour suffusing the white markings.

The ground colour of the forewings not white, but deep creamy, otherwise normal.

The white stripes of the forewings are replaced by pronounced yellow.

The ground colour (usually white), the markings grey and grey-yellow. The hindwing is brown, inclining towards yellowish, with four small weak spots surrounded by dull yellow.

The form is a combination of flavosignata and straminea.

The ground colour (usually white), the markings grey and grey-yellow. The hindwing is brown, inclining towards yellowish, with four small weak spots surrounded by dull yellow. The forewings reddish ochre-yellow, the hindwing yellowish-brown with four spots only weakly visible.

The form is a combination of flavosignata and straminea.

Forewings with the markings normal but the white replaces by strong brown. The hindwing is brown, with the red replaced by a mixture of yellow, yellowish-rose, and light rose, giving a salmon-coloured appearance. The outer margin is yellow-red.

The form is a combination of flavosignata and straminea.

Forewings with the ground colour warm buff, except for the black discoidal lunule. The markings are largely peripheral. Hindwings heavily dusted with pinkish-orange on a yellowish-buff ground, the markings more or less normal. The type in the "coll., the markings are on the outer edges of the wings, but mostly on the termen. The basal band is complete, but narrow, the inner marginal blotch is very small and the lower blotch of the subterminal band is divided; the outer small terminal spot and the upper blotch of the subterminal band, a minute spot at the inner margin.
Forewings with dull chocolate markings, these extensive than usual, and a white ground thinly peppered with brown dots. The hindwings in the type are dull pale orange thinly covered with black dots, the spots are dull and faintly indicated in the allotype they are orange-red with a slight sprinkling of black dots. The collar and legs in the type are all orange, in the allotype red; the antennae on the thorax orange with orange-red laterally and at the extremity, that of the allotype dull orange-red, the markings blackish.

Forewings ground colour orange, markings cinnamon-brown, not sharply defined and with the edges of the triple costal mark ragged. The two outer components of the triple costal mark are united along the costa, leaving in the middle a redundant crown-coloured area, the outer markings are normal; the inner part of the nervures is brownish, and in the paratype there are brown scales scattered over the anterior and outer parts of the wing. Hindwings orange with red base, margins, and costa; the distal part of the nervures is brownish, the spots are more elongate in size and outline; the hindwings of the type are suffused with black scales towards the apex of the parasphenium, between the spots and in the centre. The collar and legs are red; the abdomen of the type is dull orange-red, that of the allotype dull orange yellow, dark orange externally; the fringes are brown anteriorly in the type.

Forewings with cream ground and pale buff brown markings, the markings are small, often partially obsolete or obsolescent, ill-defined, and sometimes only shown by scattered brown scales; hindwings dull orange with spots dull and full brown or blackish-brown and sometimes encircled with yellow. Thorax lighter brown than normal, abdomen dull orange with small dull brown markings, collar red.
Other examples of this form are figured in Lep. Comp. 6, pi. 114, f. 106, and Herrich-Schaffer, Ent. Ann. 8, pi. 111.

Forewings with the ground colour very dark cream, markings reduced in size and faintly indicated in brownish or greyish-cream, a little darker than the ground. Hindwings red with yellow spots of normal size. Thorax dark brown, collar red, abdomen red with blackish markings, rather smaller than usual.

Forewings with the ground colour cream with the positions of the usual brown markings very faintly visible as a slightly darker shade of cream. The cilia cream with a few dark scales at the apex of each wing. Hindwings orange-red with the positions of the usual blue-black markings faintly visible as a paler shade in the orange-red, the cilia cream.
There appears to be very little difference between this and the preceding ab. mirabilis Cockayne except that Cockayne says that it differs enough to merit a separate name. He says mirabilis has the forewings very dark cream whilst in gravesi they are cream. In the hindwings mirabilis is red with yellow spot, in gravesi they are orange-red with markings faintly visible in a paler shade. Since the type of mirabilis is a water colour figure the exact shade of cream is hardly to be trusted, the same applying to the red or orange-red of the hindwings. The only real difference is the tiny streak of dark scales at the apex of the forewing.
Forewings ground colour a deep pinkish-cream without markings, except brown linear ones along the costa, a small brown mark at the apex and a narrow one along the anterior two thirds of the termen. Hindwings slightly darker and richer than the forewings with no trace of markings; thorax medium brown, collar red, abdomen pale pink with black markings, that of the allotype having a darker pink base and extremity.

Type. Fig. by Oberthur, Lap., Comp. 6. pl. 102.
Forewings ground colour whitish, the markings pale lilac-brown and semitransparent obliterating most of the ground colour except near the base in the type, but in the paratype only obliterating those of the posterior half of the forewings hindwing very pale lilac-brown and semitransparent with spots of slightly darker shade and only just perceptible; fringes orange on both sides of the paratype and on the right side in the type; thorax brown, collar red, abdomen red with black markings; the allotype is the figure in Etudes d'Ent. 1896. 20. pl. 2.

Forewings ground colour pale cream, markings dark brown, those along the termen uninterrupted and extended to include mark at anal angle and a wide dark band along inner marginal mark; in the type area is a broad brown band consisting of the two outer components of the triple costal mark and the outer part of the inner marginal mark; both the costal and inner marginal part of the subterminal band are broken, so that there is a small brown mark on the costa and another on the inner margin and a long submarginal mark which lies in a broad cream band lying between the terminal and median bands. The innermost component of the triple costal mark is narrow and just touches the median band, the inner part of the inner marginal mark is small and round. Hindwing ground colour of base and costal third pale brick-red, that of the rest greyish including the whole of the border; basal spots united to form a broad black band, basal spots of the usual size but without lustre, horn near black, collar red, abdomen red with black marks.

Forewings extensively brown, the cream ground being reduced to two small areas at the base which are united, three or four near the costa, two tiny ones near the inner margin, and an oblique stripe 2 mm wide situated two thirds of the way from the base and reaching neither the costa nor the inner margin, having two sharp projections outwards and one pointing towards the base and one right wing oblique, nearly separating the costal from the inner marginal areas. Hindwing basal area brick-red (in the figure light brown), the rest pale greyish or brownish-white, there are no normal spots, but an ill-defined band replaces the basal ones and from it broad grey bands run outwards to the positions normally occupied by the three spots of the outer row, which are replaced by grey of a darker shade.

ab. phantasma (Hewel.) Insektenborese, 1903. 22. p. 120. (fig. in p. 10. pr. 10.) 
Forewings cream-yellow without any markings, the only dark scales are a few hardly noticeable ones on the fringes towards the apex. Hindwing light brick-red, also without markings but showing, in the position of the middle of the three normal black spots of the outer row, a small weakly-lightened yellowish spot. Collar brown-red, thorax red-yellow haired, abdomen brick-red with the black transverse streaks on the rings absent.

ab. dealbata Schultz. Hnt. Z., 1904, 18. p. 101. (fig. in p. 10. pl. 2.) 
Or the brown colouring of the forewings as also the black spotting of the hindwing, there are only slight traces present. The hindwing light brown, the forewings cream-white. Schultz describes his type, a from Tadelwitz bred by Pilz, in detail but also cites the figs. in Menetries Stum. Illus. Petrop. (Lep.) pl. 2 for comparison. These are not the type and allotype as stated by Cockayne.
The whitish ground colour of the forewing quite predominant, the brown markings in the form of patches or spots only very moderate in size. Hindwing. The black spots noticeably smaller, especially the one towards the base, which is nearly developed.


Forewing spotted with brown on a white ground. This is a description by Cockayne, I have not seen the original. It is probably a synonym of the preceding syltica 'erne., the description is too vague to be of use.


On the forewings the white greatly preponderates over the darker colour. Possibly also a synonym of syltica. The description is of little use and the hindwings are not mentioned at all.

Ab. quadrinaculata Stattermayr. Ent. 1924. p. 70.

An extreme form of ab. syltica 'erne., in which the basal part of the triple costal-mark appears completely separated as a spot, also the double-lobed remainder of the costal-mark is merged into one spot, reduced in size, and the normal dark blotch on the inner margin is divided into two spots.

Presumably the rest of the wing is without marking, hence the new quadrinaculata, two spots near the costa and two near the inner margin, which would, as the author says, make an extreme form of syltica in which the white ground predominates.


