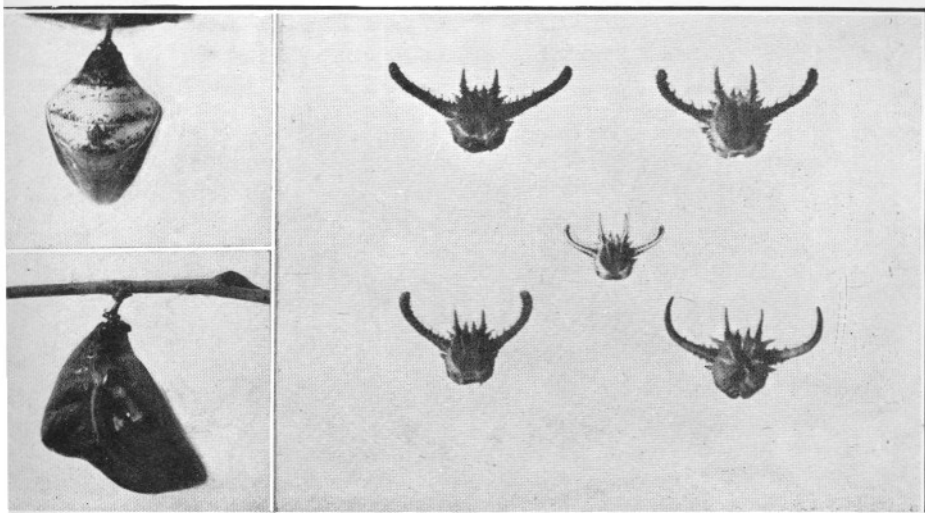


A

B



C

D

PLATE XLI.

A. *Euxanthe e. ansellica* var. *radiata*.

B. and C. Dorsal and lateral view of *Euxanthe* pupa.

D. Larval heads of

Fig. 1. *Euxanthe e. ansellica*. Fig. 4. *Euxanthe wakefieldi*.

Fig. 3. *Euxanthe wakefieldi* (3rd instar).

Fig. 2. *Euxanthe c. ansorgei*. Fig. 5. *Euxanthe tiberius*.

THE BUTTERFLIES OF KENYA AND UGANDA.

PART VI.

By

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

and

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

FAMILY NYMPHALIDÆ.

SUB-FAMILY NYMPHALINÆ.

INTRODUCTION:

The *Nymphalinae* form one of the largest subfamilies of butterflies, and are usually regarded as representing the highest development of the order *Lepidoptera*.

Although they include some small species, they are for the most part medium or large butterflies. They are active insects and some species are remarkable for their powerful flight. A large proportion are of brilliant colouring and some are amongst the most beautiful of all known butterflies.

The larger number of the species haunt woodlands or forest country and comparatively few are found in the open. West Africa is much richer in number of species and individuals than East Africa.

The perfect insect is characterised by the fore-legs in both sexes being imperfectly developed, but there is a good deal of diversity both in appearance and habits. The larvæ are generally armed with branched spikes and the pupæ are angulated, but *Charaxes* and its allies have smooth larvæ and pupæ, except that the head of the larvæ has conspicuous horns.

