#### EAST AFRICAN BUTTERFLIES.

#### GENERA

Pseudoneptis, Catuna, Pseudargynnis, Pseudacraea, Neptis.

By R. Tenniel Evans.

#### INTRODUCTION.

It is with a feeling rather akin to diffidence that I commence the task of writing a descriptive list of the butterflies of Kenya and Uganda. This was started, many years ago, by Dr. V. G. L. van Someren and the late Canon K. St. A. Rogers, and the resulting series of papers—written almost entirely by Dr. van Someren alone—dealt, in an extremely able and painstaking fashion, with the families Danaidæ, Acraeidæ, and part of the Nymphalidæ. In attempting to carry on from where Dr. van Someren has left off, I will at least endeavour to be as painstaking, even should my ability leave something to be desired.

In the following descriptions, I have been compelled to leave the life-histories of the species described unwritten, due to the fact that I have no data available from which to compile them, beyond a few meagre notes, made by myself from time to time, as to food-plants, etc. Where relevant, these will be put in, and if any reader is in a position to supply any of the missing life-histories, however incomplete his notes may be, they will be most welcome. Our knowledge of the butterflies of this country, as with most other branches of entomology, has many gaps, and private workers are in a position to fill a lot of these gaps. I would like to take the opportunity here of stressing the importance of noting the correct locality on labels. I have frequently seen collections, admirably arranged and classified, which were useless because the insects were labelled only "Kenya" or "Uganda," or, worse, had no labels at all. New locality records are continually cropping up. It is possible that the distribution of many of our Kenya butterflies is far wider than is at present suspected. Within the past month, I have had brought to my notice the taking of the Lycaenid Heodes abbotti at Nairobi, a new locality record, and a record (not quite certain) of Charaxes lactetinctus seen near Lumbwa, also a new locality record. Any records of this kind will be most welcome, also, as I said before, any notes as to life-histories, food-plants, etc.

In the descriptions which follow, I am carrying on from the point where Dr. van Someren left off. He described the *Nymphalidæ* as far as the genus *Pseudathyma*, and I intend to continue from there with the genera *Pseudoneptis*, *Catuna*, *Pseudargynnis*, *Pseudacraea* and *Neptis*. The first three genera consist, in our territories, of one species only each, and therefore no general description of the genus will be necessary. Where necessary, a general description of the genus will be given before I start on the description of the different species.

#### Genus PSEUDONEPTIS Snell.

PSEUDONEPTIS COENOBITA F. (Plate I). Expanse:—Male 50 mm. Female 60 mm. Sexes alike.

General colour black with numerous pale blue marks.

Male. F.w. Ground-colour black. A fine longitudinal pale-blue streak in the cell, terminating in a small quadrate mark. Distal to this is a second, larger, rectangular mark, and a pale-blue triangle at the apex of the cell. Three pale-blue streaks towards the tip of the costa. Remaining spots are as follows:—A series of

arrow-shaped pale blue marks, sub-marginal, following the contour of the wing, but absent in area 5. That in area 4 is larger than the rest, and that in 1b is present as a double rectangular spot. Internal to this is a further row of arrow-shaped marks, that in 5 being very indistinct and that in 4 considerably larger than the rest. This row is continued in 1a, 1b and 2 as three nearly circular spots. A broad paleblue bar crosses the base of 1a and 1b, and is continued as a large rectangular spot, basal in 2, and an irregular shaped spot basal in 3. This bar continues in 4, 5 and 6 as a series of small circular spots, one to the midpoint of each area. There is a pale-blue streak at the base of 4, and one each sub-basal in 5 and 6. The outer margin is adorned with a series of white internervular spots, and internal to this a fine pale-blue line.

H.w. Ground-colour as fore. Most of the costa is white. The extreme base of the wing is black, followed by a broad pale-blue line, continuous with that of the fore-wing. Distal to this is a straight row of small pale-blue spots from the inner margin across the apex of the cell and terminating as a greyish spot submarginal in area 7. This is followed by a broad band of the ground-colour, followed again by a straight row of large rectangular pale-blue marks from the anal angle to area 6. The margin is decorated with a broken pale-blue line from 1b to 6, followed by a fine, indistinct, blue line parallel to it. The extreme edge of the wing bears internervular white spots. Thorax black with a pale-blue band behind the head, two pale blue spots at mid-point, and a pale-blue band just above the abdomen. Abdomen black with pale-blue rings. Antennæ very long.

Underside. Similar to above, but ground-colour greyish and pale markings larger and paler, the whole with a silky sheen.

Female. Like the male, but larger, with blue markings larger and paler.

Distribution. Nandi and Kakamega and throughout Uganda in forest areas.

Habits. P. coenobita is a creature of the dense forests, much given to floating about in the undergrowth, where it looks very like a Neptis. The flight is slow and rather weak and floating, and it is easily taken. I have never found it particularly common, but it is not a rare species. It does not appear to have any close mimics, or to mimic any particular species closely. In markings and coloration it bears a close resemblance to Tirumala petiverana, but I would hesitate to attach any importance to this resemblance, owing to the very great difference in size between the two species. There is also a certain resemblance to the male of Euptera elabortas.

#### Genus CATUNA Kirby.

CATUNA CRITHEA Drury (Plate I). Expanse:—Male 60 mm. Female 65 mm. Sexes alike.

General colour dark-brown with grey-brown and yellow marks.

Male. F.w. Ground-colour dark chocolate-brown. The cell is invaded by pale-brown colour which cuts up the ground-colour into spots as follows:— a small circular spot at the base, followed by a larger circular patch, and then by a roughly semicircular area, flat side towards the base. A further spot occupies the apex of the cell and the bases of 4 and 5, and is bordered distally by grey-brown. Further light-brown spots and lines are as follows:—An indistinct sub-marginal ine, followed internally by a further line, rather indistinct in 6, 7 and 8, well-marked rom 1a to 5. This is touched proximally by light-brown loops in 4, 5 and 6, enclosing areas of the ground-colour. Veins 2, 3 and 4 are coloured light-brown. A straight

light-brown line crosses the mid-points of areas 5 and 6. A light-brown area in 3 encloses two roughly circular areas of the ground-colour, with a similar marking enclosing larger areas of ground-colour in area 2. Two light-brown line, one straight, one curved, cross area 1b at the mid-point, and a broad light-brown line crosses the base of 1a and 1b, enclosing two spots of the ground-colour at the extreme base of these areas. The edge of the wing bears white internervular spots.

H.w. Ground-colour as fore. The whole of the costa light naples-yellow. The base of the wing chocolate-brown with a pale-brown line at the base of the cell. Inner fold yellowish-grey. The distal half of the cell, sub-base of 1c and base of 2 and most of areas 5 and 6 naples-yellow, with a band of similar colouring running in a straight line across the mid-point of 1c and 2, the sub-base of 3 and the base of 4, joining the large patch of yellow in 5 at mid-point, cutting off a triangular patch of the ground-colour which has its base at the inner fold and its apex just entering 5. Other marks are:—A series of yellow internervular marks at the margin, a sub-marginal double line of brownish-yellow from anal angle to 5, and a sub-marginal brown line crossing the yellow area in 6. Thorax and abdomen black-brown with yellow bands. Antennæ very long.

Underside. F.w. Ground-colour naples-yellow. A brown spot at base of cell, followed by a brown circle, and a roughly "B"-shaped brown mark enclosing greyish-yellow. An irregular greyish mark, bounded proximally by a dark brown line, at bases of 4 and 5. This mark is followed by a band of the ground-colour, then by a large greyish area, bounded distally by a whitish line. A sub-marginal series of greyish spots, decreasing in size, runs from 1b to 7, following the contour of the wing. Those in 4, 5, 6 and 7 are edged with whitish. Each spot is followed distally by a dark mark. There is a dark brown circle enclosing greyish at the bases of 1b and 2, and dark marks in areas 1b, 2 and 3 corresponding in position to the dark areas of above.

H.w. Ground-colour as fore. Almost plain, except for two black spots in the cell. Dark marks corresponding to those of above, but very much reduced. The double sub-marginal pale lines of above are here represented by a series of fine dark "V" or "W" shaped lines.

Female. Very similar to the male, but larger and duller. All pale areas much larger.

Distribution. Fairly common where it occurs, which is, roughly, in forest areas from Kakamega and Tiriki throughout Uganda to the Belgian Congo.

Habits. Very similar to those of members of the genus Euphadra, to which it is related. They are creatures of the forests, and are fond of roads, paths and sunny spots, although one also comes across them in those parts of the forest where the floor is clear of grass and weeds. They are low-flying insects, skimming over the ground seldom more than two or three feet up, and often settling on the ground. Both sexes can usually be found in the vicinity of fallen fruits, and can be attracted to bait made from fermented pineapple or banana. They are not easy to catch as they are very wary, and their flight is swift. They frequently lead one a long chase, gliding ahead just out of net-reach for a considerable distance before diving into the undergrowth.

Mimetic Associations. There is a strong resemblance between this species and the females of several Diestogyna and Euryphene, also the female of Cynandra opis, and they are believed to act as models for the group.