(type—Illiers. Icon. 1864. pi. 33. f.)

Forewings largely white. The triple costal-mark represented only by a small spot near the base and a group of three spots at the end of the discoidal cell (two small and one somewhat larger); the inner marginal blotch is reduced to two very short thin lines and there are two brown blotches on the termen at another at the anal angle, there is also a short horizontal streak towards the apex of the wing. Hindwings brick-red with three medium-sized spots near the margin and one near the base, all surrounded by yellow.

Ab. Degrescens Cockayne. Ent. 1935. 68. pi. 1. f. 4.

In the forewing the basal marking is reduced to a single dot, the triple costal-mark separated, or nearly separated, into its three component parts; the basal portion of the subterminal band F represented by one spot, and its lower portion near the inner margin by two separated spots; the terminal band represented by two spots; the fringe white. Hindwing with only one black spot which is the middle of the outer three, crossed by nervure 2, this is small and ringed with yellow; all other spots are replaced by yellow.

Cockayne says there is a good deal of variation in the form—sometimes the fringes of the forewing is brown and the two distal parts of the triple costal-mark are united. The anal part of the terminal band may be reduced to minute dots; the subterminal band F may be reduced to a few dots or absent. In the hindwing the spot near the anal angle or that crossed by nervure 3 may have a black centre or one on both sides, and the discoidal spot may have a thin black crescentic mark in it. Another modification has all the spots of the hindwing yellow. The most extreme example has only a brown discoidal spot on the right wing and a dot at the discoidal on the left wing and a narrow brown border to the termen of brown fringes on both wings with a narrow brown mark at the apex of both; there are a few pin-point spots elsewhere and the hindwings are red with yellow spots.
Forwings basal-half markings absent or reduced in size. The brown at base and the first two bands of the triple costal-mark are nearly obsolete, whilst the third forms a narrow band which often fails to reach the costa, but sometimes reaches the inner margin, appearing ribbon-like. The outer half of the wing, the submarginal and terminal marks are normal. Hindwings red with the inner row of spots, and discoidal mark replaced by yellow, or very small, but with the spots of the outer row of average size and often circumscribed by yellow, occasionally all the spots of normal size.


Forwings basal-half brown markings absent or reduced in size. The brown at base and the first two bands of the triple costal-mark are nearly obsolete, whilst the third forms a narrow band which often fails to reach the costa, but sometimes reaches the inner margin, appearing ribbon-like. The outer half of the wing, the submarginal and terminal marks are normal. Hindwings red with the inner row of spots, and discoidal mark replaced by yellow, or very small, but with the spots of the outer row of average size and often circumscribed by yellow, occasionally all the spots of normal size.


As in the preceding albobasalis Cockayne, the markings on the basal half of the forewings are reduced and in the outer half increased. The basal half is little except for four separated brown spots right at the base, of the first brown costal band there are only a few small remnants, the large inner marginal blotch is split into two separated brown spots which do not reach the inner margin in the third band (of the costal mark) because a narrower brown area is situated which does not reach the costa and towards the inner margin nearer to the outer of the two spots of the inner marking, mentioned above, the normal marginal field is almost normal but shows a broad brown marginal band in which the normal white ground is restricted, being much narrower. Hindwings light orange-red with the four blue-black marginal spots confluent, the basal row absent, the discoidal lunar shape blue-black.


Forewings with the middle component of the triple costal mark absent or with mere traces of it remaining, the quadrates inner marginal blotch is completely or partial-ly separated into two spots, one example reduces to three small spots. Hindwings with the three blue-black spots of the outer row normal, the others yellow, with or without a black dot in the centre.


Forewings with the inner marginal blotch absent or with mere vestiges remaining. Hindwings with the basal spots small, those of the outer row somewhat elongated, all are circumscribed by yellow rings, otherwise normal. The hindwings vary as regards spotting, we have one specimen which shows a very heavily developed row of basal spots, included by Cockayne in ab. alexandria.


The forewing fringes entirely white.


In the forewings the terminal brown band is absent or represented by a small broad mark at the apex or a minute oblique mark at the anal angle or both, leaving a broad white terminal area, the white ground in the median area is reduced in extent whilst that at the base is increased. Hindwings not abnormal.


The forewing fringes entirely white.

On the forewings there is a failure of the second costal spot from the apex, and the one below it on the inner margin, leaving a broad white band in the subterminal area. The brown spots at the base absent, those on the outer margin present. Hindwings with only a central spot, the outer marginal ones still complete.

Cockayne's petriburgensis, as far as the type is concerned, is a synonym of linae as his figure in Entom. 60, pl. 1, f. shows. In the Proc. Lond. Int. Nat. Hist. Soc. 1947-1948 p. 172 he admits this and restricts the name petriburgensis to the form with even less brown marking. See the following.

Cockayne restricts the name to specimens similar to the type figure in Entom. 60, pl. 1, f. He admits this and restricts the name petriburgensis to the form with even less brown marking. See the following.

Cockayne restricts the name to specimens similar to the type figure in Entom. 60, pl. 1, f. (type). In the Proc. Lond. Int. Nat. Hist. Soc. 1947-1948 p. 172 he admits this and restricts the name petriburgensis to the form with even less brown marking. See the following.

Cockayne restricts the name to specimens similar to the type figure in Entom. 60, pl. 1, f. He admits this and restricts the name petriburgensis to the form with even less brown marking. See the following.

Cockayne restricts the name to specimens similar to the type figure in Entom. 60, pl. 1, f. He admits this and restricts the name petriburgensis to the form with even less brown marking. See the following.

Cockayne restricts the name to specimens similar to the type figure in Entom. 60, pl. 1, f. He admits this and restricts the name petriburgensis to the form with even less brown marking. See the following.

Cockayne restricts the name to specimens similar to the type figure in Entom. 60, pl. 1, f. He admits this and restricts the name petriburgensis to the form with even less brown marking. See the following.

Cockayne restricts the name to specimens similar to the type figure in Entom. 60, pl. 1, f. He admits this and restricts the name petriburgensis to the form with even less brown marking. See the following.
The forewings of the first (or lowest) stripes of the triple costal mark is separated from the others by a wide band of white ground colour. The other two, narrower than usual, are joined together, leaving only a small white spot on the costa. Other markings normal.

In the most lightly marked examples the triple costal mark is separated into two parts, the two inner components forming a solid round mark, the outer component being displaced outwards and united with the subterminal band. The costal and inner marginal parts of the subterminal band are joined to form a complete dark band. The inner marginal blotch is absent or small. In the more heavily marked specimens the three components of the triple costal mark form a solid brown mark without any white on the costa, and this may be joined to the complete subterminal band. In the most heavily marked specimens, the median and subterminal bands are both complete and all the brown markings are increased in extent. Hindwings, with the subterminal band usually displaced outwards, sometimes touching the outer row of spots, which are often unusually long and may be confluent.

In the most lightly marked examples the triangle costal mark is separated into two parts, the outermost component of the triple costal mark is separated from the other two by a band of white or cream. Hindwings more or less normal.

In the most lightly marked examples the triangle costal mark is separated from the other two by a band of white or cream. Hindwings more or less normal.

In the most lightly marked examples the triangle costal mark is separated from the other two by a band of white or cream. Hindwings more or less normal.

In the most lightly marked examples the triangle costal mark is separated into two parts, the outermost component of the triple costal mark is separated from the other two by a band of white or cream. Hindwings more or less normal.

In the most lightly marked examples the triangle costal mark is separated into two parts, the outermost component of the triple costal mark is separated from the other two by a band of white or cream. Hindwings more or less normal.

In the more heavily marked examples the outermost component of the triple costal mark is separated from the other two by a band of white or cream. Hindwings more or less normal.

In the more heavily marked examples the outermost component of the triple costal mark is separated from the other two by a band of white or cream. Hindwings more or less normal.

In the more heavily marked examples the outermost component of the triple costal mark is separated from the other two by a band of white or cream. Hindwings more or less normal.

In the more heavily marked examples the outermost component of the triple costal mark is separated from the other two by a band of white or cream. Hindwings more or less normal.

In the more heavily marked examples the outermost component of the triple costal mark is separated from the other two by a band of white or cream. Hindwings more or less normal.
Fused wings with the innermost and median components of the triple costal mark, but the inner marginal blotch, of the second together with the outer tranversely barred hind wing. The latter is a reduction of the outer component of the triple costal mark to a conspicuous lunule, surrounded by this ground. "Hind wing sexual.

