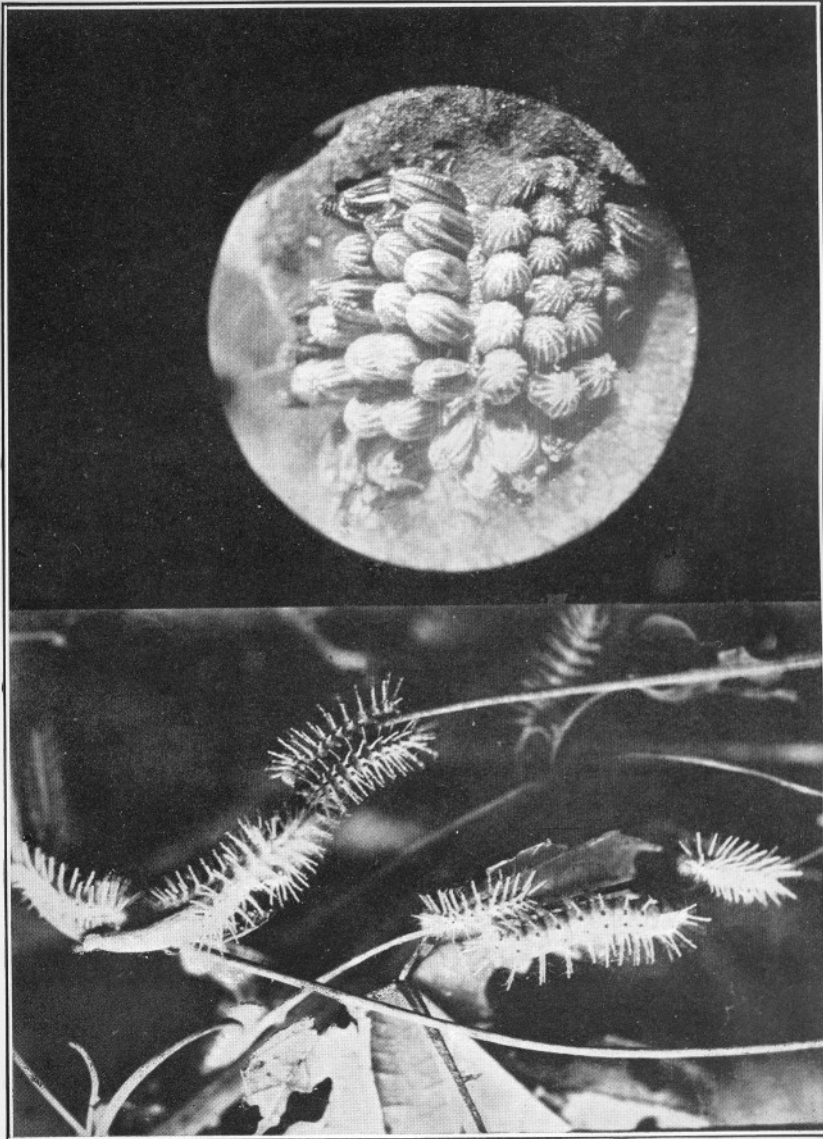


FRONTISPIECE.



A

B

Photos by DR. VAN SOMEREN.

- A. Eggs of *Planema quadricolor leptis*.
- B. Larvæ of *Planema quadricolor leptis*.

THE BUTTERFLIES OF KENYA AND UGANDA.

By

V. G. L. VAN SOMEREN, F.E.S., F.L.S., etc.,

and

REV. K. ST. A. ROGERS, M.A., F.E.S.

PART V.

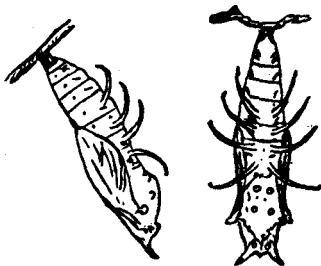
SUB-FAMILY *ACRÆINÆ*.

GENUS *PLANEMA*, Dbld. & Hew.

INTRODUCTION.

Representatives of the genus *Planema* are to be distinguished from *Acræa*, by the colour of the Palps, which are black with a lateral grey or white line, and by the position of the first branch of the subcostal or 11th vein; this is given off, at or beyond the apex of the cell. The hind-wing cell is usually much smaller than in *Acræa*.

The larvæ of the two genera are not markedly different, but those of *Planema* usually have much longer branched spines and on the whole are less particoloured.



PUPÆ OF *PLANEMA*

The pupæ are distinguishable however; those of *Planema* always have long dorsal spines which are hooked at the end, but the body of the pupa is not heavily ornamented with dark markings.

Most of the representatives of this genus are conspicuously coloured, many having a general superficial resemblance to each other. All are credited with a high degree of distastefulness to enemies, and as a result quite a number are mimicked by species of other genera and families. Some of the most wonderful examples of mimicry are to be found between species of *Planema* and the *Nymphalids*, *Pseudacræa*; examples are given later.

PLANEMA POGGEI NELSONI, Smth. & Kirby, Pl. XXXV., figs. 1 and 4. Pl. XL. fig. 4.

Expanse: Male 70-80 mm., female 80-90 mm. General colour in both sexes, black, orange and white.

F.-w base and apex black with an intervening orange band 8-10 mm. wide, extending from the costa, at apex of the cell, obliquely across the wing to just short of the hind-angle. On the inner margin the orange is carried somewhat inwards in 1 and 1a and reaches the hind border; there is an invasion of the orange band, by the black ground at the base of 3, usually in the form of a round spot; there is also an indentation on vein 2. The outer margin is slightly indented internervularly, especially in areas 1b, 2 and 3.

H.-w blackish with a somewhat well-defined white triangular band, base to inner margin, apex to costa, with the distal edge slightly angled and following the contour of the wing.

FEMALE:

Similar to the male but larger and with more rounded wings, and wider bands.

EARLY STAGES:

The eggs of this species hardly differ from others of this group, being a long ovoid, prominently ribbed and transversely ridged. They are cream coloured when first laid but turn a rich yellow after about two days. They are laid on a species of *Vitis*, order *Ampelidaceæ*. The egg stage lasts a week. The young larvæ are at first greyish, and feed within an hour of emerging. They are gregarious. At the second moult they become an olive green with prominent spines. The colour becomes a pale bluish green in the last stage and the branched spines measure 4-6 mm. in length. There are orange or yellow dots along the spiracular line and between each spine. The pupa is typically *acraïne*, long and slender, pale greenish, with black lines on the wing cases and head, and around the cremaster. The head carries longish lateral horns, while the 1st to 4th, abdominal segments are ornamented dorso-laterally with long spines which are curved at the tip. Anterior to each spine is an oblique black line and such are present on each of the remaining segments, and duplicated on the penultimate one. The thorax is ornamented with two pairs of blunt spines and each wing case has a recurved spine at the base. The pupal stage lasts 14 to 18 days, varying with temperature and humidity.