#### Genus PSEUDARGYNNIS Karsch.

PSEUDARGYNNIS HEGEMONE Godt. (Plate I). Expanse:—Male 50-60 mm. Female 65 mm. Sexes alike.

General colour orange-brown with black-brown spots.

Male. F.w. Ground-colour orange-brown. A dark brown spot at base of cell, followed by five wavy transverse lines. Two large black spots at bases of 4 and 5. Two brown spots basal and two sub-basal in 1b, one basal and one sub-basal in 2, one each at mid-point of 3, 4 and 5. Edge of wing ornamented with dark internervular spots. A double row of dark spots sub-marginal from apex to hind-angle, the outer row tending to become lunular, inner row double in 1b. The inner row of spots are accentuated proximally in 4, 5, 6 and 7 by a white spot.

H.w. Plain orange-brown with a sub-marginal row of lunular brown marks from anal angle to 7, and internal to this a row of circular brown spots. Margin dark brown. Thorax greenish-black, abdomen orange-brown. Antennæ very long.

Underside. General pattern similar to above, but pale yellow with a greyish area at apex of F.w. Dark spots of above are represented by indistinct dark marks. A conspicuous orange-brown line crosses both wings, running straight from the apex of the f.w. to 2/3 along inner margin, and continuing in a curve parallel to the outer margin across the h.w. to the inner fold. The base of h.w. is ornamented with wavy dark lines, and there is a circular mark in the cell.

Female. Very similar to the male, but larger and paler, with dark marks more conspicuous. Above, a third row of sub-marginal dark spots crosses both wings, and the wavy dark marks at base of h.w. as well as the circular mark in the cell, show through from below. On the underside, all dark marks are more conspicuous than in the male.

Distribution. Throughout Kenya and Uganda in forest and scrub country. One usually finds it more common on the outer fringes of forests than in the depths.

Habits.—Both sexes are fond of feeding at flowers, where they can be easily taken. The flight is powerful for the size of the insect, but not very fast. They are given to flying round and round low trees, and in flight are very difficult to distinguish from their very common model, Atella phalantha. The males are also attracted to animal droppings and mud.

Mimetic Associations. This species is a member of the mimetic group centring round Atella phalantha, and in flight is confusingly like its model.

#### Genus PSEUDACRAEA Westw.

The name Pseudacraea means "False Acraea," and, as might be expected, the genus is one of mimetic butterflies, with models among the Acraeidx. They are, for the most part, confusingly like their models, both in appearance and habits. Most of them have the Acraea habit of sailing round the tops of flowering trees, and of settling with wings closed for a long time on a sunny leaf. They are related to the Euphaedra-Euryphene group of butterflies, and this relationship can be seen in the long, conspicuously clubbed antennæ, and the tendency to banding and spotting across the thorax and abdomen. The larvae, too, are somewhat similar. They are hardly likely to be confused with any other genus, with the possible exception of one or two species of Hypolimnas, another mimetic genus which chooses its models from among the Danaida and Acraeida. They can at once be distinguished from their models, when taken, by the open discoidal cell in the hindwing.

PSEUDACRAEA SEMIRE Cr. (Plate I). Expanse:—Male 60 mm. Female 70 mm. Sexes alike.

General colour black-brown with a broken pale green bar crossing both wings.

Male. F.w. Ground-colour black-brown. Basal triangle to mid-point of costa brownish-ochreous with black spots as follows:—Three in cell, four in 1b, one at base of 2. A pale green triangle in the middle of the cell. A large oval green patch crosses the base of 2 and the middle third of 1b, and is bisected by vein 2. There is an oval green patch at base of 3, and one each at bases of 4 and 5. A small pale green mark at mid-point of 4, and two larger oval pale green spots, one each at mid-point of 5 and 6. The margin of the wing bears a series of greyish-brown internervular streaks, tending to become oval spots in 1b and 2.

H.w. Ground-colour as fore. Basal triangle to basal third of cell brownish-ochreous. Three black spots in cell. Distal two-thirds of cell, mid-points of 1c, 2, 5 and 6, and base of 3, occupied by a broad pale green patch, somewhat irregular distally, and divided by the black nervules. Distal to this is a series of triangular reddish-chestnut marks from 1c to 4, and a sub-marginal series of oval, double, greyish-brown spots from 1c to 6. Marginal fold dark brown.

Underside. Much as above but paler, with ground-colour ochreous-grey. Grey-brown sub-marginal marks in fore and hindwing pale grey and very distinct. Basal areas in fore and hindwing yellow ochre. Spots much as above, but h.w. shows one at base of costa, one sub-basal and one at mid-point of 7, one at base of 6, one basal and one sub-basal in 1c. Thorax and abdomen black-brown. Antennælong.

Female. Very like the male, but larger and paler.

Distribution. This beautiful species appears to be somewhat rare in East Africa. It is a West African species which just extends into Uganda. Of the two specimens in the Museum collection, one is labelled Belgian Congo, and one Bwamba Forest, Uganda. Seitz gives the distribution as "Sierra Leone to Angola."

Habits. I have no information as to the habits of this species. It does not appear to have any Acraeid or Danaid model in East Africa.

PSEUDACRAEA BOISDUVALI TRIMENI Butl. (Plate I). Expanse:—Male 90 mm. Female 100 mm. Sexes alike.

General colour orange-red with black spots.

Male. F.w. Ground-colour bright orange-red with large round black spots as follows:—One at base of cell, followed by two at mid-point and two at discocellulars. One at base of 1b, followed by two sub-basal and one at mid-point touching vein 1, and one sub-basal across vein 2. There are black streaks as follows:—one each sub-marginal in 1b and 2, one at mid-point of 3, one each sub-basal in 4 and 5. A greyish semi-transparent area crosses the apex of the cell, the bases of 3, 4 and 5, and just enters 2 at mid-point. Distal to this is a sub-apical orange-yellow bar. Base of wing, costa, apex, and outer margin black, extending up the veins.

H.w. Ground-colour much as forewing, but slightly redder. Base of costa, base of cell, and base of 1 and 2 black, with a whitish spot at base of cell. Black spots as follows:—A small black spot near base of cell, contiguous with black basal patch. A large round spot near apex of cell, one sub-basal in 5, and a large spot sub-basal in 2. These spots are bordered with white, which colour has a decided tendency to spread along the veins. Margin heavily black, enclosing indistinct round orange spots. Thorax and abdomen black, with white and orange spots. Antennæ very long.

Underside. Much as above but paler, ground-colour more pink. Black basal area of h.w. split up into large spots as follows:—One lunular spot at base of cell, one each sub-basal in 7, 8 and 9. Sub-marginal h.w. marks pink and very distinct.

Female. Similar to the male but larger and paler.

Distribution. Typical boisduvali is a South African species. The local race, trimeni appears to extend throughout Kenya and most of Uganda, and appears to be represented in Western Uganda by a race described hereafter. I have seen trimeni in forest patches near Thika, at Lugari, and in the Kabras Forest, and it also occurs round Nairobi, in forest country.

Habits. A forest insect, much given to floating, usually just out of net reach. It does not seem to be particularly common, but is easily spotted on account of its very brilliant colouring and large size. It is one of the finest of the genus, and a very conspicuous insect.

Mimetic Associations. This race is a very good mimic of Acraea zetes acara, and is easily mistaken, when on the wing, for that species. It can usually be distinguished, however, by its superior size.

PSEUDACRAEA BOISDUVALI BOISDUVALI Doubl. (Plate I). This race was taken by T. H. E. Jackson in the Bwamba Forest, Uganda. It differs from trimeni in that the f.w. is almost entirely grey-black, brownish at the base, with a little red sub-marginal in 1b. Spotting as in trimeni. The female is greyish-ochreous with spots as in trimeni, except for a reduction in the black areas at base of h.w. Below, the h.w. in both sexes tends to take on a greenish tinge.

Distribution. The series in the Museum, 3 males, 1 female, come from Bwamba, Uganda, T. H. E. Jackson, May-June, 1940.

Mimetic Associations. In both sexes, above and below, this race bears a remarkable resemblance to Acraea egina and also to Acraea zetes menippe.

PSEUDACRAEA DOLOMENA ALBOSTRIATA Lathy (Plate 1). Expanse
Male 72 mm. Female unknown to me.

General colour orange-brown and black with white patch in h.w.

Male. F.w. Most of the cell, basal two-thirds of 1a, 1b and 2 warm orange-brown, with an extension of the orange-brown (slightly paler) into 3 at the midthird. Costa black-brown. Cell with five circular black spots, two next to costa, two, somewhat ill-defined, on discocellulars, and one on median. The two spots next to the costal nervule are bordered with white. A circular black spot in 1b, near the base of vein 2. Apex from end of cell, and outer margin to hind angle black-brown with dark internervular rays. Four white streaks at apex of cell.

H.w. Basal triangle black-brown. A light bar crosses the discal area of the wing from inner fold to 6, white from inner fold to cell, and orange in 5 and 6. Outer margin black-brown with rays as in f.w. Spots in basal triangle as follows:—Four in the cell, two in 1c, one each in 5, 6 and 7, at the extreme base of each area.

Underside. F.w. much as above, but paler throughout. Black spots larger and more conspicuous. Rays as above.