**Boyce.**

**ab. albisignata** Smith. Ent. Gaz. 1933, p. 3. f. b.

"Forewings with the three components of the triple costal mark completely fused, forming a solid brown mark on the costa; near the center of this mark is a white mark shaped like a comma which does not touch the costa."

**ab. fuscorhabda** Smith. Ent. Gaz. 1933, p. 3. f. 2.

"Hind wings with the costa glossy fuscous with brownish olive. Similar to the preceding but brunnescens introduced into the strain."

**ab. rubrociliata** Smith. Ent. Gaz. 1933, p. 3. f. 3.

"The fringes of the forewings are reddish-orange with the exception of those which are blackish-brown."

**ab. nigromarginaria** Smith. Ent. Gaz. 1933, p. 3. f. 2.

"Forewings with the costa, outer and inner margins blackish-brown, this color extending in various widths, narrow along part of costa but broad along submarginal through the fusion of the subterminal and terminal bands. Hindwings with broad black margin which the outer row of spots do not touch the costa."

Forewings with the brown markings predominating over light white markings; hindwings with pattern as shown in the figure, the colour of the light part brown, orange with a slight tinge of scarlet base.

The type is in the J. C. S. collection and is similar in many respects to the preceding *C. nigromarginaria*. The forewings are more narrowly bordered with brown, but the hindwings have the black margin of *C. nigromarginaria*, and the outer rows of black spots are joined to it in the same manner, the lower two are confluent forming a large black anal blotch. The name is unfortunate, as a colour form it would be much the same as ab. *C. nigromarginaria*, it could have been named on its marking characters with more effect.

ab. *C. melanoclista* Smith, Ent. Gaz. 1958. 9. pi. 3. f. 3.

Forewings with the brown markings more extensive than the fusaceous and whitish markings. The hindwings light ochraceous-fuscous, broadly margined with black in the manner shown in the figure.

The "broad margin" of the hindwing is through the coalescing of the outer marginal black spots with each other, and with a brown marginal band giving the appearance of a very broad solid dark outer third of the wing. The costa is also darkened and united with the discoidal spot and the basal spot, which are united with each other, leaving only an irregularly shaped patch of the ochraceous-fuscous ground color very similar to *C. melanoclista* backnape but darker.


Forewings completely cold sepia, white pattern restricted from the base along costal line reaching the inner margin or turning the white pattern is reduced to remnants of the triple costal mark and the upper part of the basal marking. Lighter patch in the terminal area which appears due to scales defect. Hindwings black, fuscous at the base and inner margin, the outer margin also fuscous; faint trace of the bluish sheen of the normally separated marginal spots in the subterminal area. Very similar to *C. fuscolimbata* Cockayne but darker.


Ocellus with a purple-black pupil and with blotchy purple-black on the veins postmedially to subterminally.

This is a most strange description of the hindwing, "degraded rufous ocellus" is an irregularly shaped patch of the ground color which is darkened ochraceous-fuscous, in fact the hindwing is similar but more extreme in its extent of black area, due to the coalescing of the basal black spot with the discoidal black spot and both of these with the united marginal black spots, forming one large triangular patch in which the light ground is restricted to the small spots crossing about middle of the wing. Hence in the type, which is in the J. C. S. coll., one of the same color as in the preceding *C. melanoclista*, ochraceous-fuscous, in fact the hindwing is similar but more extreme in its extent of black area, due to the coalescing of the basal black spot with the discoidal black spot and both of these with the united marginal black spots, forming one large triangular patch in which the light ground is restricted to the small spots crossing about middle of the wing.


The veins of the forewing are black or blackish.


The veins of the forewing are black or blackish.
torwing showing a smoky suffusion extending asymmetrically across the surface and darkening the white ground colour, and lightening the brown marking, where it covers it. Hindwing with the spots indistinct owing to a blackish suffusion. The type is here in the H. C. K. collection and appears to be a pathological example. The "smoky suffusion" is like a greyish skin stuck over the pattern of parts of the forewing. The hindwing spots of the outer row are similarly affected giving a blurred appearance but there is also a certain amount of black dusting uniting them.

Forewing with the innermost component of the triple costal mark joined just to its middle to the median component in addition to the normal connexion. Hindwing with the base, most of the corotial and inner and outer marginal areas reddish-orange but the normal markings joined together by a black suffusion.

Forewing more or less normal except for a slight lightening of the brown marking. Hindwing buff-pink, the dark spots ample in size but having the appearance of the dark colour running into the lighter ground.

The triple costal mark of the forewing is united to the inner or anterior part of the inner marginal portion of the subterminal band and the inner marginal portion of the median band is united to the lower or posterior part of the subterminal band, leaving a long white streak which runs from the base between the corotial and inner marginal portions of the median band and extends about half-way across the wing, reaching the first two spots of the outer margin, but not touching the two near the anal angle.

Forewing the innermost portion of the triple costal mark is separated from the other two portions, and the inner marginal blotch is partially divided, being "U" shaped instead of quadrilateral. On the two outer portions of the triple costal mark are joined to the outer portion of the inner marginal blotch, forming a complete transverse band. The three component parts of the triple costal mark are separated from the outer two portions, and the inner marginal blotch is partially divided, being "U" shaped instead of quadrilateral. The two outer portions of the triple costal mark are joined to the outer portion of the inner marginal blotch, forming a complete transverse band.
Similar to conjuncta but with the inner marginal blotch completely separated into two portions.

Similar to biconjuncta but with the inner marginal blotch completely separated into two portions, so that the two transverse bands are not united along the inner margin.

ab. hebaoides Stattermayer. Similar to biconjuncta but with the inner marginal blotch completely separated into two portions, so that the two transverse bands are not united along the inner margin.

ab. atribasalis Cockayne. Proc. S. Lond. Ent. & Nat. Hist. Soc. (1947-8) 1949. p. 174. pl. 17. Forewings rich dark brown, two small white spots at base, completely transverse white stripes, two thirds of the way from the base, curving from the costa internal to the costal part of the subterminal band and extending to the inner marginal part, sometimes with a small spot of white distally. Hindwing with all the spots of the outer row confluent, inner 1 black and others slightly intermediate.

ab. melanozoster Lambillon. Forewings rich dark brown, two small white spots at base, almost completely transverse white stripes, two thirds of the way from the base, curving from the base internal to the costal part of the subterminal band and extending to the inner marginal part, sometimes with a small spot of white distally. Hindwing with all the spots of the outer row confluent, inner 1 black and others slightly intermediate.

ab. nigrescens Lambillon. Forewings rich dark brown, two small white spots at base, a complete transverse white stripe, two thirds of the way from the base, curving from the costa internal to the costal part of the subterminal band and extending to the inner marginal part, sometimes with a small spot of white distally. Hindwing with all the spots of the outer row confluent, inner 1 black and others slightly intermediate.

ab. splendens Cockayne. Proc. S. Lond. Ent. & Nat. Hist. Soc. (1947-8) 1949. p. 177. Forewings black, with all the glistening blue-black spots coalescing to form one large black blotch, the only ground colour, purplish brown, at the base, along the inner margin, one or more, along the costa, sometimes a smaller outer marginal border. Hindwing the black which unites the inner basal band with the inner angle spot is crescents from the big blotch. The hindwings vary in the extent of the brown marking which may be slightly or greatly increased, and may even cover the whole wing.

ab. trimargo Cockayne. Proc. S. Lond. Ent. & Nat. Hist. Soc. (1947-8) 1949. p. 173. Forewings ground colour white with a great increase in the extent of the brown markings, which have taken approximately the sites ground reddish brown of the basal streaks and the transverse band between the base and the median band, small area on the costa between the inner and middle part of the inner margin, one or more, along the costa; sometimes a curved narrow stripe, anterior to the middle of the subterminal band and extending to the outer margin, sometimes with a small spot of white distally. Hindwing with all the spots of the outer row confluent, inner 1 black and others slightly intermediate. The forewings have a reddish brown border running from costa to anal angle, in which lie three spots of the outer row, the rounded contours of their inner aspects projecting slightly beyond the rest of the border. These spots are black, in the extreme forewings bluish brown, orange with black markings. The main feature of this form is the very wide blackish brown border on the forewings and the lack of white ground colour on the lower half of the forewing.
In the forewings the brown markings have increased in extent, leaving two white stripes at the base and a narrow transverse band between the basal and median markings; a white streak on the costa between the middle and outer portions of the triple costal mark, a white stripe running obliquely from the costa between the outer portion of the triple costal mark and the costal portion of the subterminal band, then turning outward between the middle portion of the terminal band and the inner marginal portion of the subterminal band from the outer portion of the inner margin; submarginally, the outer portion of the triple costal mark from the upper part of the inner marginal portion of the subterminal band, there is also a very narrow white streak near the costa between the costal portion of the subterminal band and the submarginal part of the terminal band. Running out to a white transverse stripe between the basal mark and the innermost part of the triple costal mark and an extension outward separating the inner marginal quadrangular mark from the triple costal mark. Cockayne says the name could be applied to forms with little white ground remaining on the forewings, and normal hindwings, since presumably similis has normal hindwings.