DISTRIBUTION:

Occurs throughout Uganda and extends eastwards to the Nandi-Elgon area. It is particularly plentiful in the central province of Uganda and around Jinja in the eastern province.

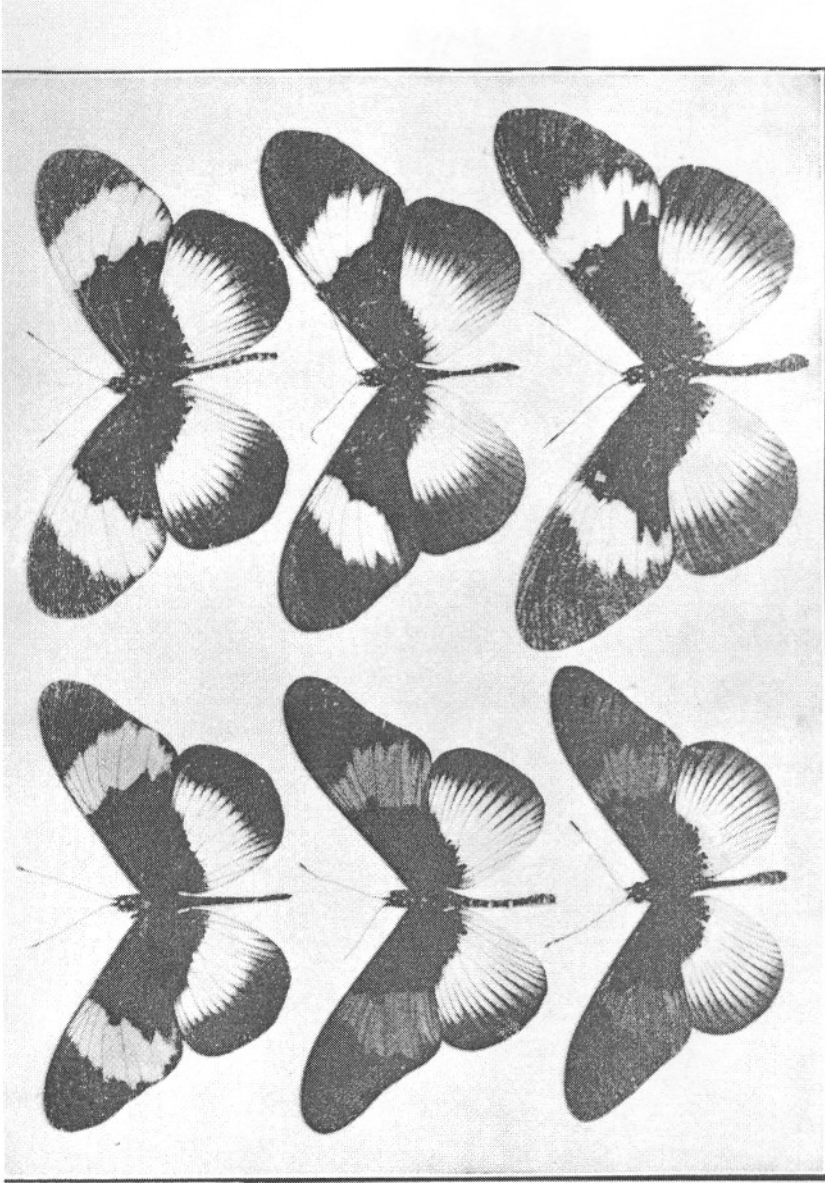


Photo by DR. VAN SOMEREN.

Plate XXXV.

- Fig. 1. *Planema poggei nelsoni*, male.
- Fig. 2. *Planema macarista*, male.
- Fig. 3. *Planema macaria hemileuca*, male.

- Fig. 4. *Planema poggei nelsoni*, female.
- Fig. 5. *Planema macarista*, female.
- Fig. 6. *Planema macaria hemileuca*, female.

OBSERVATIONS :

Judging from the numbers captured or seen, it would appear to be the commonest species of the tri-coloured group, but there is a distinct seasonal incidence. (See Carpenter, *Trans. Ent. Soc.*, 1923, pts. III., IV., Jan. 24, pp. 469-489.) Its influence on the mimetic species is most marked.

In the Eastern limits of its distribution, there would appear to be a tendency to persistence of the fore-wing pattern of the parent form *poggei poggei*, Dew., i.e., there is a marked increase in the width of the fore-wing band with a reduction in that of the hind-wing; the hind-wing band is frequently tinged ochreous. Besides four specimens of this type taken in the Nandi-Kaimosi area there are two in the Hope Dept., Oxford, from Eastern Uganda. A series of *poggei* from the eastern limits might shew this form to be constant. Pl. XXXVIII., fig. 1.

PLANEMA MACARISTA, Sharpe. Pl. XXXV., figs. 2 and 5. Pl. XXXIX., figs. 1 and 5.

MALE :

Expanse 84-90 mm. General colour blackish with orange and white bars. Sexes different.

F.-w. Sepia-blackish with an orange-yellow bar extending from the costa to the hind margin of the wing. The inner border of this band starts at the origin of vein 11, passes obliquely down along the apex of the cell, avoids the base of 3, thence cuts the base of 2 almost vertically, passing down with a slight outward curve to the hind margin. In a "set" insect this border is almost vertical, with a rounded indentation at the base of 3. The outer edge commences at vein 12, passes obliquely to the mid point on 4, thence by zigzags to the hind angle. The width of the band varies slightly in individuals but the general outline is fairly constant.

H.-w. Sepia-black, with a somewhat triangular white patch, base to inner margin, apex to upper angle, sharply defined from the blackish base of the wing but rather diffuse distally, being indented by the blackish internervular rays. A variable number of black spots show through the base from the underside.

Underside: F.-w. pattern as above, but duller; an orange spot distally edged with black is present at the base of the costa. H.-w. general pattern similar to above but basal triangle chestnut with clearly defined black spots as follows: One each in 8 and 9; two large, basal in 7; one each at base of 2, 4, 5, 6; two each towards base of 1a and 1c; three in cell, one large central, one at base, one at origin of vein 5.

FEMALE:

F.-w. sepia black with an oblique white bar extending from the costa outwards to the hind angle, and just reaching 1b. The inner edge follows a curve from the mid-point on costa to the origin of vein 4, thence with a more graduated curve to the mid-point on 2. The outer margin follows the oblique line of the discocellulars thence outward and downward to almost the end of 2, the line being serrated intercellularly.