H.w. marked much as above. Basal triangle greeny-grey with black spots as above, very conspicuous. Discal bar greyish-white and broader than above, and marginal border greyish-brown. Rays as above.

Distribution. To the best of my knowledge, Western Uganda to the Congo.

Mimetic Associations. This insect bears a decided resemblance to Bematistes quadricolor latifasciata, and would appear to enter the mimetic group of which that species forms the centre.

PSEUDACRAEA EURYTUS (Plate II). A very variable species, the different forms of which have been given names as follows:—

1. f. TIRIKENSIS Neave. Expanse: --- Male and female 90-100 mm. Sexes alike.

Male. F.w. Ground-colour black. A broad white sub-apical bar crosses the wing from the costa, across discocellulars to 2, where it turns almost at right angles and continues as a greyish bar to the hind border. It does not reach the outer margin. 3 black spots in cell, one at base of 1b.

H.w. Basal triangle reddish-ochreous with black spots as follows:—One at base of cell, two at mid-point, one sub-basal in 2, one at base of 5, one at base of 6, one at base of 7, one each sub-basal in 8 and 9. The disc of the wing taken up by a broad triangular white patch, base at inner margin, apex at costa. Distal third of wing black-brown with border black, extending into the white area as internervular rays.

Underside. As above, but base of h.w. redder. Spots as above, but more conspicuous.

Distribution. Tiriki and Kakamega to Uganda.

Mimetic Associations. This race mimics the females of several Bematistes, such as B. alcinoe camarunica and B. aganica montana.

2. f. HOBLEYI Neave (Plate II). Marked as tirikensis, but in the male the forewing sub-apical bar is orange. The female has a white sub-apical bar.

Distribution. Occurs along with the previous form.

Mimetic Associations. The male enters the mimetic group round Bematistes poggei nelsoni and its allies.

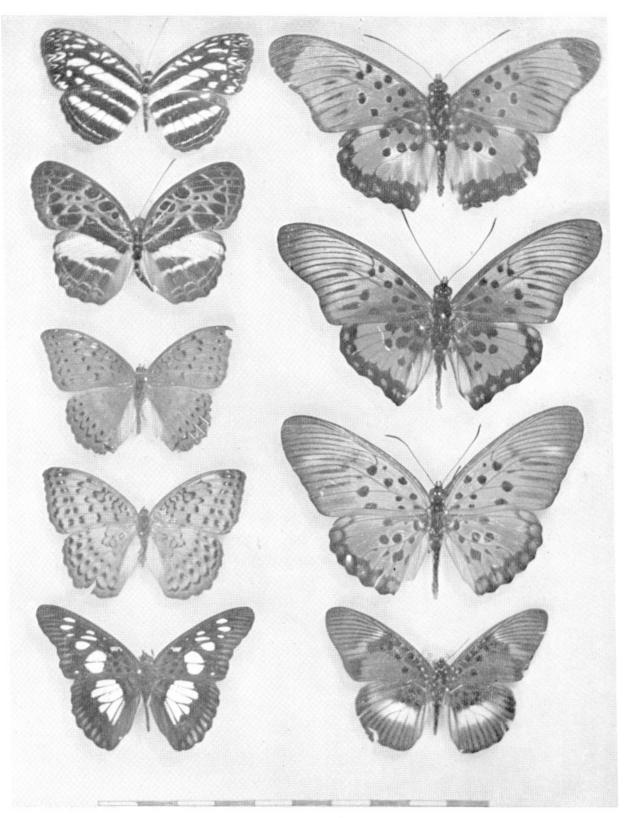
- 3. f. TERRA Neave (Plate II). Spotting as in the other forms. A large orange area occupies most of 1a and 1b, and the basal two-thirds of 2. An orange sub-apical bar crosses the bases of 4, 5 and 6, and just enters 3.
  - H.w. Almost entirely orange-brown. Margin black, extending in the form of internervular rays almost to the cell. Spotting very conspicuous owing to absence of black base.

A variety of this form has the f.w. sub-apical bar creamy-white. (f. schubotzoides).

Distribution. Western Uganda.

Mimetic Associations. Typical terra is a mimic of Bematistes tellus. The white-barred form mimics Bematistes tellus eumelis and Bematistes schubotzi.

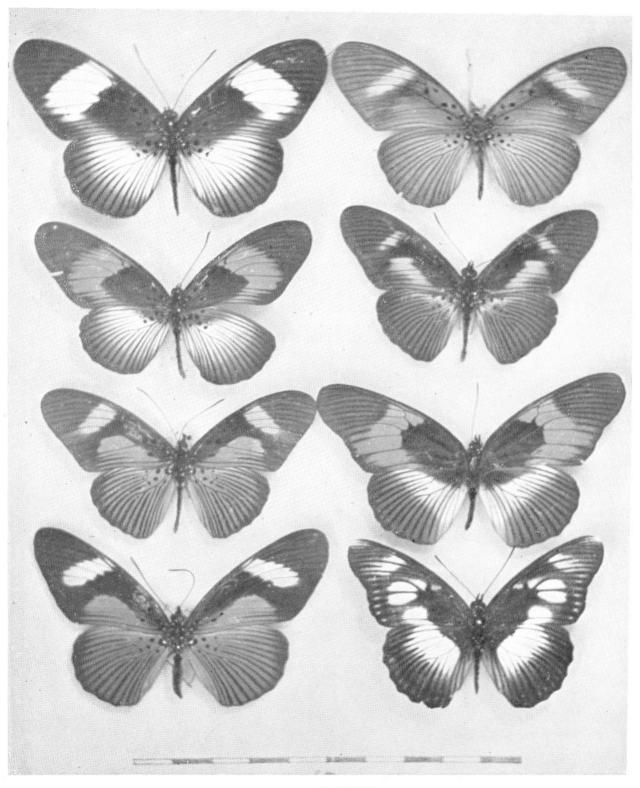
- 4. f. OBSCURA Neave (Plate II). Marked much as in terra, but pale areas creamy-grey, and very reduced in area. It is found in the forests of Uganda, and is a mimic of Bematistes epaea paragea.
- 5. f. ROGERSI Trim. Marked somewhat like terra, but with f.w. pale areas much extended and pale tawny-orange. The patch at the base of the f.w. is extended to occupy most of the cell, and is only separated from the sub-apical bar by a narrow black bar. The one specimen in the Museum is labelled Dalgube. It is a mimic of a form of Acraea esebria.



Pseudoneptis coenobita F. Catuna crithea Drury. Pseudargynnis hegemone Godt. ♂ Pseudargynnis hegemone Godt. ♀ Pseudacraea semire Cram

### PLATE I.

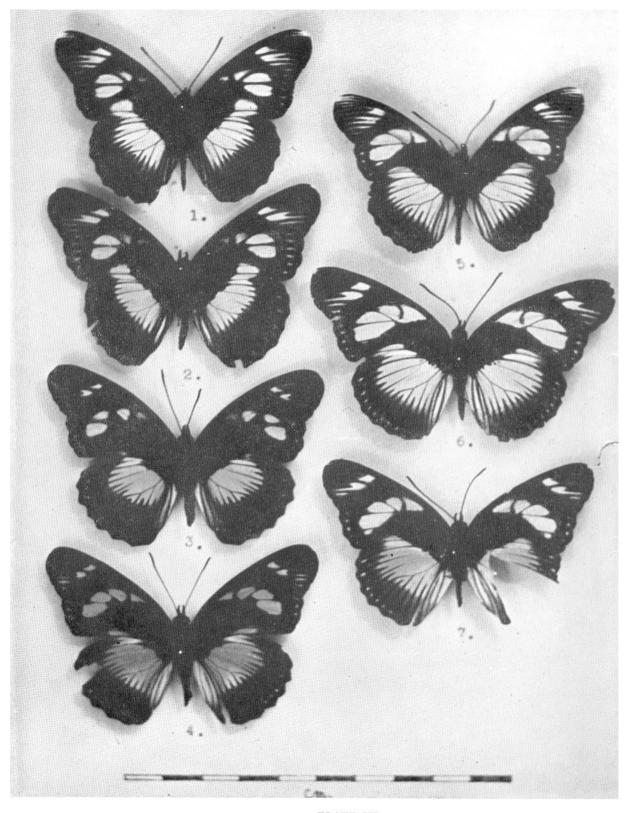
Pseudacraea boisduvali trimeni Butl. Pseudacraea boisduvali boisduvali Doubl. ♂ Pseudacraea boisduvali boisduvali Doubl. ♀ Pseudacraea dolomena albostriata Lathy.



Pseudacraea eurytus f. tirikensis Neave. f. hobleyi Neave. f. terra Neave. f. schubotzoides

PLATE II.