Forewings with the brown markings much increased in extent, so that the white ground is reduced to a stripe between the outer part of the triple costal mark and the subterminal band, two dots between the subterminal band and the terminal band and two dots on the costa; in addition, there are white marks at the base running out to a white transverse stripe between the basal mark and the innermost part of the triple costal mark and an extension outward separating the inner marginal quadrangular mark from the triple costal mark. Cockayne says the name could be applied to forms with little white ground remaining on the forewings, and normal hindwings, since presumably similis has normal hindwings.

Forewings with the basal area almost entirely brown, or a paler tint than normal, up to and including the inner marginal portion of the subterminal band, or with brown dots on the white ground between the median and subterminal bands. The white ground colour in the basal region is replaced by brown, rather than that of the markings and the area so replaced may vary on the two sides, but the scales are normal in appearance. Hindwings rather paler red than usual with spots normal or nearly so.

Forewings nearest to obscura Cockerell, of normal brown but not marbled; as in obscura, the normally white markings are not in white, but in dark black-brown, narrower than usual. The hindwings show a lot of black, the margin is yellow just before it a red band of normal colour about 3 mm. wide and edged internally by a narrow yellow line. In the position of the three black outer spots there is a blotched, partly suffused black band which goes from the inner margin along the margin and ends about 12 mm. before the outer margin (costa) and is about 3 mm. wide; this black band shows only a small island of red between the 1st and 2nd spot from the costa in normal caja, and ends on the large black blotch representing the inner spot in normal caja; the veins from the black band to the basal angle are black. The rest of the wing is red with yellowish internal glands, abdomen showing a lot of black, the central four rings completely black as also its underside, except the tip which is red. This is the original description, it does not agree with the translation given by Cockayne in Proc. Zool. Soc. (1947-8) 1949, in which he states that the base of the hindwing is black.
Forewings brown, 4th darker brown taking the place of the normal white marking. Hindwings are also brown, 4th lighter brown fringes and inner margin; the scales normal in size and lustre, showing distinctly on the brown ground. Abdomen dark brown, fringed with black, reddish-brown to the tip.

ab. Janci Michel. Berl. Ent. 1908. 3. p. 51. pl. 1. fig. 2. [see.]
Forewings brown, the white part of normal caja showing as dark-brown markings. Hindwings with ground colour black-brown, the steel-blue spots distinct; at the base there are radiating remnants of the normal brick-red ground colour. The form is very similar to obscure Cockerell, but has a red line from the base outward, in the form of three rays, one of which is along the inner margin.

Forewings with the white markings absent except for a thin, dentate, submarginal line, two small spots on the inner margin, and a similar one at the base. Hindwings black with orange-yellow margin and inner margin the margin to black variable.

ab. clari Rutt. Ent. Soc. 1909. 21. p. 88. pl. 5. fig. 2.
Forewings leur chocolate-brown, with only the faintest traces of the usual creamy-white markings. Hindwings with yellow ground colour, the black spots easily traceable but modified by a dark suffusion that covers all the centre of the wing, leaving only the marginal areas yellow. For figure, though carefully reproduced, these rather too prominently the paler markings of the forewings (Art. Thorax of the orange colour at the forewings, the abdomen red with the usual black bands.

ab. quarrionorhonia Biezanko. Polski Ent. 1924. 3. p. 73. pi. 1. f. 231.
Forewings brown with darker brown marking. Hindwings nearly black with spot scarcely visible. Abdomen orange with black bands.

Forewings normal, hindwings orange, sometimes with orange-red border, partially and often asymmetrically suffused with blackish-brown. Collar red, abdomen orange, redder on the sides and extremity.

Forewings chocolate-brown; on each forewing, symmetrically placed close to the costa there are two small buff spots, the larger is oval and lies about midway between the base and the level of the discocellular nervure; the smaller is round and is equidistant from the base and the larger spot. Between the discocellular nervure and the margin there is a broad ill-defined pale band starting near the costa and ending near the inner margin; it is semitransparent and many scales are missing owing to worn condition, but those present are very pale brown owing to deficiency of pigment or transparent and colourless owing to absence of pigment. Hindwing with the basal part red, but the border between the yellow on the outer row of spots and the pale brown, the scales being much paler than the blackish-brown pigment; the basal part of the costa is whitish, the outer part pale brown; a broad strip along the inner margin is whitish, the scales being very deficient in pigment. The spots are dull black without the usual blue-black lustre and the fringes grey-black. Abdomen dark brown, uniform bright red, brighter or red than the hindwing scales, with the usual black dorsal mark.
Forcing with the markings light reddish-brown with numerous irregular oval or
lighter brown, varying in size and position in different specimens as is seen in the two sides of the same specimen, but present in all markings. Markings bright red with normal blue-black spots; abdomen red with small brown markings, legs brown, collar bright red. The ground colour of the forewings is cream.

ab. paliens Schultz. Ent. Z. 1909. 22. p. 16.
Forcing with the ground colour much paler than typical, not chestnut-brown but brownish-yellow. The "ground colour" obviously refers to the markings.

Colour somewhat less bright than in normal caja, the undersides exhibiting a more
greater distribution of the scarlet tinge; it is further characterised by the fact
that the veins are edged on each side by light buff scales, a condition more pronounced on the undersides than on the upper.

This aberration manifests a curious elongate wing-shape, recalling that of Hepialus
humuli Linn., most of the examples exhibit the prominence of the white ground
colour in the forewing as in ab. paliens. Hindwing and abdomen were of less
normal in marking but the hindwings elongated in the same way as the forewings.
The wing-shape is the exact opposite to that of ab. palin in this. The wings are shortened, (see following form).

Forcing short with the apex rounded and the termen deeply bowed; hindwing also
short with a deeply bowed termen. The ground colour of the forewing elongated-
but, markings rich wriggling less bright than in normal caja.
The main character is of course the wing-shape, the marking description being
mostly that of the type specimen.
In the hindwings all the eye-spots are bordered with yellow instead of black-blue, the margins of the spots remaining black.


The description may mean anything, the complete number of spots joined into one large blotch, or merely into bands. Lempke in Tijdschr. Ent. 1961. P. 104. Pjil. 1 gives his opinion that the outer row of spots are united and the basal spots also united, not forming a band. This is accepted here, the hindwings therefore showing a complete basal band with an outer marginal band.

Cajalinca semiconfluens Lempke. Tijdschr. Ent. 1961. P. 104. Pjil. 1. This form however is not accepted here, the outer row of the hindwing spots are connected with each other, but the basal spots are not joined.


The two authors Loganich and rebeli Wnukowsky, Zool. Anz. 1929. P. 223. (nom. nov. pro confluens deb. el) were given by these two authors because they thought rebeli was a synonym of confluens. This is not so.
On the hindwings all the spots have become strongly elliptical, and the outer row is drawn out streak like and united with uppermost spot of the inner row. In another specimen the uppermost spot of the outer row is also joined by a streak to the discal spot.

On the hindwings the spots are united both longitudinally and transversely, and the proving radiata Gramann and confluens Stattermayer. The figure is too bad to be of any use. In another specimen the outer row of spots appear to be united transversely by a black line connecting with the spots of the inner row which are opposite to them.