H.-w. as in the male but white bar narrower, less triangular; marginal border much wider.

Underside: A dull replica of above, with the base of the hind-wing dull chestnut, spotted with black as in the male.

EARLY STAGES:

The eggs are of the usual *acraeinae* type, white or creamy with a high glaze; long oval, slightly flattened at the base, well ribbed and cross-barred. We have not reared the larvæ nor can we find a published description of the various instars.

DISTRIBUTION:

Uganda, more particularly the western and central, area extending to the Nile and more rarely eastward to South Elgon and the Teriki country.

OBSERVATIONS:

This is almost entirely a forest species. The seasonal incidence has been studied by Carpenter, op. cit., and its position in the mimetic association centred round *P. poggei* investigated. The male shews a close resemblance to *P. poggei*, *macaria hemileuca*, and *P. elgonense*; while the female follows the colouration of females of *macaria hemileuca*, *alcinoe camarunica*, *elgonense* and *aganice montana*. Both male and female act as models for *Pseudacraea eurytus*, and female forms of *Papilio dardanus*.

A certain number of males have the median bar of the hind-wing tinged with rufous var. *mofosa*, Suff., and *vendita*, Grunb., thus approaching the colouration of the rare *Pl. pseudeuryta*.

PLANEMA MACARIA HEMILEUCA, Jordan. Pl. XXXV., figs. 3 and 6. Pl. XXXIX., figs. 4 and 8.

MALE:

Expanse 76-82 mm. General colour blackish, orange and white.

F.-w very like *macarista*, but the tawny orange bar, though wider at the costa, is generally narrower, more serrated on the outer margin and more irregular on the inner. The orange colour extends into the

apex of the cell and this projection carries a characteristic black spot at the origin of 5.

H.-w. very much like that of *macarista*, but the basal area is browner with more clearly defined black spots; the marginal sepia is less dense though the internervular rays are well marked; the area thus appears larger and less sharply defined distally.

Underside: F.-w. pattern as above but colour duller. A black and yellow spot is present at the base of the costa.

H.-w. basal area chestnut, bearing black spots as follows: One each at base of 8, 5, 4, and 2; two basally in 7; one large or two small basal in 1c; two each at base of 1a and 1b. Cell with three spots. The sepia margin is ill defined.

FEMALE:

Expanse 98-100 mm. General colour black and white.

F.-w.: Base, from line of apex of cell to almost the hind angle, black. The cell with a conspicuous white spot towards the apex. Distal margin of white bar runs obliquely from costa through the discocellular veins thence curving downwards and slightly inwards passes towards the hind angle, the contour being deeply indented in 1b and 2. The inner margin passes through the apex of the cell thence slightly inwards in 2. passes abruptly outward in 1a and 1b, thus narrowing the band markedly.

H.-w. basal area dark brown with black spots as underneath. A broad white band, widest at the inner margin passes obliquely across the wing, sharply differentiated from the basal brown but not sharply defined distally.

UNDERSIDE:

F.-w. as above though duller and without the white spot in the cell. H.-w. pattern as above; basal area chestnut carrying spots as follows: one each basal in 8, 6, 5, 4, and 2; two each at bases of 1a, 1b, 1c and 7. Cell with three spots, one at base, one at midpoint, one distal.

EARLY STAGES:

Unknown.

DISTRIBUTION:

A rare insect which has been recorded from Uganda at Mawakota, Entebbe, and Jinja.

OBSERVATIONS:

The male figured differs slightly from the type but is uniform with other specimens taken in Uganda. The female we believe has not been described hitherto. The mimetic relationship is similar to

the preceding species, both male and female acting as secondary models for *Pseudacraea eurytus*.

PLANEMA ELGONENSE, Poulton. Pl. XXXVI., figs. 2 and 5.
Pl. XXXIX., figs. 2 and 6.

MALE:

Expanse 70-76 mm. General colour black, orange and white.

F.-w.: Apical portion extended; distal margin curved as in *macarista*; basal and apical portion blackish; separated by a much curved tawny orange band with deeply serrated outer margin. The distal margin is very like that found in *macarista* but the inner margin is strongly curved outward to the mid point on 2 thence turning inward sharply at almost right-angles reaching the hind margin of the wing at the proximal end of the terminal third of 1a.

H.-w. blackish with a wide white band the upper margin of which is sharply defined from the black basal area, and on the lower edge clearly separated from the black marginal border, thus differing in this respect from *macarista*. The lower edge is furthermore, not straight, but somewhat angled outwardly in 4.

FEMALE:

Expanse 70-74 mm. general colour black and white.

F.-w. broader and more rounded than in the male, but with a white band of similar outline though broader.

H.-w. similar to that of the male, but broader.

UNDERSIDE:

Male and female, dull replicas of above, but with the base of the hindwing rich purply-chestnut, carrying spots as follows: One very minute in 8; two large transverse in 7; one each at base of 6, 5, 4, and 2, the latter two very small; two each in 1a, 1b; three in 1c; cell with three large spots, the centre one transverse to the long axis.

EARLY STAGES:

Unknown.

DISTRIBUTION:

A rare insect, occurring only in the West Elgon district of Uganda.

OBSERVATIONS:

This species has recently been described by Prof. Poulton who has kindly ascertained its relationship to allied Planemas; "closely allied to *poggei*, Dew., and *adrasta*, Weym., but in both sexes bearing a strong resemblance to *macarista*, Sharpe, *macaria hemileuca*, Jord., also, in the female, to the female of *alcinoa camerunica*, Auriv., in