Pseudacraea eurytus f. imitator Trim. f. obscura Neave Pseudacraea kunowi hypoxantha Jord. Pseudacraea lucretia lucretia Cram. &

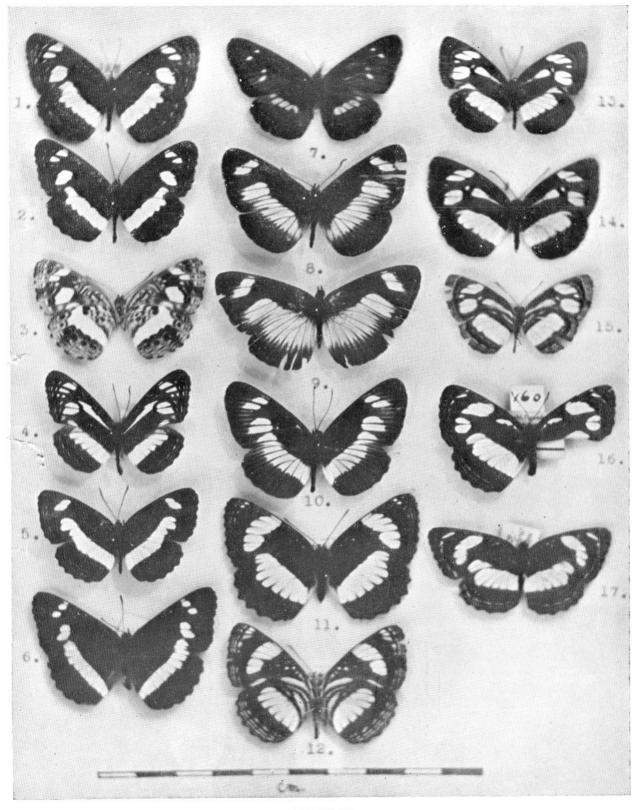


Pseudacraea lucretia lucretia Cram,  $\begin{tabular}{c} \begin{tabular}{c} \begin{tabula$ 

1. 2. 3. 4.

# PLATE III.

- 5. Pseudacraea lucretia expansa Btlr.
   6. \$\begin{pmatrix} \frac{\pi}{2} & 1. \\ \pi & \frac{\pi}{2} & 2. \end{pmatrix}\$
   7. \$\begin{pmatrix} \frac{\pi}{2} & \frac{\pi}{



#### PLATE IV.

- 1. Neptis saclava marpessa Hpfir. Diani.
  2. Neptis saclava marpessa Hpfir. Bura, Teita.
  3. Neptis saclava marpessa Hpfir. underside.
  4. Neptis saclava marpessa Hpfir. underside.
  5. Neptis saclava marpessa Hpfir. Bura, Teita.
  6. Neptis incongrua occidentalis. Molo.
  7. Neptis woodwardi Sharpe. Kabras.
  8. Neptis woodwardi Sharpe. Kabras.
  9. Neptis ochracea Neave. 2 Katera.
  10. Neptis exaleuca Karsch. Bwamba.
  11. Neptis agatha Stoll. Kabete.

- Neptis agatha Stoll. underside.
  Neptis melicerta Drury. Marsabit.
  Neptis melicerta Drury. Kwale.
  Neptis melicerta Drury. underside.
  Neptis strigala Auriv. N'tebi, Uganda.
  Neptis nysiules Hew. Belgian Congo. 12. 13. 14. 15. 16. 17.

Distribution. Pseudacraea eurytus in its various forms occurs throughout most of Kenya and Uganda in forest country, but is commonest in West Kenya and in Uganda. I have never found it particularly plentiful anywhere, and it does not appear to be very common in collections. Possibly this is because it is overlooked on account of its remarkable resemblance to its various models.

The localities from which the specimens in the Coryndon Memorial Museum were collected are as follows:—

f. TIRIKENSIS	3 specimens, 1 labelled Bwamba Forest, Uganda.		
	1 ,, Kakamega		
	1 ,, Budongo Forest, Uganda.		
f. HOBLEYI	1 specimen, labelled Budongo Forest, Uganda.		
f. TERRA	1 specimen, labelled Nabugabo, Uganda.		
f. SCHUBOTZOIDES	1 specimen, labelled Budongo Forest, Uganda.		
f. OBSCURA	3 specimens, labelled Budongo Forest, Uganda.		
f. POGGEIOIDES	4 specimens, 1 labelled Budongo Forest, Uganda.		
	1 ,, Kakamega.		
	1 ,, Kabras.		
f. ROGERSI	1 specimen, labelled Dalgube.		

# PSEUDACRAEA KUNOWI HYPOXANTHA Jord. (Plate II). Expanse 75 mm. Female unknown to me.

Male. F.w. Ground-colour velvety black-brown. An orange-red bar crosses the apex of the cell, the base of 4, 5 and 6, and the distal two-thirds of 1a, 1b, 2 and 3, thus being sharply curved at vein 4. Apex and margin black-brown.

H.w. Base black-brown. Central third of wing with a white bar crossing distal half of cell, bases of 1a, 1b, 1c, 2, 3, 4, 5, and mid-points of 6 and 7. Distal third of wing black-brown, with black interner vular rays reaching from margin to cell. Anal angle orange-brown. Thorax and abdomen black with small white spots.

Distribution. This appears to be a somewhat rare species. The one specimen in the Museum is labelled Mawakota, and Seitz gives the distribution merely as Uganda.

Mimetic Associations. This species would appear to be a mimic of Bematistes macarista and its allies.

PSEUDACRAEA LUCRETIA Cr. (Plate III). Expanse 70-80 mm., male and female. Sexes usually alike but female rather variable.

General colour black and white.

Male. F.w. Ground-colour black-brown. A rectangular greyish-white spot at apex of cell, a greyish-white triangle at base of 4, an oval white patch at base of 3, another oval white patch at mid-point of 2, with, contiguous to it, a small greyish-white spot in 1b. A semicircular white patch at mid-point of 1b, base on vein 1, and not reaching vein 2. This is continued as a rectangular patch in 1a. A white sub-apical bar crosses the wing, consisting of a rectangular spot at sub-base of 6, a rectangular spot at mid-point of 5, and a streak in 4. Tip of wing white. A series of double greyish interner vular streaks from 1b to 5, contacting the rectangular white patch in 5, and the streak in 4. These streaks are separated by dark rays, and tend to become circular in 1b.

H.w. Ground-colour as fore. Basal triangle black-brown. Discal third occupied by a well-defined white area, crossing the wing from inner fold to costa. Distal third black-brown, with dark internervular streaks just reaching and invading the white area. A sub-marginal row of whitish internervular spots from 2 to 7.

Underside. Markings much as above. Ground-colour greyish ochreous. F.w. with a dark streak in cell. H.w. ground-colour brownish-ochreous. Black spots at base as follows:—Three at extreme base. One at base of cell, followed by two more sub-basal, one each sub-basal in 7, 8 and 9. Internervular dark rays from 1c to 8. White sub-marginal marks of above very distinct.

Female. Somewhat variable—in three main forms.

- 1. Like the male, but larger, with white areas somewhat expanded.
- 2. Like 1, but with h.w. patch ochreous.
- 3. Like 1 and 2, but with all pale areas orange-ochreous.

Distribution. Roughly from Thika and Nairobi to Uganda and the Congo. Fairly common where it occurs, in forests and along wooded river-courses. I found it particularly abundant at Thika during 1941.

*Habits*. Given to floating, usually fairly high. Both sexes are attracted to flowers, and are easily captured. The males come to the evil-smelling baits beloved of the male *Charaxes*, and to mud.

Mimetic Associations. The black-and-white male and the male-like form of the female resemble, in flight, the various forms of Amauris damocles. The female form with the ochreous patch in the h.w. is an excellent mimic of Amauris albimaculata and its allies, while the orange-ochreous form bears a certain resemblance to Bematistes tellus eumelis and to certain forms of Acraea esebria.

PSEUDACRAEA LUCRETIA EXPANSA Btlr. (Plate III). Very similar to the previous race, but with all pale marks much enlarged, particularly those occupying the central area of the forewing. The females seem to have similar variations to those of *lucretia*.

Distribution. The coastal districts of Kenya to Thika and Nairobi, where it appears to intergrade with *lucretia*. Habits similar to *lucretia*.

Mimetic Associations. This race, in the black-and-white forms, is a fairly close mimic of Amauris ochlea. The female with orange-ochreous marking bears a fairly close resemblance to certain forms of Acraea esebria.

#### Genus-NEPTIS F.

This genus should not need much description, as it is, or should be, familiar to most collectors. The butterflies in it are, for the most part, black with a broad, broken bar of white crossing both wings. They are small to medium-sized insects, and the great majority of the species are confusingly alike. The habits of all the species are sufficiently alike to be described here. They are creatures of the forest and scrub country, with a few species, such as N. agatha, found in open savannah forest as well as in the thick forests. The flight is slow and somewhat jerky, and they are rather given to floating. They appear to have influenced the coloration of a few other butterflies to a certain extent. The species of the genus Pseudathyma are very Neptis-like, and so are certain of the Euptera, such as one of the forms of the female of E. elabontas, both sexes of E. pluto kinugnana, one form of the female of Euryphura plautilla albimargo, the local species of Neptidopsis, ophione and platyptera. At times the female of Charaxes baumanni, when laying, looks not unlike a Neptis. I have no data as to the edibility or otherwise of the genus. Some of them, in fact, appear to be mimetic, notably N. woodwardi, which bears a decided resemblance to Amauris albimaculata, and to Acraea lycoa and A. johnstoni.

In order to assist in separating the species, I append hereto Dr. H. Eltringham's Key to the genus (Trans. Ent. Soc. Lond. 1921, p. 532).