Hindwings a mixture of red and orange. The discal spot is united to the outer spot of the outer row by a black streak, a black line unites the inner row to the middle one of the outer row, another black line joins the small spot of the inner row near the inner margin to the spot of the outer row near the anal angle, seven wedge-shaped black marks run inward from points just internal to the border, the fourth ending in a point between the first and second spots of the outer row, the others running into the spots nearest to them.


Hindwings with black, yellow-edged veins.

ab. brunneociliata Stattermayer, Ent. Anz. 1924. 4. p. 70.

Hindwing with dark brown fringes except the last third near the anal angle, which is yellow.


The main character of the form is seen on the hindwings on which the nervures are all black and which show a complete black border. In violet and blue, brown fringes, the ground colour is rich orange-red, and the inner row of blue-black spots on a complete black back to which the discal spot is united; the outer row of spots are rather large and yellow, the yellow back is as far as the nervures. The forewings have the brown markings increased in extent, leaving the following areas of green ground - two basal dots, a narrow brown line reaching neither the costa nor the inner margin, and, but not at the basal area, and the trident costal mark with an extension partially separating the costa from the pale outer marginal margin, lacking trapezoidal spots in the outer third of the wing, a small dot between the costal and subcostal ones.
Hindwings vinaceous pink dominated by fuscous suffusion, its only two spots remaining of the normal three of the outer row. These are the first and second, counting from the costa.

Similar to ab. bioculata, which has only two spots in the outer row, but these are the second and third, i.e. the lower two.

Smith's type has the brunnescens strain showing, but one of his series has the hindwings of almost normal colour, orange red. The name should include all hindwing colour, but only showing the two spots.

Hindwing bright rufous tinged orange, its yellow costa, its only blue-sheened large, moderately large, blue-sheened black spot remaining of the outer row. It is the central spot of the normal form.

Till's form is merely a light example of brunnescens Statteimayer.

Hindwings with the fringes pure white.
The abdomen of the black marks unite with the dark brown or black, forming complete rings. The form is the opposite to subrubrodorsalis, in which the black marks are feeble or absent.

Subrubrodorsalis adult. Inst. 1919. p. 16.
Abdomen with the black dorsal marks entirely absent.
Schultz mentions specimens with feeble marks reduced to small spots, but actually gives the name to those without any spots at all.


On the hindwings the black spots of the central field are united to form two parallel bands of which the outer is only present in its upper half, only in very rare cases are there two completely formed transverse bands which run from costa to anal margin.

ab. nigrofasciata, Pailla-Tedaldi, Ent. It. 1888, 7. p. 204.

On the hindwings the inner row of spots are joined to form a straight transverse band.

Some authors consider this a synonym of the preceding, but Schultz and other states that there are too rare, although the outer of the two forms is usually the upper half only has complete, both nigrofasciata and fasciata have T rows, which is much more frequent, it is separate here as a subspecies.


On the hindwings one or more of the black spots of the inner row are united in the form of longitudinal streaks. The large black apical blotch, which usually are joined to the corresponding spots of the outer row, is often united by the inner row and later, the result of black dusting occurs. If this or there is none, along the costal margin a broad dark area runs from base to apex.


On the hindwings with the light spots partly suppressed. See restriction below.


On the hindwings the apical black spot is absent.


Oberthur figures a specimen from the Bellier collection in England as an aberration. It differs from the above, but it can stand under the new rules as a subspecies.
villica Linn. continued.


On the forewings the white spots on the costa and on the inner margin, at least on one of these is present. For convenience in writing and indicating in the most extreme forms, all the white spots on the inner margin extending that of the tornus, forming one long stripe, the confluent on the costa confined to the two basal spots. Schultz cites Oberthür's plate in "Etudes" 20, pl. 17, figs. 275-282 which show many forms of this type of conflueence.


The white markings predominant on anterior part of the forewing are as follows: the confluent white spots larger and restricting the black areas to a greater degree. Dufour's text shows the spots along the inner margin vary large and confluent and joining up with the large spot at the tornus. The basal costal two spots are large and confluent with the spots along the inner margin before forming a large white basal blotch. I have not seen the original figure.

ab. kettellwii Cockayne. Ent. 1952, p. 11, pl. 1, figs. 7-11.

Both forewings and hindwings are almost entirely lacking in scales except at the posterior ends.

On the forewing there is a line of black scales along the costa and a large part of the inner margin; the discoidal mark is distinct, a line of black scales runs along the inner nervure except the part near the base and another line runs along nervure 2 to a point a little beyond the discoidal mark, and the triangular space between this line and black scales; the apex is black, there is a triangular black blotch at the tornus as nervure 4, and another near the anal angle, and a narrow black band along the tornus and the fringe between the first mentioned black spots. This shows the spots along the inner margin very large and confluent and joining up with the large spot at the tornus. The basal costal two spots are large and confluent with the spots along the inner margin before forming a large white basal blotch. I have not seen the original figure.

ab. wardi Mathew. Ent. 1947, p. 11, pl. 2.

The author gives no description. The figure is excellent and shows the forewing with the three cream spots of the outer area joined together in a solid blotch. The rest of the spots vary in individuals. The costa of the forewing remains narrowly black as far as the apex or a little beyond, travelling slightly along the outer margin, below this the fringe is cream like the rest of the blotch. The costa, just before the apex, there is a black line or two small spots reaching into the cream area. The other cream spots are normal as regards position but in the figure somewhat elongated. The hindwing shows a short black stripe running from the costa near the apex, but the rest of this line is black and the rest of the spots vary in individual.

ab. anomala Cockayne. Ent. 1952, p. 64, pl. 1, figs. 12.

On the forewing the pair of spots at the base are united and form a yellow-coloured mark broader and longer than normal, and a small black spot joins the anterior part of the basal mark running outwardly close to the costa. The discoidal cream spot is missing, but the spot basal to the discoidal cream has a pointed extension near the costa, which almost reaches the outlined spot attached to the basal spot. There is only one spot near the inner margin instead of two; there are two spots joined together near the tornus. The rest of the spots vary in individual.
The light colouring claims almost the whole of the forewing surface, so that of the dark ground there are hardly visible traces to be seen. The hindwing is darker yellow, without black spots.

Schultz then says that Oberthur figured two examples of this aberration in 'Etudes' 20, pl. 17, figs. 283 & 286. Oberthur also noted these same figures.

Oberthur based 'villicula' on Hampson's 'ab.4.' in Gat. Lep. Finale 3, p. 467, the description of which is apparently that of the figure in Barrett, pi. 73, f. le., which was also cited by Oberthur as being his ab. 'Ferruginosus'. This 'villicula' is the same form.
villica Linn., continued.

ab. caliglnoaa Schultz. Silt. f. 1904. p. 110. 'holly black on the wings, body, legs, etc. on upper and underside.

ab. arabachi Goltz. In Silt. The right side normal but indication of marking. The grey instead of white; the abdomen on its left half brown and on its right half black.


The whole insect is suffused with smoky-blackish brown, in the forewings the large spots are indistinct in outline and small. "Marking with the ground colour dark brown with a trace of orange and the black markings are large and indistinct."

The area on the thorax is blackish brown and on the abdomen entirely blackish brown.


The markings brown instead of yello.


"Markings with the two transverse rows of black spots almost or completely absent; the apical blotch however in present. Forwings normal."


There are at least three different constructions put upon Spuler's description of this form which says "Fowings, except at the apex, with small black blotches, - you see abdomen and anal side," etc.

Cockayne takes the view that Spuler meant a very rarity and named the markings had small spots and has called a short series by the name manuaculae. For it is not so because Spuler mentions the combination of radiata (urnula) and anglica, with forewing aberrations. Spuler makes another mistake in describing manuaculae as having the white spots reduced in size, the exact opposite to what Spuler says. The form in my opinion has the forewings almost completely "white," except at the apex, quite small blotches (tupfen), not spots for which Spuler used the word flecken, meaning of the normal black. If this is correct Spuler's line as a synonym of illustris Schultz which had the light colouring almost taking the whole of the forewing surface with small traces of the black markings, has the types of the two figures he cites in Sauer's Essays both of which retain the black at the apex, which Spuler also stresses. In view of all this it is placed as a synonym of illustris Schultz but also explained here because of the different points of view.

ab. posticosuffusa Cockayne. Ent. J. 1952. p. 64 pi. 1 f. 7.