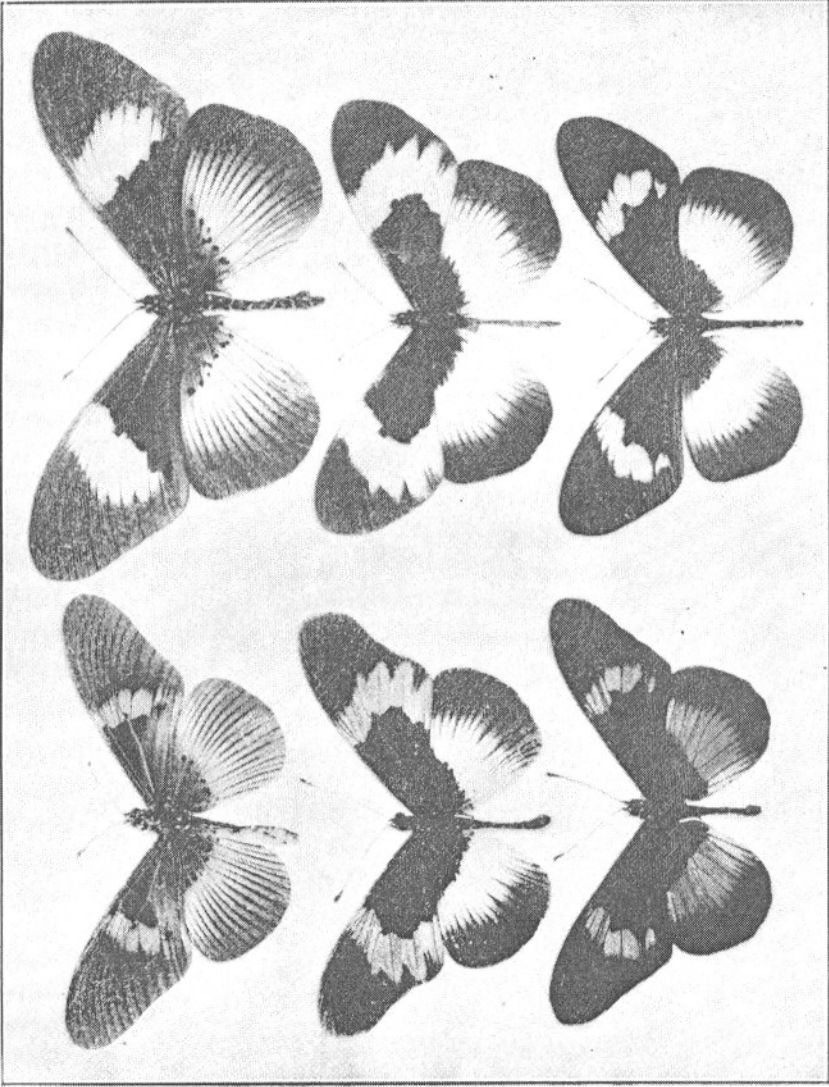


Photo by DR. VAN SOMEREN.

Plate XXXVI.

Fig. 1. *Planema alcinoe canarunica*, male.

Fig. 2. *Planema elgonense*, male.

Fig. 3. *Planema aganice montana*, male. Uganda race.

Fig. 4. *Planema alcinoe canarunica*, female.

Fig. 5. *Planema elgonense*, female.

Fig. 6. *Planema aganice montana*, female. Uganda race.

the male to the *aurivillii*, Staud., female of *Acræa alciope*, Hew." In size this new form was a rather small member of this *Planema* association . . ." "the true relationship of this new species was kindly determined by Dr. Eltringham, who examined the male armature and found that it closely resembled that of *poggei poggei*, *p. nelsoni*, and *adrasta*, being of a much smaller and much simpler type than in *macarista* and its two associates, which differed markedly from each other as well as from the species described, and other members of the *poggei* group." The species is only known from three male and two female specimens taken in the West Elgon district.

PLANEMA ALCINOË CAMARUNICA, Auriv. Pl. XXXVI., figs. 1 and 4. Pl. XXXIX., figs. 3 and 7.

MALE:

Expanse 68-80 mm. General colour blackish and orange-brown.

F.-w.: Apical half blackish brown, basal area tawny-orange bordered distally with an orange bar which crosses the wing from costa to just inside the hind margin. Sub-costal area, distal end of cell and base of area 2 with diffuse blackish scaling; in some specimens a blackish spot at base of 3, and one in 1b at the junction of distal and mid third.

H.-w.: Basal area tawny orange merging into a lighter diffuse band which shades into a broad brownish marginal border with darker rays and internervular streaks. The basal area is spotted with blackish-brown marks which correspond to the spotting beneath.

UNDERSIDE:

A dull replica of upper surface with a lighter brown shade distally on both wings. Basal triangle of hind-wing chestnut ornamented with black spots as follows: One in 8; two each in 7, 4, 1a, 1b, and 1c. sub-basal; one each sub-basal in 2, 5, and 6; two in the cell, basal and central, the latter transverse to the long axis.

FEMALE:

General colour black and white.

F.-w. basal half of wing dark rusty-brown, shading into black distally. Apical area black, separated from the basal black by a broad oblique white band, the inner margin of which is invaded by the ground colour at base of 3, and distal two-thirds of 1b.

The outer margin is somewhat curved and indented by the black ground in 2 and 3.

H.-w.: Basal triangle rusty brown, decorated with black spots. Marginal border blackish and broad, separated from the base by a

diffuse white band, widest at the inner margin of the wing and tapering towards the costa; strongly invaded distally by blackish rays and internervular streaks.

UNDERSIDE:

Very like above but duller. A white spot, distally bordered with black is present at the base of the costa. Basal triangle of hind-wing chestnut with black spots arranged as follows: One in 8; one each in 1a, 1b, 5 and 6, sub-basally; one each, basal in 2 and 4; two each in 1c and 7, basal and sub-basal; three in the cell, one sub-basal, a double spot at mid-point, and a double spot at origin of vein 5.

EARLY STAGES:

Unknown to us personally, but described in Seitz, p. 241, as follows: Larva light coloured with black markings on the upperside of the abdomen on each segment from 2-5 with a pair of very long, slender, black spines with yellow-red bases and the tips curved into hooks; those of the second segment are longer than the rest and directed forwards; those of the fifth segment shortest; the head with two divaricating horns.

DISTRIBUTION:

Occurs through Uganda, extending east to Teriki, but rare to eastward; it is essentially a western species.

OBSERVATIONS:

Dr. Carpenter (1c) has raised an interesting point in connection with the possible influence of *Planema aganice montana* on the colouration of this species. There is an undoubted tendency for the eastern *alcinoe* to become darker at the base of the fore-wing. The female *alcinoe* acts as a model for the *tirikensis* form of *Pseudacraea eurytus*.

PLANEMA AGANICA MONTANA, Btlr. Pl. XXXVI., figs. 3 and 6.
Pl. XL., fig. 9.

MALE:

Expanse varying from 56-70 mm. General colour blackish and orange.

F.-w. sepia black with a narrow curved orange tawny bar which passes from the costa through the basal third of the discocellulars thence through the basal half of 5 except for the extreme base, through the mid-third of 2, followed by an isolated triangular spot in 1b, set slightly internal, and cut off by a projection of the black scaling invading the yellow of 2.