# KEY TO THE AFRICAN FORMS OF THE GENUS NEPTIS.

(The sexes are alike in pattern).

	(1220 bostob dio dello in pubblis).	
	Some or all of the discal spots and bands of upperside yellow.  All paler markings above white (rarely bluish).	a. g.
(a)	F.w. cell on underside contains white dots, usually also visible above. Cell without white dots.	b. d.
(b)	F.w. inner marginal spot absent or only faintly developed F.w. with a well-marked inner-marginal spot, sometimes confluent with spots in 2 and 3.	comorarum c.
(c)	Expanse about 50 mm., h.w. discal band only about 3 mm. wide, distally edentate  Expanse about 35 mm., h.w. discal band about 5 mm. wide, distally regular	dumetorum mayottensis
(d)	Discal yellow band broad (4-5 mm.) quite or nearly continuous from inner margin of h.w. to f.w. area 3, its proximal margin almost a straight line.  Yellow band narrower (2-3 mm.) and having a curved proximal outline from inner margin of h.w. to f.w. area 3.	e. f.
(e)	F.w. band continuous from inner margin to area $3$ . F.w. band interrupted by ground-colour in anterior half of $1b$ .	ochracea ochracea ochreata
<b>(f)</b>	H.w. band nearer to base than to hind-margin, short and pale ochreous	woodwazdi frobenia
(g)	Base of h.w. beneath practically unicolorous with rest of ground-colour (generally red-brown) not striped or spotted.  Base of h.w. beneath striped or spotted.	h. m.
(h)	White spots within f.w. cell. No white spots in cell.	i. j.
(i)	On h.w. underside a small white spot in area 6	neavei swynnertoni*
(j)	Underside ground-colour red-brown or orange-brown. Underside ground-colour ochreous	k. exaleuca exaleuca
(k)	$H.w.\ underside$ without heavily marked dark interner vular rays . H.w. underside with heavily marked dark interner vular rays.	incongrua incongrua l.
(1)	F.w. with three or four minute white dots beyond cell, h.w. white band about 2 mm. wide $$ F.w. without such minute dots, h.w. band about 5 mm. wide $$ .	incongrua occidentalis exaleuca suffusa
(m)	Base of h.w. beneath irregularly marked and spotted, not with regular pale bands on a dark ground.  Base of h.w. beneath with curved bands of white or whitish on a dark ground.	n. r
(n)	F.w. cell nearly all white. F.w. cell dark or only with white dots.	o. p.
(o)	H.w. discal band only about 3 mm. wide H.w. discal band about 5 mm. wide	metella metella f. gratilla

<sup>\*</sup>This is the principal difference between typical neavei and swynnertoni, and it is not a constant one. Nevertheless, the male armatures differ.

(p)	F.w. sub-apical spots in 5 and 6 not separated by ground-colour F.w. ditto. separated by ground-colour, at least proximally.	nemetes f. carpenteri q.
( <b>p</b> )	H.w. discal band about 5 mm. wide and not markedly projecting outwards in area 5	saclava
	projection in area 5	saclava f. marpessa
(r)	F.w. cell dark above like ground-colour, or with only minute white dots, not with sharply defined streaks or spots (trigonophora sometimes has a diffused white streak in f.w. cell above). F.w. cell contains more or less white, at least some part of which is sharply defined.	s.
(s)	F.w. discal band practically continuous from nervure 2 to, or nearly to, costa (nervule 4 may be rather blacker than the rest, but see footnote on <i>seeldrayersi</i> ).  F.w. discal band discontinuous, generally owing to reduction of spot in area 4.	t.
(t)	F.w. cell on upperside has white dots. Ditto. rarely with faint paler markings, but not in the form of dots.	u. w.
(u)	F.w. delicate sub-marginal lines are continuous, interrupted only by the nervules. These lines less distinct between nervules $3\ \mathrm{and}\ 4$ .	v. agatha, jordani*
(v)	H.w. discal band extends beyond nervule 6 H.w. ditto. does not extend beyond nervule 6	seeldrayersi† livingstonei
(w)	Proximal edge of f.w. discal band straight.  Ditto concave or indented.	x. z.
$(\mathbf{x})$	F.w. discal band sharply defined, the nervures only very faintly	
	marked.  Discal band formed of elongated white spots rounded and deeply indented distally between nervules	y. nysiades (part)
<b>(</b> y)	F.w. discal band almost pyriform and pointed at costal end. Submarginal lines on both wings markedly white Ditto. narrower towards costa, but not pyriform. Sub-marginal lines not so markedly white	nina puella
(z)	F.w. band somewhat indented distally by ground-colour, especially	<i>F</i>
(-)	in 3 and 4, band composed of spots of nearly equal length .	nysiades f. continuata
	Ditto. with the spot in 2 very small and only touching that in 3 at its inner anterior angle	nysiades f. metanira
	Ditto. with spots in 4, 5 and 6 considerably longer than those in 2 and 3	nicomedes f. puelloides‡
( <b>a</b> °)	F.w. band does not reach costa, only just extending as a narrow longitudinal streak beyond nervule $6$ F.w. band reaches costa or at least into area $8$ .	nysiades f. clarei b°.
(b°)	F.w. cell distinctly dotted with white. F.w. cell dark, though rarely with vestiges of an ill-defined streak.	c°. e°.
(c°)	White band of both wings very broad (6-10 mm.) and continuous from h.w. inner margin to nervule 4 of f.w	kikideli d°.

<sup>\*</sup>No absolutely constant character can be given to distinguish these two species; jordani i smaller than the average size of agatha, and the ground-colour is paler. In jordani the discaband is more consistently narrowed towards the costa.

<sup>†</sup>Occasional examples of *seeldrayersi* have the f.w. band separated into elongated spots b an increased blackening of the nervules. Such examples are distinguished from *nysiades* by th white dots in f.w. cell above.

<sup>‡</sup>Puelloides can generally be distinguished from conspicua by its smaller size and the interruption of the f.w. sub-marginal lines in area 3 and often in 6.

(d°)	The fine line just beyond the discal band is almost straight between the nervules	rogersi barnsi
(e°)	On h.w. underside distal to white band a row of large more or less rounded dark spots on a lighter ground-colour. Without such spots.	f°. g°∙
(f°)	H.w. beneath with conspicuous costal white band extending from base to about middle of costa	poultoni nemetes nemetes
(g°)	In f.w. cell beneath is an elongated curved clavate spot followed by two to four very small spots beyond cell F.w. beneath with an irregular narrow white mark along costal edge of cell and a transverse streak across end of cell	trigonophora nysiades (part)
(h°)	On h.w. upperside the innermost of the three white sub-marginal lines is widened so as to form a conspicuous white band at least 2 mm. wide.  This line at most only slightly wider than the others, not more than 1 mm.	i°. k°.
(i°)	A narrow but continuous longitudinal white stripe in f.w. cell, but no transverse stripe	rothschildi j°.
(j°)	F.w. cell with a longitudinal white stripe Ditto. with three transverse marks progressively smaller proximally	paula biafra
(k°)	Discal band of f.w. continuous from area 2 to, or nearly to, costa, or only just interrupted by nervule 4. F.w. band markedly interrupted at nervule 4.	l°. m°.
(1°)	In f.w., proximal edge of spots in 2 and 3 forms a straight line at or nearly at right angles to the long axis of spot in $\mathbf 4$ . This proximal edge is S-shaped without a sharp angle	nicomedes quintilla nicomedes nicom <b>edes</b>
(m°)	White marks in f.w. cell are transverse and usually three in number. (When very faintly developed= $nysiades$ typical) White stripe in cell longitudinal.	nysiades (part) n°.
(n°)	In f.w. cell a white wedge-shaped mark followed distally by a contiguous triangular patch of greyish white scales . Without such greyish patch (rarely with a few grey scales).	jamesoni o°.
(o°)	Discal spot in area 4 of f.w. is a mere narrow line touching nervule 5, such line nearly as long as the spot in 5 F.w. discal spot in area 4 not of this form.	nicoteles P°·
	F.w. spot in 4 well-developed and at least as long as that in ${\bf 5}$ . This spot, if present at all, very small and isolated.	<i>strigata</i> q°.
(q°)	The white streak in f.w. cell is long and narrow and just above the origin of nervule 3 is sharpely indented anteriorly but not quite divided by the ground-colour. Beneath, this indentation usually contains a white dot	nebrodes r°.
(r°)	F.w. discal spots in 2 and 3 and in 5, 6 and 7 are not notably separated and so form two conspicuous white patches, very little white in cell	melicerta f. goochi s°.
(s°)	F.w. discal spots in 5 and 6 very short, almost rounded. Inner marginal spot obsolescent F.w. discal spots in 5 and 6 elongated, inner marginal spot or spots well developed.	nicobule t°.

lermanni

. melicerta
. mixophyes, nicodice\*

The above key includes all the African Neptis known in 1921, when Dr. Eltringham wrote his monograph on the genus. Some may have been discovered since, but I am not aware of them. A large number of the species mentioned in the key are not described below, as some are West African, and others come from Madagascar and the Comoro Islands.