Hindwing with the black markings blurred at their edges and having a suffused appearance. Forewing normal.

ab. nigrolimbata Cockayne. Ent. J. 1952. p. 64 pi. 1 f. 10.

Hindwing with a broad black band along the margin reaching or almost reaching the anal angle. In the type the fringes are black and in the allotype it is black along the outer half of the wing. Forewing normal.
villica Linn., continued,

The whole of the abdomen is orange-yellow with no trace of the usual deep pink of the distal half.

ab. flavoabdoiainalis Cockayne. Ent. dec. 1952. >i.p# 4.

Trie whole of the abdomen is orange-yellow with no trace the usual deep pink of the distal half.

ab. flavo Bang-Haas. Ent. 1930. 43.p. -35«

Bang—Haas suggests this name for all yellow aberrations of this kind, but as he does not mention villica, the name cannot be used in this species.

This is the spot ab. spoliata Cock. Ent.;c, 1934.66.p.op. (corrected p. 135.-

Forewing with spot 6, using the schema of O. Schultz, missing. Also in the apex on the inner margin of the forewing next to the base not at the anal angle.

In the first description spot 5 was given as missing but corrected to a ob. the same volume on p.115.

ab. galericula Schmidt. Ent.Z.192p. 37» P. 4). An asymmetrical specimen, in the right ab. uruguay Schultz, on the left the normal arrangement of spots: the head row of spots absent. Particularly striking is a yellow four cornered longitudinal streak on the thorax which is halved by a fine black line from front to back.


On the hindwings the black apical blotch is very well developed, even at times, invading the whole apex: the other black spots much reduced in number. Described as an aberration of the subsp. belliri, Agenjo described several other aberrations which however belong to the subsp. anglica Spring. and do not apply to our English race.

ab. bellieroides Draudt. Seitz. Forewings with the deep brown normal but deep yellow-toned. The author says the specimen was alleged to have been collected on Gapri. It will seem likely that it was actually a bellieri wrongly labelled, but since it is described as an aberration, it can stand for specimens superficially like bellieri.
cribraria Linnaeus. The typo form does not occur in Britain, the description says forewings white, with transverse black spots.

subsp. bivittata South. Entorn. 1900, 33, p. 57, fig. = anglica Oberthur. Leis, Com. 1911, 5 (1), p. 171, pl. 80, f. 159.

aberrational forms etc.

cribraria Linnaeus. 33p.l.

subsp. bivittata South. Entorn. 1900, 33, p. 57, fig.

Subsp. bivittata South. Our British race. Differs from all other races by the dark longitudinal streaks on the forewings. From the Forest heaths. Oberthur's description of anglica says - Differs from all Continental races by the elongated blackish lines running from the base of the forewings to the outer margin which however vary greatly.

subsp. bivittata South. Entorn. 1900, 33, p. 57, fig. = anglica Oberthur. Leis, Com. 1911, 5 (1), p. 171, pl. 80, f. 159.

aberrational forms etc.

Subsp. bivittata South. Our British race. Differs from all other races by the dark longitudinal streaks on the forewings. From the Forest heaths. Oberthur's description of anglica says - Differs from all Continental races by the elongated blackish lines running from the base of the forewings to the outer margin which however vary greatly.

ab. fasciata Gless, Int. Ent. 1916, 10, p. 39.

The black spots of the forewings flowing together into broad bands. Presumably transverse.


The black spots of the forewing, particularly those of the transverse lines, elongate into streaks along and between the veins. In particular there is a long streak from the base, through the cell, almost to the outer margin. Hindwings in the black with all grey base, in the f completely black.

According to Lempce this is a subsp. on the heaths in Holland but occurs elsewhere as an aberration. It cites South Brit. Moths p. 129, f. 2.


Forewings darkened. Completely fuscous except for the veins which remain white.


All the wings and fringes almost unicolorous black-grey, the black markings are still visible but indistinct on the dark ground.

ab. delimbata Cockayne. Ent. Sec. 1931, 53, p. 66, pl. 8, f. 15.

On the forewing the markings in the basal and median parts are strongly developed but in the marginal part there are no markings with the exception of a thick black streak between nervures 1 and 2 and a few scattered black scales elsewhere. The form belongs to our British subsp. bivittata. The following form is similar but apparently does not show the longitudinal streaks.
cribraria Linn.,

The proximal and discal rows of black spots flowing together into broad bands but
the submarginal row absent.
Similar to the preceding but can only be applied to the subsp. arenaria Linn.,
which however is found only rarely in this country.

Forewings white without any markings.

The basal half of the forewings and hindwings white with black spotting, the exter-
nal half deep brown.

The ground colour of forewings, the fringes of the hindwings, and the body, pale
yellow.

Examples of the subsp. arenaria from coastal dunes, with the forewings dirty-grey
instead of white.
The text appears to be a natural reading of the page, containing descriptions of various species of butterflies, including their aberrational forms and colors. Here is a transcription of the text:

"... aberrational forms etc. jacobaeae Linn, typical form — the markings and hindwings red. ab. flavescens Thierry-Ifieg. (Cat. 187, p. 181). The normally red parts are yellow instead of red. ab. expallescens Cockayne. Cat. 191, p. 263. The parts normally blackish-brown have a faded, yellowish-grey colour, the parts normally red are faded orange, sometimes tinged with reddish-orange. ab. fulvescens Copler. Schmett. Pur. 1906, p. 143. The normally red parts are replaced by yellow-red (orange). b. pallens Oabeau. Larabillionea 1928, p. 12. Porewings of a more greyish-black than the typical colour, the markings red but less bright. Hindwings of a pale red. b. albescens Cockayne. Ent. Ec. 1931, p. 26. The normally red parts are replaced by yellow-red, sometimes tinged with reddish-orange. ab. nigrana Gabeau. L. mb. 1928, p. 28. Hindwings up-striped and underside blackish, with a dull red basal area, single specimen, the type, of the type. b. ortrudae. Loch. its. Ien. Ent. Tlor. 1945, p. 17, 18. Hindwings with the normal red but showing the following markings in more grey, the ur of the forewing. Between veins IV/2, III/2, II/1, II dark grey spots, more or less distinct beginning at the edge of vein III/3 and running on a slight curve towards the grey notch between veins I and II. This marking, in spite of its incompleteness, reminds one of the pattern of P. arctias and is very similar to the hindwing of P. plenata."

The text continues with more detailed descriptions of various species of butterflies, including their color variations and specific markings on their wings.
On the forewings the red subcostal stripe is much narrowed, the two red spots are also smaller than usual.

The red costal stripe of the forewings is bordered on its lower side by a very narrow whitish line.

Fore and hindwings of a beautiful clear vermilion with the normal red markings clearly visible but of a darker shade. Fringes buff-yellow except for a few black scales on the forewing costa, thorax and abdomen vermilion but slightly dull in appearance.

Fore and hindwings of vermilion with the normal red markings more clearly defined than in the preceding ab. coneyi and somewhat darker. Fringes buff-yellow suffused with black scaling which is heavier on the costa of fore and hindwings, thorax and abdomen suffused with black.

Fore and hindwings of dull vermilion with the normal red markings clearly defined. Fringes and margins of all wings black, heaviest on the costa of fore and hindwings; the veins of the forewings black and a suffusion of black scales on outer third of the forewings. Thorax and abdomen dull vermilion, heavily suffused with black.

Forewings buff yellow suffused with pale vermilion, with the usual costal streak and spots of vermilion. Hindwings buff yellow suffused with a rosy tint which follows the veins in many specimens. Fringes buff yellow with a variable amount of black scaling. Thorax and abdomen vermilion suffused with black.

Fore- and hindwings crimson with the usual costal streak and spots of a darker shade. Fringes mainly black. Thorax and abdomen crimson, heavily suffused with black.