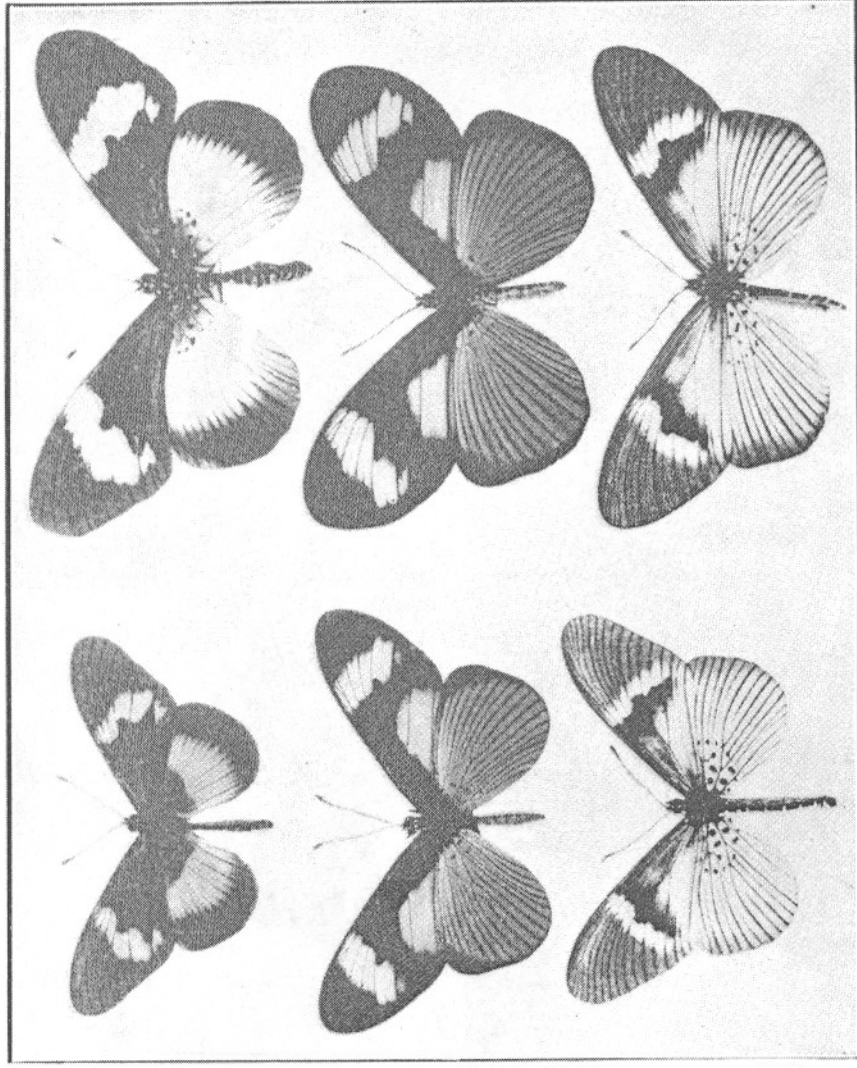


Photo by DR. VAN SOMEREN.

Plate XXXVII.

Fig. 1. *Planema aganice montana*, male. Kenya race.

Fig. 2. *Planema tellus eumelis*, male.

Fig. 3. *Planema consanguinea albicolor*, male.

Fig. 4. *Planema aganice montana*, female. Kenya race.

Fig. 5. *Planema tellus eumelis*, female.

Fig. 6. *Planema consanguinea albicolor*, female.

H.-w. with a broad orange centre, proximally bordered by a blackish-brown basal patch and distally by a clear-cut marginal blackish border 5-6 mm. in width. There are a few indistinct blackish spots on the basal triangle.

UNDERSIDE :

Pattern as above, but dark areas more brownish, except for the base of the hind-wing. This is a reddish-chestnut carrying black spots of variable size and number; average as follows: Usually a small one in 8; two large ones in 7; one each in 5 and 6; three in 1c, the distal one transverse; two each in 1a and 1b. The cell contains one, sub-basally, and a curved line distally or sometimes this line is represented by two distinct spots.

FEMALE :

Expanse 75-80 mm. General colour black and white. Resembles the male in pattern but the light areas are white.

EARLY STAGES :

The eggs are laid in groups on the under surface of the leaves of a creeper *Adenia cissampeloides*, Harms (*Passifloraceae*). They are similar to those of other planemas. The larvæ go from a dull greyish green of the first stage to a pale green, each segment with the exception of the first thoracic and the anal, armed with six long branched spines of a yellow or yellowish green colour; the base of each spine is bluish, while the intervening spaces in the line of the spines carry blue spots; head brownish. The pupa is of the usual type, *i.e.*, rather elongate about 25 mm. with lateral spikes to the head segment, and on the dorsum of each of the abdominal segments 1-5 long reddish brown curved spines, the first pair directed forwards, the rest backwards.

DISTRIBUTION :

The description given applies to the race of *aganice* which is found in Uganda, east to Nandi and Londiani.

OBSERVATIONS :

In this race the males and females are much darker than those of Kenya; especially is this noticeable in the basal triangle of the hind wing. Furthermore, the white band in the hind wing of the female is narrower, while the marginal border is darker and more sharply defined.

PLANEMA AGANICE MONTANA, Kenya race. Pl. XXXVII., figs. 1 and 4. Pl. XL., fig. 8.

MALE :

Expanse 56-60 mm. General colour dark brownish and tawny orange. The pattern of this race conforms to the description given

for that of Uganda, but the dark areas are not so dense—much more brownish—with in the fore-wing a decided paling toward the base; the hind-wing basal triangle is rusty brown with clear black spots; the marginal border is narrower.

FEMALE:

Expanse 80-90 m.m. General colour dark brownish and white.

F.-w. pattern as in the Uganda form but dark areas considerably paler especially at the base, with a concentration of scaling around the white bar.

H.-w. basal area pale ochreous brown ill defined distally and clearly spotted. White area extensive not very sharply defined from grey-brown marginal border; interneural streaks marked.

UNDERSIDE:

Pattern as above but dark areas with an ochreous tinge.

EARLY STAGES:

As in the Uganda form. It feeds on *Tryphostemma zanzibaricum*, Mast (*Passifloraceæ*).

DISTRIBUTION:

This pale form ranges from the coast zone to Kilimanjaro and Teita northward to Mt. Kenia and Nairobi and sparingly to the Mau.

OBSERVATIONS:

There is not the slightest doubt but that there are two distinct geographical races of *P. aganice* inhabiting Kenya and Uganda. Quite a number of Kenya examples (females) have buffy areas in the hind-wings; especially is this the case in the Taveta district, and often in the Nairobi area.*

PLANEMA PSEUDEURYTA, G. & S. (not figured).

This is a rare insect of which only the male is known. It is very like *macarista*, but the inner margin of the fore-wing orange bar is outwardly curved, and the hind-wing pale area is orange-brown.

EARLY STAGES:

Unknown.

DISTRIBUTION:

Appears to be confined to western Uganda from whence two examples were taken by Neave at Toro.

* I have on occasion at a distance mistaken a large female with buff hind-wing for a pale var. of *Papilio d. cenea* or *Amauris d. damocides*.