NEPTIS SACLAVA MARPESSA Hpffr. (Plate IV Figs. 1-3). Expanse:—Male 40-45 mm. Female 50 mm. Sexes alike.

General colour black and white.

F.w. Ground-colour sepia-black. Cell with three white dots, followed by four white dots in 4, 5 and 6. A discal white patch in 2 and 3, divided by the nervules. A white patch in 1a and 1b, continous with the discal band in h.w. Three sub-apical white spots, ovoid in shape, one very small in 9, one much larger in 6, and one smaller in 5. Two fine parallel sub-marginal lines, greyish-white, the inner one broken by the nervules. Internal to these a series of indistinct dark spots, proximally marked greyish in 4, 5 and 6. Marginal fringe with white dots.

H.w. Ground-colour as fore. A white discal bar crosses the wing from midpoint of inner fold to mid-point of costa. This bar is perfectly regular proximally, but somewhat irregular distally, with a marked projection in area 5. Distal to the bar is a series of large dark spots, somewhat ill-defined, followed by two parallel greyish sub-marginal lines, broken by nervules. Margin white-spotted.

Underside. F.w. Ground-colour greyish-ochreous. White markings of above show through, much enlarged. Cell with a curved transverse whitish mark across discocellulars, and the three dots of above, which show through greatly enlarged, as reddish-bordered white spots. Distal to the cell, in 4, 5 and 6, are three white spots, edged proximally with reddish, and followed by a dark area terminated by the sub-apical white marks. The sub-marginal series of whitish lines are represented here by dark streaks broken by the nervules, and the series of dark spots internal to this are clearly shown up by the paler ground-colour.

H.w. Ground-colour as fore. Basal triangle ornamented with reddish lines and spots as follows:—Two red spots, the distal one grey-centred, and a red "V"-shaped mark in the cell. A reddish-grey streak crosses the base of 1c, cell and 8. Another similar line crosses the base of 6 and 7 and the sub-basal area of 8. A dark spot each at mid-point of 6 and 7. Discal bar as above, much enlarged, and bordered, distally and proximally, with brown. Dark spots of above brownish, well-defined. Sub-marginal lines as fore.

Female. Like the male, but larger and paler, with white marks larger.

Distribution. In forest country throughout most of Kenya and Uganda.

<sup>\*</sup>I can find nothing in the description of nicodice to distinguish it from mixophyes except its size. The former is said to have an expanse of 48 mm. and the latter 32 mm., Size is of little value in the genus. I have before me examples of agatha varying 20 mm. in expanse.

NEPTIS METELLA Dbl. & Hew. (Plate IV, Fig. 4). Expanse 50 mm. Sexes alike.

#### General colour black and white.

Male. F.w. Ground-colour sepia-black. Cell with a conspicuous scimitar-shaped white streak, followed by two minute white streaks in 5 and 6. A quadrate white spot each in 3 and 4 at mid-point, separated by the nervule. A small white streak in 9, a quadrate spot in 6, a broad streak in 5, and two spots in 4, all form a very much broken sub-apical bar. There is a pair of parallel white lines sub-marginally, broken by the nervules. The marginal fringe is spotted with white. There is a series of indistinct dark spots internal to the sub-marginal white lines, marked with white internally, and a small white area in 1a, just entering 1b, and continuous with the h.w. discal bar.

H.w. Gound-colour as fore. A straight parallel-sided white bar crosses the wing, broken distally by intrusions of the ground-colour along the nervules. Submarginal lines as fore, with a series of ill-defined dark quadrate marks between these and the discal bar.

Underside. F.w. Ground-colour ochreous-yellow at base, fading to greyish towards the apex. White and dark marks as above. White marks much enlarged, and dark spots more conspicuous owing to paler ground-colour.

H.w. Ground-colour yellow-ochreous. White marks as above. Base of wing ornamented with conspicuous black spots as follows:—One at extreme base of wing. Four in cell, one in 1b, two each in 1c, 5, 6, 7 and 8, those in 6 and 7 tending to be large and somewhat diffuse. White discal bar bordered with a series of black semi-circular dark spots internal to the sub-marginal series, which show through very conspicuously from above. Sub-marginal lines as above.

Female. Similar to the male, but larger and paler.

Distribution. Western Kenya through Uganda to the Congo, in forest country. This insect can be immediately distinguished from others of the genus by the characteristic ochreous, black-spotted hindwing basal triangle.

NEPTIS NEMETES CARPENTERI (Plate IV, Fig. 5). Expanse 50 mm. Sexes alike.

#### General colour black and white.

Male. F.w. Ground-colour deep brown-black. A white discal bar runs from 1a to 3. This bar is continuous with the h.w. discal bar, and is regular proximally, indented by the nervules distally, particularly at nervule 2. A white quadrate patch crosses the mid-points of 5 and 6, not interrupted by nervule 6. A series of indistinct dark spots sub-marginal from 1a to apex, followed by a double fine white line, slightly interrupted by the nervules. These dark spots are accentuated proximally by a greyish mark.

H.w. Ground-colour as fore. A straight white bar crosses the wing, continuous with the white bar in f.w. This bar is regular proximally, and indented by the nervules distally. It is followed by a sub-marginal row of large, ill-defined dark spots, and fine white lines as fore.

Underside. F.w. Ground-colour reddish-grey with white marks as above, but larger. Dark sub-marginal marks more conspicuous, and fine sub-marginal white lines whiter, more continuous and more distinct. Cell with a greyish-white streak along costal edge and curving over discocellulars, and two greyish areas, one ovoid, one quadrate.

H.w. Ground-colour as fore. Marked as above, but with two whitish lines crossing the basal triangle parallel to the discal bar, the distal of these two lines not very distinct. Cell with two reddish spots.

Female. Similar to male, but paler.

Distribution. Of a series of 9 in the Museum, 7 are labelled Budongo, and 2 Kalinzu. The distribution may be wider.

NEPTIS POULTONI Eltr. We have no specimen, and I quote from Eltringham, Trans. Ent. Soc. Lond. 1921.

"Expanse 38-42 mm. Ground-colour dark sepia, with white discal markings. F.w. with an inner marginal patch in 1a and 1b, the proximal edge of which forms a straight line continuous with that of the h.w. discal band. In 2 and 3 are large contiguous spots forming a sub-ovate patch of regular outline. In area 4 a minute white dot placed distally. In 5, 6 and 10 contiguous spots forming a large sub-apical patch. Distal to the white markings and roughly following their contour a line somewhat paler than the ground-colour, followed by a band of more or less rounded internervular dark spots, this followed again by three paler lines forming the hind-marginal border. Fringes dotted white between nervules.

H.w. with a white discal band of irregular outline 4 mm. wide on inner margin, and rather broader in 5, thence narrowing to a small spot in 7. Distal to the white band a border similar to that in f.w.

Underside. Ground-colour paler than above. Costa white at base and as far as cell end. In cell a white line on subcostal curving downwards and outwards, its end pointing to origin of nervule 3. On end of cell a white transverse line, and beyond this, indications of a second indistinct line. Discal white spots as above, but sub-apical extends into 10. The border arrangement of pale lines much accentuated owing to increased whiteness of lines and an additional fine marginal line.

H.w. brown at base, but with a conspicuous curved white costal bar from base to end of 8, followed by two indistinct narrow whitish streaks on dark ground. Beyond discal band border of same pattern as in f.w."

Distribution. Given by Eltringham as Uganda.

# NEPTIS INCONGRUA OCCIDENTALIS (Plate IV, Fig. 6). Expanse 55-60 mm. Sexes alike.

General colour black with a narrow white bar.

Male. F.w. Ground-colour sepia-black. A white patch on inner margin just touches a quadrate white mark in 2, which is contiguous with a similar mark in 3. A roughly circular white spot in 4, another in 5, and a white mark on the costa form a sub-apical bar, and there are three white dots on discocellulars. Fringe white-spotted.

H.w. Ground-colour as fore. A narrow white discal bar crosses the wing from just above the anal angle to mid-point of costa, continuous with the inner marginal patch in f.w. This bar is regular proximally, indented by nervules distally. Fringe white-spotted.

Underside. Both wings. Ground-colour rich coppery-red with a sheen, tending to become ochreous at f.w. margin. All white marks of above present, somewhat enlarged. Internervular rays distinct at forewing margin to discal area.

Female. Similar to male, but larger and paler.

Distribution. Throughout Kenya at moderately high altitudes. I have seen it at Nairobi, and found it fairly common at Molo and on Mt. Elgon. It is given to floating round trees, high out of net-reach, and is not, in my experience, easy to capture. It is one of the finest of the genus, and cannot be mistaken for any other species. Its rich coppery underside makes it unmistakable. There is a distinct superficial resemblance between this species and the female of Charaxes baumanni, but the two could never be confused.

NEPTIS WOODWARDI Sharpe (Plate IV, Fig. 7). Expanse:—Male 48-54 mm. Female 60 mm. Sexes alike.

General colour black-brown with white spots in f.w., ochreous bar in h.w.

Male. F.w. Sepia-brown. Almost unicolorous. The only markings are a small round white spot each in areas 2 and 3 and in 5 and 6.