Forewings very pale vermilion with the costal streak and spots only just visible. Hindwings pale rose pink. Fringes buff with a little grey scaling. Thorax and abdomen pale vermilion suffused with greyish buff.
Fore- and hindwings as the typical form, suffused with rusty vermilion so that although all typical markings remain, this form has the appearance of being overlaid with additional scaling. Fringes greyish black. Thorax and abdomen dull vermilion suffused with greyish black.
her a Linn, Systematice. 884.
On the forewing the two white oblique stripes fail completely except for some very small spots on the costa, a quite thin stripe along the inner margin is present and a thin streak from the apex to near the anal angle. In the wing of Spuler is a broad
mark. Otherwise the wing is unicolorous dark brown.
Spuler is costimaculata had only remnants of the second and fourth white bands of the forewing. The description is not full enough to be certain and it would appear to be practically the same form as perfusca.

ab. nigricans Kempny. in loc. Ent. its. 1882, 1, p. 62.
Forewing with only the marginal white transverse stripe present, the two other main
ones are absent except for white spots on the costa. On the hindwing the black central spot is united with the lower part of the apical blotch by a broad short band. Oberthur's colored figure agrees almost exactly with this description, the hindwing clearly showing the broad black band running from the discoidal to the apical blotch and the black ray from the base to the discoidal. The species resembles luctuosa in this.

Hindwings with the black marginal spots elongated and forming a strong black margin. Forewings with the inner oblique stripe narrower and longer.

ab. brunescens Spuler. Schmett. Eur. 1906, 2, p. 141. (brunescens in text as a note. An brownish clouding of the bands or stripes.)
Hindwing yellow.
The main character is the strong dusting of the hindering. This dusting is broadest at the inner margin and less broad at the costa, the red-orange of the type and the luteolus of the type, breaking through the general dusting in the middle of the ring. The white stripes strongly narrowed.
P. Panaxia dominula Linn. 1772. [Ent. J. 1775, pl. 509.]

Forewing with the light spots orange instead of the normal white.

- spaneyi Strand. Ent. Indoch. 1912, 29. p. 64.

Forewing with the light spots orange instead of the normal white.

- aberrational forms etc.

- spaneyi Strand. Ent. Indoch. 1912, 29. p. 64.

Forewing with the light spots orange instead of the normal white.

- spaneyi Strand. Ent. Indoch. 1912, 29. p. 64.

Forewing with the light spots orange instead of the normal white.

- spaneyi Strand. Ent. Indoch. 1912, 29. p. 64.

Forewing with the light spots orange instead of the normal white.

- spaneyi Strand. Ent. Indoch. 1912, 29. p. 64.

Forewing with the light spots orange instead of the normal white.

- spaneyi Strand. Ent. Indoch. 1912, 29. p. 64.

- aberrational forms etc.

- spaneyi Strand. Ent. Indoch. 1912, 29. p. 64.

- aberrational forms etc.
Sometimes the pale spots of the marginal cells of the forewing are fused together into a bold oblique band and the little spots at the apex into a small one, the hinder can join with the first. The wing Bl. not strongly reduced.

As usual with Huber's descriptions, this is not at all clear. Presumably the two largest spots fuse into a band and the small apical ones into a second band that can join up with the first.

On the forewing the yellowish and white, respectively, spots of the costa are united with those below (on the inner margin) to form large pale transverse spots. Reich mentions a flavo-conferta Schultz in Ent. Itundach. p. 91, but I can find no mention of it in Schultz articles.

The main character on the forewing is the large white subapical blotch, merging into the greatly enlarged group of apical spots to form "finger" running out from this blotch. The large spot at the anal angle is orange, so that a large irregular area of "finger" with yellow in its periphery, it is appropriate to the ground colour. The wing is orange-yellow at all extreme points of the Normal spot which is small, black and edged with yellow, instead of the large spot which is small, black and edged with yellow, filling the base of the area of the anal spot. Hindwings ground colour is yellow, with the exception of the distal spot which is black and edged with yellow. Markings black, 1st the oecision of a small break just before the anal angle, there it is gold.

Forewing with the apical group of spots greatly enlarged and striated. They fuse together, particularly at the lower two to form a large white band edged distally by the black fringes. Kettlewell there is an error, with must between this break and the anal spot, forming bright red at the corner and reduced margin.

Forewing with the markings as in the preceding albomarginata but the spots are deep yellow as in ab. crocea Schultz.

On the forewings the basal spot and central spot (in the discoidal cell) are fused into one, as in juncta Druce, but the fusion is continued distally as a thin line running parallel with the costa, and joins the subapical blotch. Hindwings.

The normal markings can be seen as through ground glass. The ground colour itself is pale, so that the differentiation between it and the markings is indistinct, whereas they are bright to varying degrees to the light, for instance, the ground colour at the extreme light margin, the discal black markings and the mid anal margin, the normal black markings reduced to varying degrees of the exact spot in hindwings.

The proximal and distal spots in the discoidal cell of the forewing are confluent and form a mark, in shape, like a dumbell.

The basal and central spot in the discoidal cell of the forewing are confluent and form a mark, in shape, like a dumbell.

The proximal and distal spots in the discoidal cell of the forewing are confluent and form a mark, in shape, like a dumbell.
Continued

On the underside of the forewings there are two broad ochre-yellow longitudinal stripes, running from the base out towards the margin. These are three good "forms", first of which shows the two basal spots considerably elongated horizontally, reaching the base. In the other two the upper basal spots only reach the middle but also extend outwards to include the outer spot. In the first form, a striking aberration, it seems strange however, that the upper spots are reduced, in contrast, the spots are normal, one would hardly expect this in such a striking marking, but it occurs in the juncta group.


Cockayne and Kettlebell give a wrong reference to this form and Kettlebell gives the correct reference but wrong description. "On the underside of the forewings there are two broad ochre-yellow longitudinal stripes, running from the base out towards the margin." There are three good "forms", first of which shows the two basal spots considerably elongated horizontally, reaching the base. In the other two the upper basal spots only reach the middle but also extend outwards to include the outer spot. In the first form, a striking aberration, it seems strange however, that the upper spots are reduced, in contrast, the spots are normal, one would hardly expect this in such a striking marking, but it occurs in the juncta group.

On the underside of the forewings there are two broad ochre-yellow longitudinal stripes, running from the base out towards the margin. These are three good "forms", first of which shows the two basal spots considerably elongated horizontally, reaching the base. In the other two the upper basal spots only reach the middle but also extend outwards to include the outer spot. In the first form, a striking aberration, it seems strange however, that the upper spots are reduced, in contrast, the spots are normal, one would hardly expect this in such a striking marking, but it occurs in the juncta group.

On the underside of the forewings there are two broad ochre-yellow longitudinal stripes, running from the base out towards the margin. These are three good "forms", first of which shows the two basal spots considerably elongated horizontally, reaching the base. In the other two the upper basal spots only reach the middle but also extend outwards to include the outer spot. In the first form, a striking aberration, it seems strange however, that the upper spots are reduced, in contrast, the spots are normal, one would hardly expect this in such a striking marking, but it occurs in the juncta group.

On the underside of the forewings there are two broad ochre-yellow longitudinal stripes, running from the base out towards the margin. These are three good "forms", first of which shows the two basal spots considerably elongated horizontally, reaching the base. In the other two the upper basal spots only reach the middle but also extend outwards to include the outer spot. In the first form, a striking aberration, it seems strange however, that the upper spots are reduced, in contrast, the spots are normal, one would hardly expect this in such a striking marking, but it occurs in the juncta group.

On the underside of the forewings there are two broad ochre-yellow longitudinal stripes, running from the base out towards the margin. These are three good "forms", first of which shows the two basal spots considerably elongated horizontally, reaching the base. In the other two the upper basal spots only reach the middle but also extend outwards to include the outer spot. In the first form, a striking aberration, it seems strange however, that the upper spots are reduced, in contrast, the spots are normal, one would hardly expect this in such a striking marking, but it occurs in the juncta group.

On the underside of the forewings there are two broad ochre-yellow longitudinal stripes, running from the base out towards the margin. These are three good "forms", first of which shows the two basal spots considerably elongated horizontally, reaching the base. In the other two the upper basal spots only reach the middle but also extend outwards to include the outer spot. In the first form, a striking aberration, it seems strange however, that the upper spots are reduced, in contrast, the spots are normal, one would hardly expect this in such a striking marking, but it occurs in the juncta group.

On the underside of the forewings there are two broad ochre-yellow longitudinal stripes, running from the base out towards the margin. These are three good "forms", first of which shows the two basal spots considerably elongated horizontally, reaching the base. In the other two the upper basal spots only reach the middle but also extend outwards to include the outer spot. In the first form, a striking aberration, it seems strange however, that the upper spots are reduced, in contrast, the spots are normal, one would hardly expect this in such a striking marking, but it occurs in the juncta group.
dominula Linn, continued

ab. marita Schulte. Soc. Ent. 1905, 12, p. 140. V. fig. in Act. Ent. 1904, 43, p. 177.