OBSERVATIONS :

Carpenter has pointed out, Op. cit. that this *Planema* is probably the model for the *opisthoxantha* form of *Pseudacræa eurytus*.

PLANEMA TELLUS EUMELIS, Jordan. Pl. XXXVII., figs. 2 and 5. Pl. XL., figs. 5.

MALE :

Expanse 68-72 mm. General colour orange and black.

F.-w. blackish-brown with an orange bar crossing the wing from immediately below the costa to the distal end of cellule 2, but not reaching the margin, and placed between the end of the cell and the proximal end of the internervular rays. Hind margin with a large orange area occupying the basal two-thirds of cellule 1a and 1b, and the inner half of 2.

H.-w. mostly orange, with a small blackish area at the base, and a narrow blackish marginal border, widest at the apex and decreasing rapidly towards the anal angle. The veins and internervular rays are blackish and well marked, and extend inward almost to the cell.

UNDERSIDE :

F.-w. somewhat like above but with the apical area ochreous with black lines. A white streak is present at the base of the costa.

H.-w. ochreous with black spots at the base, but no marginal border. Veins and internervular rays black as above.

FEMALE :

Expanse, 80-90 mm. Very like the male, but larger and with more rounded wings. The lower half of the fore-wing orange band is more irregular.

EARLY STAGES :

Unknown to us.

DISTRIBUTION :

Throughout Uganda but not plentiful in the east.

OBSERVATIONS :

This *Planema* is the model for the *terra* form of *Pseudacræa eurytus*. It is to be noted that there is no brown or chestnut at the base of the hind-wing below, neither is this present in the mimic.

A certain number of specimens have the fore-wing bar very pale to almost white, thus approaching a similar form of *Acraea jodutta*. Such a form is also met with in *Ps. eurytus*.

PLANEMA CONSANGUINEA ALBICOLOR, Karsch. Pl. XXXVII.,
figs. 3 and 6. Pl. XL., fig. 6.

Expanse, male and female, 60-65, 78-80 mm. Sexes alike.

General colour buffy with greyish-brown tips to fore wings.

F.-w. basal half buffy white to pale sandy shaded in the upper part of the cell with greyish brown; apical half greyish brown darkest proximally, with a narrow white or creamy oblique bar which is sub-basal between veins 4-7, narrowest in cellule 3, passes through cellule 2, slightly distal to the mid-point and represented in 1b by a free spot.

H.-w. almost entirely sandy buff with a dark marginal border, widest in 4-7, decreasing towards the anal angle. Veins and inter-neural rays greyish-brown, well defined and reaching almost to the cell. Basal area with a variable number of dark spots.

UNDERSIDE:

Apical portion of fore-wing and whole of hind-wing ochreous buff with dark rays; white forewing bar present and accentuated by dark scaling proximally. Two black spots at base of f.-w. costa; basal spotting of hind-wing variable but clear, usually as follows: One in 8; two in 7; one each, sub-basal in 6, 5, 4, 2, 1a and 1b; three in 1c; two in the cell.

EARLY STAGES:

Unknown.

DISTRIBUTION:

Western Uganda to Central Province; common on Bugalla. Not present in Kenya.

OBSERVATIONS:

This species has a restricted distribution, and, so far as we know, has no close mimics, though the colouration is distinctive.

PLANEMA EPAÆ PARAGEA, Sm. Pl. XXXVIII., figs. 2, 3, 4.
Pl. XL., fig. 1.

MALE:

Expanse 66-70 mm. Female 75-82 mm. General colour sooty greyish brown with creamy markings.

F.-w. sooty grey—with brownish tinge; a row of three creamy or white spots at the proximal end of the mid-third of veins 5, 6, and 7, followed by one or two spots slightly beyond the mid-point of cellule 3. There is usually a certain amount of creamy scaling towards the base of cellule 2, also at mid-point of 1b.

H.-w. sooty grey with an indistinct creamy band which passes across the wing through the apex of the cell.

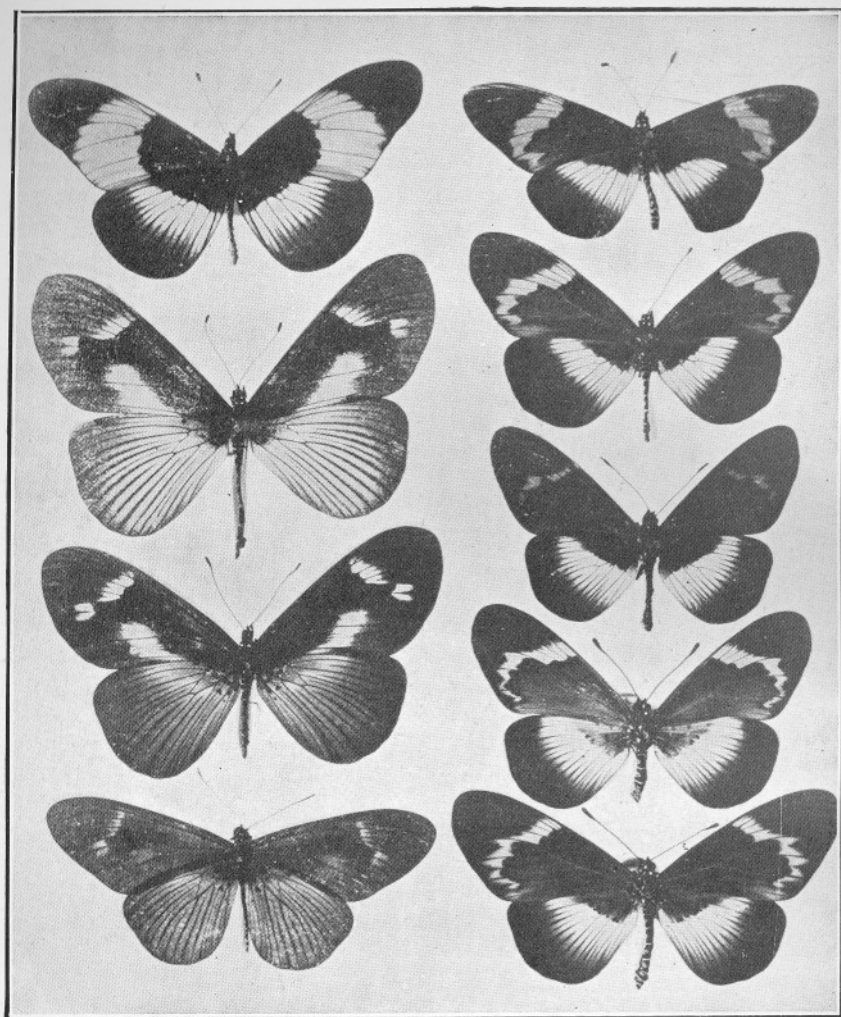


Photo by DR. VAN SOMEREN.