H.w. Ground-colour as fore. A narrow ochreous discal bar from mid-point of 2, crossing the base of 3, and mid-points of 4 and 5. Fringes of both wings whitespotted.

Underside. F.w. Ground-colour brownish ochreous with a bronzy sheen, becoming more ochreous towards outer margin. White spots of above present, much enlarged. Internervular spaces marked with dark rays.

H.w. Ground-colour much as fore, but more ochreous. Inter-nervular rays well defined. Pale bar of above present, somewhat larger.

Female. Like the male, but larger, with pale areas very much enlarged, and h.w. bar paler.

Distribution. West Kenya (Kakamega) and Uganda, in forest areas.

Mimetic Associations. Both sexes bear a remarkable resemblance to certain forms of Acraea johnstoni and Acraea lycoa, and also to Amauris echeria and its allies. This resemblance is particularly well marked in the female.

NEPTIS OCHRACEA Neave (Plate IV, Figs. 8 and 9). Expanse 55-60 mm. Sexes alike.

General colour sepia-brown with an ochreous bar crossing both wings.

Male. F.w. Ground-colour sepia-brown. A broad ochreous bar crosses the wing from 1a to 3, tending to turn inwards in 2 and 3. A large quadrate ochreous spot in 5 and 6 forms a sub-apical bar. Ill-defined dark internervular rays just reach the pale areas from the margin.

H.w. Ground-colour as fore. Middle third of wing taken up by a broad regular ochreous bar from inner fold to costa, regular proximally, indented distally by the nervules and by dark, ill-defined rays which run inwards from the margin and just reach the pale area.

Underside. Both wings. Ground-colour greyish ochreous. All pale markings as above, larger and paler. Internervular rays and nervules well-marked.

Female. Like the male, but larger and paler, with pale markings more extensive. H.w. Pale area reaches base of wing.

Distribution. A series of 6 in the Museum, 4 from Kalinzu and 2 from Katera.

Mimetic Associations. This species, and especially the female, bears a strong resemblance to certain forms of Acraea esebria and Acraea jodutta. The resemblance is seen on both upper and under surfaces.

NEPTIS EXALEUCA Karsch (Plate IV, Fig. 10). Expanse 55-60 mm. Sexes alike.

General colour black with white bar crossing both wings.

Male. Very similar in markings to the fore-going, but the pale markings are white instead of ochreous, and the ground-colour is blacker. The internervular rays are more clearly defined, particularly in the h.w. There is a deep interruption of the white bar in the forewing by the ground-colour along nervule 2, dividing this bar into two areas.

Underside. F.w. Ground-colour at base reddish-ochreous, greyish towards apex. Pale marks as above, with dark internervular rays well defined.

H.w. Ground-colour reddish-ochreous at base, yellowish-ochre at distal third. Pale marks as above. Dark internervular rays well defined.

Distribution. There is a series of 5 in the Museum, labelled Bwamba, Uganda, T. H. E. Jackson, April-May, 1940.

Mimetic Associations. There is a certain resemblance between this species and certain black and white forms of Acraea esebria. Possibly some of the black and white females of species of Bematistes, such as aganica montana, also enter this association.

NEPTIS AGATHA Stoll (Plate IV, Figs. 11 & 12). Expanse:—Male 50-55mm. Female 55-60 mm. Sexes alike.

#### General colour black and white.

Male. F.w. Ground-colour almost dead black in fresh specimens. Three to five white spots in cell, varying in size, one on costa by apex of cell, two on discocellulars. A white patch on inner margin at middle third, extending into 1b. A continuous broad white bar from 2 to costa, bending at an obtuse angle at vein 4, and indented distally by the nervures. Three interrupted white sub-marginal lines follow the outline of the wing from 1b to apex, and there is a trace of a fourth, which curves round as an indistinct pale line parallel to the broad sub-apical bar. The inner line of the sub-marginal three lines is widened, particularly towards the apex, where, in 7 and 8, it appears as two spots. Fringe white-spotted.

H.w. Ground-colour as fore. The middle third of the wing is taken up by a broad white bar, regular proximally, indented distally by the nervules. Margin with three interrupted white lines as fore. Fringe white-spotted.

Underside. F.w. Ground-colour slightly paler than above. All white marks as above, but much larger. Spots in cell tend to coalesce, particularly at the base.

H.w. Ground-colour as fore. White marks as above, but larger. Basal triangle ornamented with a white streak on costa and two white streaks parallel to this between costa and discal bar. A white spot at mid-point of 7. A series of white spots forms a row parallel to and just distal to the white discal bar.

Female. Like the male but larger.

Distribution. This is one of the commonest of the Neptis. It is found in forest and scrub country from the Coast to the Congo. Its habits do not differ from those of others of the genus.

For the descriptions of the following species, i.e. jordani, seeldrayersi, barnsi, rogersi, trigonophora, nicoteles, nicomedes and puella, which, according to Eltringham, occur within the bounds of Kenya and Uganda, I have been obliged to quote from Dr. Eltringham's monograph on the Neptis, as I have not been able to obtain any specimens from which to prepare a first-hand description.

### NEPTIS JORDANI Neave.

"A detailed description would follow so closely that of agatha that it would seem of more use to state as fully as possible the directions in which it differs from that species . . . . In general appearance the ground-colour is browner than agatha. The f.w. discal band is very complete and shows no blackening at the nervules. In practically every case the white spot in area 4 is longer than that in area 5, whereas in agatha 4 is generally shorter than 5. In jordani the white in 6 is so markedly shorter than in 5 that the whole band has a narrowed appearance towards the costa, an effect much less apparent in agatha. The distal margin of the discal band from nervule 4 to the costa presents on the whole a straight or even concave line, whereas in agatha such margin is convex. In h.w. the white of the discal band projects outwardly between the nervules, especially in 4 and 5, and the ends of such projections are well rounded. In agatha the ends of the component white spots are generally cut off nearly straight, and they are not liable to so prominent a projection in 4 and 5. This feature is perhaps even more evident on the underside."

#### NEPTIS SEELDRAYERSI Auriv. Kumasi to Mombasa.

"Expense 45-60 mm. Sepia-black with white markings. F.w. with three white spots in cell and from one to five beyond it. An inner marginal patch formed by two spots in 1a and 1b, usually coalescent, or at most only divided by the nervule. A discal band of white spots in 2 to 6 and 9. This band may be quite continuous with the nervules only just visible, or it may be distinctly separated into spots, distally somewhat divergent. The tendency to separation is greatest on nervule 4, but the spot in 4, though it may be narrow, is not appreciably reduced in length (differing in this respect from rogersi and barnsi). Distal to the discal band and following its contour a pale line well marked or faint, not thrown into distinct arches between the nervules. Three sub-marginal lines, the first more or less expanded into spots near apex (rarely traces of a fourth near apex). These lines, however faint, are interrupted only by the nervules and never markedly obsolescent in area 3.

H.w. with a white discal band beginning at inner margin and usually ending in area 6, but sometimes extending into area 7. Its proximal margin forms an almost continuous straight line with the f.w. inner marginal patch as far as the median nervure, whence it turns downward towards the anal angle. This discal band varies in width from 4 to 10 mm., and may be quite continuous, even the nervules being white, or it may consist of spots separated by black nervules, and distally still more so by invasions of the ground-colour. Beyond this band a pale line only faintly indicated, followed by three, sometimes four sub-marginal lines. Both wings with white spotted fringes.

Underside. Ground-colour little paler than above. F.w. white at base of costa. Pattern in cell variable, but usually consisting of a white mark on subcostal side with a small proximal and a larger distal posterior projection, between which are two rather faint spots. Following this an irregular line across cell end. White discal marks as above, the first line yellowish-white, the sub-marginal lines much accentuated, the most proximal one being widened into sub-triangular spots towards apex.

H.w. with a conspicuous white basal band extending along costa nearly to middle of its length, followed by two rather well-defined white bands. These are much more regular and less broken than in agatha. Discal band as above. First pale line well developed and yellowish white. Sub-marginal lines similar to those on f.w., the most proximal being expanded into subquadrate spots."

NEPTIS BARNSI Eltr. Expanse 55-60 mm. Congo River to Semliki Valley. Kisumu.

"This species closely resembles seeldrayersi Auriv., from which it may generally be distinguished by the obsolescent character of the streak in f.w. area 4, and by the fact that the pale line on f.w. immediately distal to the discal markings is deeply arched (distally convex) between the nervules . . . . ."

NEPTIS ROGERSI Eltr. Rabai. Expanse about 50 mm.

"At once distinguished from agatha and seeldrayersi by the small spot in f.w. area 4, whilst they differ from barnsi in the straight formation of the f.w. discal line bordering on the large white spots. Also in the much narrower basal costal band and in the pure white markings of the underside."

NEPTIS TRIGONOPHORA Btlr. East and South Africa (Rabai to Pondoland).

"Expanse 45-50 mm. Sepia-black with white markings. F.w. cell without white dots, but sometimes with vestiges of a longitudinal streak. An inner marginal patch in 1a and 1b, followed by two spots in 2 and 3 slightly separated distally. In 4 a very small spot distally placed, and in 5, 6 and 9 three white spots distally separated, the third very small and streak-like. A pale discal line following the contour of the discal spots. Three delicate but usually well-defined sub-marginal lines.