The description in Soc. Ent. says: "Forewing unicolorous, without spots. Nominon form occurs which shows the spots of the forewing strongly sooted. Obtained by exposure of pupa to cold." (Gmelin in Soc. Ent. 1904, 43, p. 145.) Fig. 7, which shows the forewings without spots and the hindwings with very heavy black blotches and bands on each appears to be a darker ground colour than some other figures which presumably have red ground. I have not noticed the colour of the hindwings, or the heavy markings, so presumably they are not a character of the form. I have not seen the description said to be in V. fig. 1904, 43, p. 177.


Completely darkened on fore and hindwings.

The figure by Milliere shows the body also darkened. Schulte does not mention the head and forewings dark green, hindwings black.

ab. nigrofusca Rich. Mitt. deut. Ent. 1903, 4, p. 19, fig. 4.

Forewings and hindwings ground colour uniform black-brown, with reduced scaling, the margins darker edged. Forewing with basal area darkest, from there the colour is reduced in density towards the outer margin, which is rather lighter. At the end of the cell there is a thick large discal spot, on the inner margin near the base, a 2 mm. long red-yellow streak and a hardly visible yellow streak on the costa in the basal third; otherwise the forewing is completely markingless and without metallic sheen. Hindwings with a narrow discal spot weakly marked, the basal field reddish with a yellow infusion, otherwise without any marking. Blown at the base blackish brown with thick black dorsal stripes, the head extremely black.

The figure is quite good and agrees very well with British specimens in the collection.


On the hindwing the black spot at the middle of the costa is united with the one at the anal angle to form a black lunette band.


Differing from the typical form in the absence of the two longitudinal stripes on the thorax. The wing markings are normal.


The abdomen not as in the typical form, uninterrupted red, but beautifully black and red ringed. The normal black dorsal is present, in pattern normal.
CHECK LIST OF THE BRITISH LYMANTRIIDAE.

LYMANTRIIDAE.

1. *Lymantria* Hubner, [1819].

5. *Pasychira pudibunda* (Linnaeus, 1758).
7. *Laelia caenosa* (Hubner, [1803-05]).

LYMANTRIIDAE.

1. *LYMANTRIA* Hubner.

Hubner, [1819], *Verz. bek. Schmett.* (10):160.

Type (the only species cited by Hubner) - *Phalaena monacha* Linnaeus, 1758.

Principal synonyms. *Liparis* Ochsenheimer, 1610 (homonym); *Spathias* Hubner, [1819] (type *Phalaena dispar* Linnaeus, 1758); *Hypocyrtia* Kirby and Spence, 1826 (type *Phalaena dispar* Linnaeus, 1758); *Psilura* Stephens, 1828 (type *Phalaena monacha* Linnaeus, 1758).

British species. *Phalaena monacha* Linnaeus, 1758; *Phalaena dispar* Linnaeus, 1758.

Note 1. Under the genus *Lymantria*, Hubner ranges *Phalaena monacha* Linnaeus, 1758 and *Hypocyrtia* Linnaeus, [1803-05]. The latter was recognised by Ochsenheimer (1810, *Schmett.* Eur.:182) as a colour variety of *P. monacha*, and is still so considered. The genus is therefore monotypical.

Note 2. Although *Porthetria* Hubner has page precedence over *Lymantria* Hubner, the two were combined in a single genus by Hampson (1905, *Fauna Br. India*:59), who used *Lymantria* for the combined genus and *P. monacha* for the type. Under Article 23 of the International Commission on Zoological Nomenclature it is laid down that where a genus is formed by the union of two genera of the same date, the name selected by the first reviser shall stand.
2. DASYCHIRA Hubner.

Hubner, 1803, Annal. ext. Schneit. 1 pl. [128].

Type (the only species cited by Hubner) - Dasychira tephra Hubner, [1803].


British species. Phalaena fascella Linnaeus, 1758; Phalaena antiqua Linnæus, 1758.

Note 1. Houmeogen and Dyar (1894) and Dyar (1902) treat D. tephra as a variety of Phalaena achatina Smith, 1797. Barnes and McCunnough (1913) refer to it as unrecognisable, but strongly resembling Olana kerrvilliei B. & D. 1913. A manuscript note of Hubner's, in the possession of the Royal Entomological Society of London, associates the species with, but apparently does not sink it to, Phalaena leucophaea Smith, 1797. The three last-mentioned species are certainly congeneric with one another, and D. tephra. While the identity of D. tephra is, within limits, a matter of some doubt, I have decided to admit it as the type, as the name Dasychira cannot otherwise be used.

3. LEPITA Stephens.


Type (the only species cited by Stephens) - Bombyx caenoseca Hubner [1803-05].

British species. Bombyx caenoseca Hubner [1803-05].

Note. The name is spelt as caenoseca in the original reference [1803-05] Linn. Schneit. Tab. Bombyx 51 and in [1807-09] Eur. Schneit. 77, but as caenoseca in [1807-09] Eur. Schneit. 120.

4. ORGYIA Ochsenheimer.


Type (fixed by Curtis) - Phalaena antiqua Linnaeus, 1758.

Principal synonyms. Metopophus Germar, 1812 (type Phalaena antiqua Linnaeus, 1758).

British species. Phalaena antiqua Linnaeus, 1758; Gynaephora antiqua Hubner, 1819.

Note. The second British species has been almost universally known by the name Phalaena coenostigma Stawell, 1793, but that name is invalid as it is a synonym of Phalaena antiqua, Stawell's description (1793, Ent. Gen. 1: 295) being based upon an illustration (Sessil. April. Tab. 10, figs. 3 and 4) of P. antiqua. The error was not detected by Linnaeus, who shows, under P. coenostigma (Ent. Nat. Gen. 13: 1826), by references to illustrations in Albin and Milks, that he is referring to the "Scarce Vapourer" and not to P. antiqua. This being so, the oldest valid name for the "Scarce Vapourer" is Gynaephora antiqua Hubner, 1819, the three references given by Hubner making it clear that he had discovered Linnaeus' error.
5. SUPRECTIS Hubner.

Hubner, 1819, Verz. bek. Schmett. 10:189.
Moore, 1882, Lab. Ceylon. 2:89.

Type (fixed by Moore) - Phalaena chrysorrhoea Linnaeus, 1758.

Principal synonyms: Arctemia Germar, 1811 (type Phalaena Linnæus Muller, 1764); Hyphna Hubner, 1820 (type Phalaena Ocellissa Stoll, 1790); Porthoseis Stephens, 1828 (type Phalaena chrysorrhoea Linnaeus, 1758); Lonchana Walker, 1856 (type Lonchana scintillans Walker, 1856).

British species: Phalaena chrysorrhoea Linnaeus, 1758; Phalaena simillis Fussely, 1773 (Helbyx aurifluvs Denis and Schiffermuller, 1775).

Note 1. There has been much confusion as to the identity of Linnaeus' P. chrysorrhoea. The type, in the possession of the Linnaean Society of London, is a ♀ specimen of the "Brown tail" or "Cul brun" and not of the "Gold tail" or "Cul doré".

Note 2. I have given the name simillis Fussely precedence over aurifluvs Denis and Schiffermuller on the evidence set out by Prout (1900) in Ann. Mag. Nat. Hist. (7) 6:158.

Note 3. Many systematists place the two British species in separate genera, but a study of African and Oriental species appears to me to discourage this view. If a separate genus is required, Lonchana Walker should be used.

6. LEUCONA Hubner.

Hubner 1822, Syst.-alph. Verz.:14-16, 18, 19.
Westwood January 1840, Introd. class. Ins. 2 Syn.:92.

Type (fixed by Westwood) - Phalaena salicis Linnaeus, 1758.

Principal synonym: Stilpnotia Westwood, 1840-41 (type Phalaena salicis Linnaeus, 1758).

British species: Phalaena salicis Linnaeus, 1758.

Note. Although the name Leucona first appears in Hubner's Systema, Opinion 97 of the International Commission on Zoological Nomenclature rules that it was not then validly published.

Lymantridæ as name of Family. See letter by Œil to H.S. Hinton, dated 7/10/55, in correspondence file.