Plate XXXVIII.

- Fig. 1. *Planema poggei* var. Fig. 5. *Planema quadricolor latifasciata*, male.
 Fig. 2. *Planema epæa paragea*, female. Fig. 6. *Planema quadricolor latifasciata*, female.
 Fig. 3. *Planema epæa paragea*, female. Fig. 7. *Planema quadricolor leptis*, male.
 Fig. 4. *Planema epæa paragea*, male. Figs. 8, 9. *Planema quadricolor leptis*, female vars.

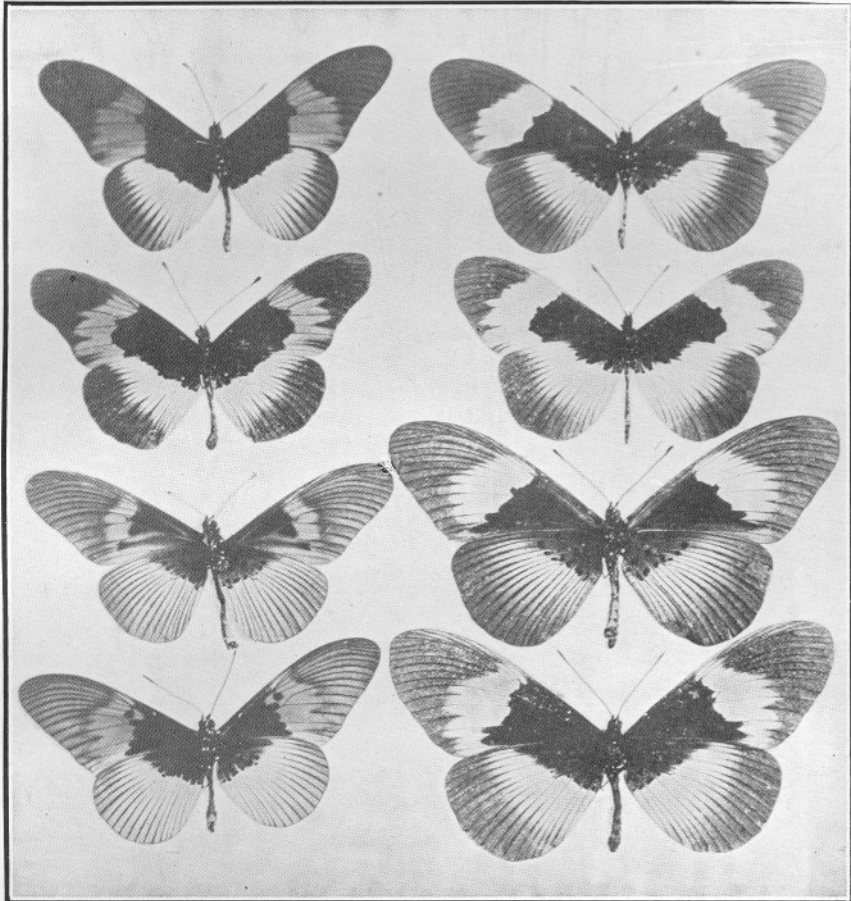


Photo by DR. VAN SOMEREN.

Plate XXXIX.

Undersurfaces.

- Fig. 1. *Planema macarista*, male.
 Fig. 2. *Planema elgonense*, male.
 Fig. 3. *Planema alcinoe camarunica*, male.
 Fig. 4. *Planema macaria hemileuca*, male.

- Fig. 5. *Planema macarista*, female.
 Fig. 6. *Planema elgonense*, female.
 Fig. 7. *Planema alcinoe camarunica*, female.
 Fig. 8. *Planema macaria hemileuca*, female.

UNDERSIDE :

F.-w. much like above but apical portion tinged with ochreous. H.-w. ochreous grey, slightly paler in the region of the band, and orange tawny at the base; this last with clear black spots, variable in number. The veins and internervular rays are greyish-brown.

Certain male specimens are almost uniform sooty-grey on the upperside, vide Pl. XXXVIII., fig. 4.

FEMALE :

Very like the male but larger and generally darker, but with the creamy markings more distinct in the fore-wing and usually so, in the hind-wing, but very frequently the hind-wing pale area is wide spread and diffuse. Pl. XXXVIII., fig. 2.

EARLY STAGES :

We can find no record of the eggs and larvæ of this species. The pupa is a pale bluish-green with black lines on the wing scutæ, linnea markings along the lateral aspect of the abdominal segments, anterior to the long spines. The spines are present on the 1st to 4th segments; red at the base, yellow centrally and black tipped.

DISTRIBUTION :

This species occurs in Uganda but to our knowledge does not extend into Kenya.

OBSERVATIONS :

This *Planema* is the model of the *obscura* form of *Pseudacraea eurytus*, also of the predominant form of female of *Papilio cynorta peculiaris*, Neave, while certain forms of *Acraea lycoa* and *johnstoni* would certainly come within this combination.

PLANEMA QUADRICOLOR LATIFASCIATA, Sharpe. Pl. XXXVII., figs. 5 and 6. Pl. XL., fig. 3.

Expanse, males 50-55, females 68-70 mm. General colour black, reddish-chestnut and orange. Sexes almost alike.

F.-w. basal half reddish chestnut separated from the black apical portion by an oblique orange band which extends from the costa to almost the hind angle near which point the band narrows and curves inwards; the inner margin of this band is accentuated with a narrow black line.

H.-w. basal triangle reddish-chestnut followed by an ochreous-orange band about 4-6 mm. wide; the rest of the rest of the wing dark blackish-brown.

UNDERSIDE :

Very like above but duller, the dark areas being brownish and the hind-wing band paler; the basal triangle however richer, and ornamented with black spots.

Female like the male but larger.

EARLY STAGES :

The eggs are laid in a group on the under side of the leaves of a creeper *Adenia cissampeloides*, Harms (*Passifloraceæ*). They are white to cream and in shape indistinguishable from those of *quadricolor leptis*.

The larva changes from a dirty greyish-green of the first two instars to a translucent bluish green, paler at the first three segments. The segmental spines are long, greenish at the base and black-tipped. The spaces between the spines are ornamented with bluish spots. The pupa is pale bluish or greenish, typically acraeine, with lateral spines on the head and long dorsolateral spines to the first four abdominal segments. In some specimens these spines are reddish.

DISTRIBUTION :

This race occurs in the Elgon Kavirondo districts and on the western Mau.

OBSERVATIONS :

Although a common and distinctively marked insect, it appears to have influenced very few plastic species; there are however certain forms of *Pseudacraea dolomena*, and *Acraea johnstoni* which bear a superficial resemblance to it.