H.w. with a white discal band from inner margin to area 7, straight proximally and very slightly indented distally at nervules. This followed by a pale discal line and three, sometimes four sub-marginal lines, the innermost of these brownish, the rest extremely fine and scaled with white.

Underside. F.w. very slightly white at base of costa, a curved clavate white mark in cell, its distal end often bordered by a delicate pale curved transverse line. Beyond this four rather ill-defined spots. White discal marks as above, followed by a well-developed pale line of a yellowish tinge and four white sub-marginal lines, the first about 1 mm. wide.

H.w. with a small narrow white streak at base of costa followed by two curved well-defined white lines. Discal band as above, followed by a yellowish line and four sub-marginal white lines. All fringes white between nervules."

NEPTIS NICOTELES Hew. Cameroon to Mombasa.

"Expanse 37-42 mm. Ground-colour sepia-black with white markings. F.w. with a white clavate mark nearly filling cell. An inner marginal patch in 1a and 1b followed by a more or less rounded patch of two spots in 2 and 3. A sub-apical patch of white in 4, 5, 6 and 9. In 4 this patch begins only just below nervule 5, so that the spot in that area is a mere streak. The discal marks followed by a pale line, beyond which are three delicate whitish sub-marginal lines. Fringes white between nervules.

H.w. with a discal white band from inner margin to area 6 about 5 mm. wide, almost straight on both edges, nervules thereon not or very little blackened. Discal and marginal lines as on f.w.

Underside. F.w. just noticeably white at base of costa. H.w. with a white streak at base of costa followed by two more on the dark ground of basal area. Other marks as above, but white sub-marginal lines much more accentuated.

This little species is apparently not common. It may be distinguished from others by the streak of white below and adjacent to nervule 5 in f.w."

#### NEPTIS NICOMEDES Hew.

Apparently occurs in three forms, nicomedes, quintilla, and puelloides, the distributions of which, as given by Eltringham, are "Uganda," "Entebbe," and "Kampala" (inter alia) respectively. There are no specimens of any form in the Museum; I quote from Eltringham.

#### NEPTIS NICOMEDES f. NICOMEDES Hew.

"Expanse about 38 mm. Sepia black with white markings. F.w. with a white mark in cell sometimes clavate extending from near base, widening and curving over downwards and outwards to end of cell, sometimes divided into two, the basal part remaining only as a dot. On inner margin a white mark in 1a and 1b, the marginal part rather wide and the inner edge forming a continuous straight line with that of h.w. discal band. A large continuous white discal band from 2 to 9, its outer and inner edges regularly curved, proximally concave, distally convex. Beyond this a pale line, faint or well-developed, followed by a narrow white line which is usually expanded into a spot near apex. Two delicate sub-marginal lines, more or less interrupted in area 3, especially beneath.

H.w. with a broad discal band about 5 mm. wide, both edges rather straight, and nearly parallel, extending from inner margin to 6, this followed by a pale line, and three sub-marginal lines.

Underside. The clavate mark in f.w. cell better developed than above, and sometimes with a faint pale transverse line beyond it. Base of costa faintly white. Other marks as above but marginal pattern whiter, and interruption of lines more obvious in 3, and often in 6.

H.w. with a conspicuous curved white band at base of costa, extending to middle of same, followed by two narrow lines, the lower rather longer than the upper. Other markings as above but marginal lines more developed.

NEPTIS NICOMEDES f. QUINTILLA Mab. Resembles the type form, but the spots in f.w. 2 and 3 are short and quadrate, so that the contour of the inner edge of the discal patch is materially altered. All stages of intermediates occur.

NEPTIS NICOMEDES f. PUELLOIDES Eltr. F.w. cell without any trace of white mark, and on underside the white in cell is reduced to a line on subcostal which curves sharply downwards and outwards at cell end. Just beyond this a transverse white line. The spots in f.w. 2 and 3 vary in length, so that the proximal edge of discal patch may be of the type form or may approach that of quintilla . . . ."

#### NEPTIS PUELLA Auriv. Cameroon. Congo. Uganda.

"Expense about 35 mm. Sepia black with white markings. F.w. without marks in cell. An inner marginal patch in 1a and 1b, its inner edge quite or nearly continuous with that of h.w. discal band. A large continuous discal patch from 2 to 9, the inner edge of which is either straight or convex. This patch not or but little reduced in width till just before reaching costa, where the spot in 9 is very small. The usual discal pale line followed by three fine whitish or bluish-grey submarginal lines, these interrupted only at nervules. Fringes white between nervules.

H.w. with large discal patch continuous and with smooth outlines followed by discal and sub-marginal lines as on f.w.

Underside. F.w. as above but white markings, especially sub-marginal lines much accentuated. Costa whitish at base. In cell a longitudinal streak on sub-costal, followed by a diagonal line across end of cell.

H.w. with large white curved band on costa from base to a point just above end of proximal edge of discal band, followed by two narrow whitish lines. Otherwise as above with pale lines accentuated, the discal line brownish-white.

This species may be distinguished by its small size and by the large continuous discal patch in f.w. The straight or convex proximal edge of this patch and the uninterrupted sub-marginal lines distinguish it from *nicomedes puelloides*."

NEPTIS MELICERTA Drury (Plate IV, Figs. 13-15). Expanse:—Male 40 mm. Female 50 mm. Sexes alike.

General colour black and white.

Male. F.w. Ground-colour sepia-black. Cell mostly taken up by a club-shaped white area, occasionally somewhat obsolescent at the base, and followed by a white triangle in area 4. A small white patch on inner margin in area 1a, a circular white patch, interrupted by the nervule, across nervule 3, and a white sub-apical bar composed as follows:—a small white dot in 4, a long white spot in 5, an irregular shaped mark in 6, and a very small quadrate spot in 9. Three pale, greyish-white sub-marginal lines, not interrupted by the nervules, and a fourth indistinct pale line curving over, parallel with the sub-apical bar. A series of indistinct dark spots between third and fourth lines.

H.w. Ground-colour as fore. A medium-width white bar crosses the disc of the wing from inner fold to costa, regular proximally and distally. Three sub-marginal whitish lines as fore, with indistinct dark spots internal to the third line

Underside. F.w. Ground-colour sepia-brown. White marks as above, but larger and more distinct.

H.w. Ground-colour as fore. White marks as above, but larger. Dark markings more distinct. A white streak on costa, followed by two indistinct greyish lines parallel to the discal bar.

Distribution. As far as my information goes, from Western Kenya (Kakamega) through Uganda to the Congo.\* It is a forest species.

NEPTIS STRIGATA Auriv (Plate IV, Fig. 16). Expanse 50 mm. Sexes alike.

General colour black and white.

Female. F.w. Ground-colour sepia-black. A club-shaped white mark in the cell. A large white patch on inner margin, reaching nearly to nervule 2. An ovoid patch in area 2, contiguous with a similar, smaller patch in 3. A large white semi-circular area, not interrupted by nervules, from costa to vein 4. Three submarginal white lines follow the contour of the wing from hind angle to apex, the most proximal much widened towards the apex, and curving somewhat inwards.

H.w. Ground-colour as fore. Middle third with a broad white bar, regular proximally, slightly indented by nervules distally. Sub-marginal white lines as fore

Underside. F.w. Ground-colour sepia-brown. White markings as above, but larger.

<sup>\*</sup>There is a specimen in the Coryndon Memorial Museum collection labelled "Marsabit" and I have taken this species at Kwale in the Coast Province of Kenya.—Editor.

H.w. Ground-colour as fore. White markings as above, but larger. A large white streak on costa, and two curved greyish-white lines cross the basal triangle, roughly parallel to the discal white bar.

Distribution. One specimen only, a female, in Museum collection, labelled N'tebi (? Entebbe), Uganda, Jackson, May/June, 1895.

NEPTIS NYSIADES Hew (Plate IV, Fig. 17). Expanse 50 mm. Sexes alike.

General colour black and white.

Male. F.w. Ground-colour sepia-black. Cell with three small white streaks or spots. A white patch on inner margin, reaching half-way through area 1b. An angled sub-apical bar from 2 to costa, but not invading costa, and indented by nervules distally, particularly by nervules 3 and 4. An ill-defined whitish line runs distal to and parallel with this patch, from 2 to 6, followed by a row of indistinct dark spots. Three fine white sub-marginal lines, just interrupted by nervules, follow the contour of the wing from 1b to apex, the inner one of these much widened and curving inwards at the apex.

H.w. Ground-colour as fore. Middle third with a wide white discal bar crossing the wing, regular proximally, indented distally by nervules. Sub-marginal markings as in f.w.

Underside. F.w. Ground-colour sepia-brown. All white markings as above, much enlarged and less interrupted by nervules. Cell markings appear as two transverse streaks.

H.w. Ground-colour as fore. White markings of above present, much enlarged and more regular, less interrupted by nervules. Costa broadly white. Basal triangle with two ill-defined transverse whitish streaks. A further ill-defined whitish line is found distal to and parallel with the white discal bar.

Distribution. As far as my information goes, throughout Uganda to the Belgian Congo.

(To be continued).