PLANEMA QUADRICOLOR LEPTIS, Jordan. Pl. XXXVIII., figs. 7, 8, and 9. Pl. XL., fig. 2.

MALE :

Expanse 50-60 mm. General colour reddish-chestnut, black and white.

F.-w. basal half of wing bright reddish-chestnut; apical half deep brownish-black, with almost at the proximal edge, a narrow orange band of about equal width throughout, in cellules 4-7, slightly expanded and more distally placed in 3 and represented in 2 by a crescentic or angular mark which extends slightly into 1b.

H.-w. basal patch reddish-chestnut, separated from the blackish marginal border by a white bar, sharply defined proximally but shaded distally.

UNDERSIDE :

As above but black areas more brownish; the basal area in hind-wing brighter reddish.

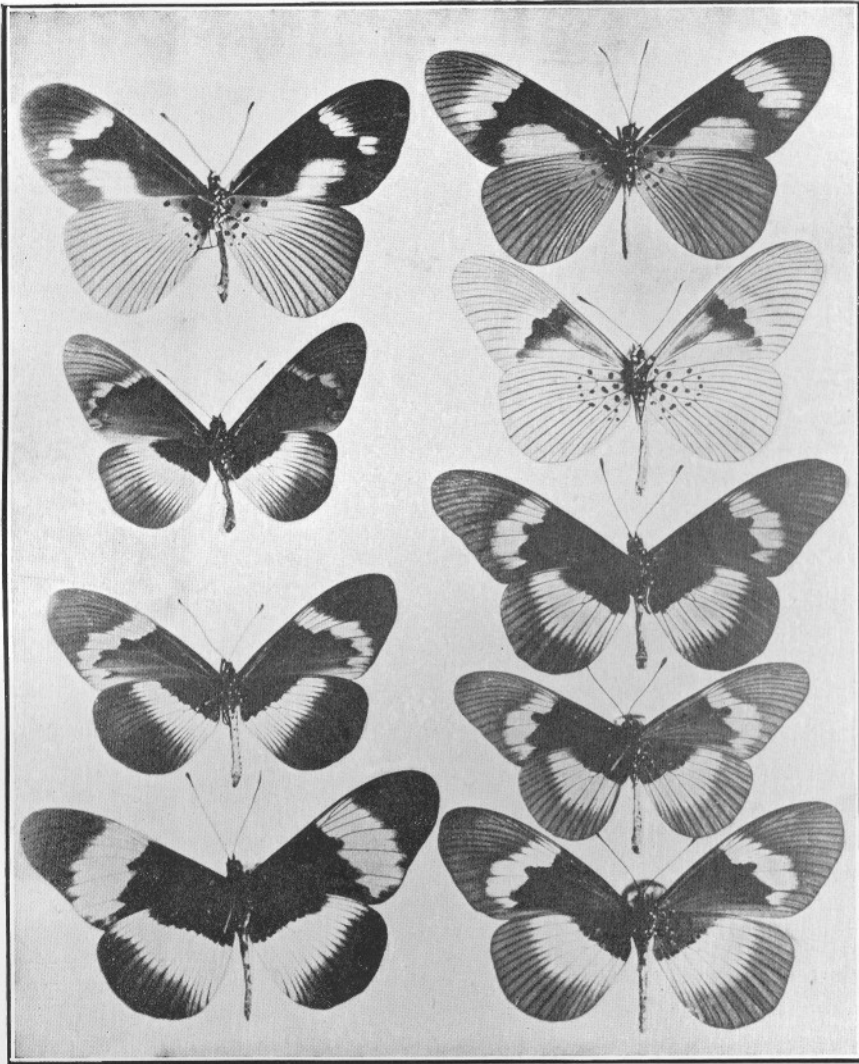


Photo by DR. VAN SOMEREN.

Plate XL.

Undersurfaces.

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| Fig. 1. <i>Planema epæa paragea.</i> | Fig. 5. <i>Planema tellus eumelis.</i> |
| Fig. 2. <i>Planema quadricolor leptis.</i> | Fig. 6. <i>Planema consanguinea albicolor.</i> |
| Fig. 3. <i>Planema quadricolor</i>
<i>latifasciata.</i> | Fig. 7. <i>Planema aganica montana,</i>
Uganda race. |
| Fig. 4. <i>Planema poggei nelsoni.</i> | Fig. 8. <i>Planema aganica montana,</i>
Kenya race. |
| Fig. 9. <i>Planema a. montana,</i> Uganda race. | |

FEMALE:

Very like the male but reddish areas paler, more brownish; and the fore-wing orange bar wider and paler. Expanse 60-75 mm.

EARLY STAGES:

Almost identical with the race *latifasciata*. The eggs are laid in one or more groups on the underside of the leaves of a creeper *Adenia cissampeloides*, Harms. They are ovoid, slightly flattened at the bases with a slight depression at the top, markedly ribbed and cross-ridged. In colour creamy to yellow. The newly emerged larva is greyish-brown with a black head and minute tubercles on each segment. At the first moult it becomes greyish green, changing to a pale bluish-green at the next instar. The mature larva is a very pale bluish green, some almost white, each segment, with the exception of the 1st thoracic and anal, ornamented with six long branched spines, pale green at the base and bluish at the tip, with between each, a reddish spot, duplicated centro-dorsally. Head ochreous. The larval stage lasts two to three weeks varying with the condition of the food plant and humidity.

The pupa is pale bluish-green with a whitish pubescence, with black marks on the cremaster and wing covers, oblique black lines on the dorso-lateral aspect of the abdominal segments in front of each spine, with a double mark on the pen-ultimate segment. The spines are present on the 1st to 4th segments; they are greenish at the base centrally red and black-tipped; the anterior pair directed forwards the remainder backwards. In some examples the spines are entirely red while the body is immaculate. The pupal stage lasts ten days to a fortnight. The head spines are well developed and divergent.

DISTRIBUTION:

This race is found in the highland forests of Kenia, being especially plentiful on the slopes of Mt. Kenia, the Kikuyu Escarpment and on the Aberdares. We have also taken it at Molo.

OBSERVATIONS:

This race is remarkably constant in pattern and colour. There is an interesting point however in connection with the venation; the position of the first branch of the fore-wing sub-costal which in the genus *Planema* should be given off at or beyond the end of the cell, is in this race as in *itumbana*, variable. Out of 100 bred specimens some have it just before the end of the cell, a large number, at the end, and some beyond.

Here again, this species has not affected other species in its range, with the exception, perhaps, of *Acræa johnstoni* and *Ac. ansorgei*, both of which are themselves distasteful.