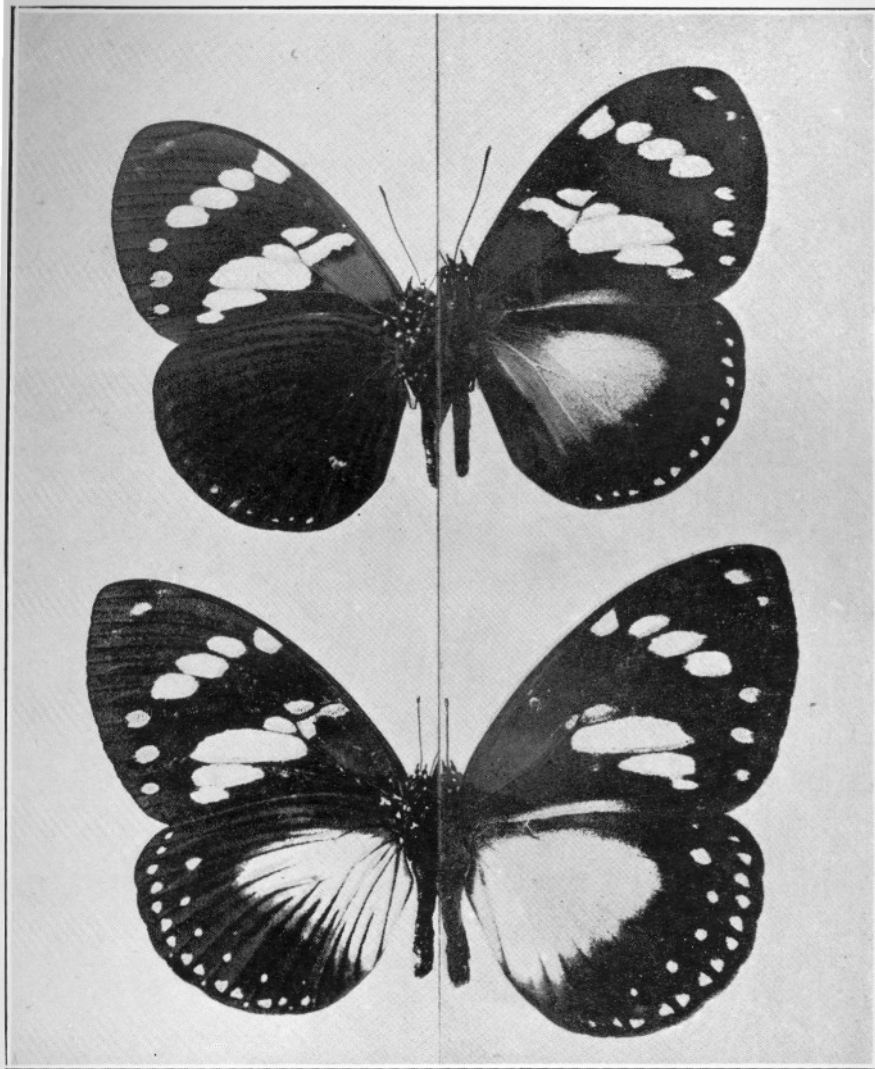
Some of the species are well known for their migratory habits, e.g., *Atella phalantha*, *Pyrameis cardui*, *Hypolimnas misippus*, and *Crenis natalensis*. *H. misippus* has been observed in considerable numbers far out in the Atlantic and has established itself in South America during the last century.

Some genera, e.g., *Hypolimnas* and *Pseudacraea*, include some of the most remarkable known examples of Mimicry, and others such as *Precis*, the best known examples of diverse seasonal forms.

The butterflies of many genera are in the habit of basking with out-spread wings in the full sunlight and the males of many species are attracted by strong-smelling substances such as the excreta of carnivora and also by the fermenting exudations found on certain trees and to damp spots near streams.

The numerous species have conveniently been divided into tribes as follows:—

- Argynni*.—These include *Lachnoptera*, as endemic genus; *Atella*, common to the Oriental region; and *Argynnis*, characteristic of the Holarctic region of which a few species occur at high elevations.
- Vanessidi*.—Include the cosmopolitan *Pyrameis cardui*, *Antanartia*, with its nearest allies in South America; *Precis*, found throughout the tropics, including the wonderful examples of seasonal variation notably *P. sesamus* and *P. antilope*; *Salamis*, an endemic genus of great beauty; and *Hypolimnas* or *Euralia*.
- Eurytelidi*.—Also found in the Oriental Region though there is one endemic genus, *Neptidopsis*. This genus may be recognised by the swollen sub-costal nervure, a character unique amongst the *Nymphalinae*.
- Eunicidi*.—With a single endemic genus *Crenis*, all the other members of the tribe being South American.
- Neptididi*.—With many species which are very difficult to differentiate. This genus has two or three European species but is most developed in the Oriental region.
- Nymphalidi*.—With several endemic genera and many species chiefly West Africa. The great majority of the species of this tribe inhabit dense forest and fly rapidly close to the ground. The larvæ have long branched and feathered spines on the sides of the body so that they are difficult to see on the food plant, and it is only of recent years that they have become known. One abundant species, *Hamanumida dædalus*, haunts sunny paths in open places, but it still preserves the habit of flying rapidly just above the ground and frequently settling with out-spread wings. The genus *Pseudacræa* has generally been included in this tribe but its habits are quite different as it has a floating flight like a *Neptis* and now that its larvæ are known, they also differ markedly from others of the tribe.
- Marpesidi*.—Including the single genus *Cyrestis*, common to the Oriental region though most of the tribe are South American.
- Charaxidi*.—These include two endemic genera, but the bulk form the genus *Charaxes*, common to the Oriental region. Many of the species are large insects of very powerful flight, much addicted to settling on the branches of trees, though they often bask. They include some of the most beautiful butterflies in the country and one section of the genus has butterflies with highly ornamented undersides, the varied colours of which are most harmoniously blended, reminding one of a Persian carpet. The species of the endemic genus *Charaxes* also settle on the branches or trunks of trees generally head downwards.



A.

PLATE XLII.

B.

Under and Upper surfaces of ♂ and ♀ *Euxanthe trajanus* Sb. sp. Nov.

CHARAXIDI.

GENUS *EUXANTHE*.

The members of this genus are characterised by their large size, very rounded wings, especially in the males, their brilliant colouration, and characteristic larvæ and pupæ.

They are divided into two groups:

- A. Base of the fore-wing above with a large triangular red-brown area; cell of hind-wing closed; F.-w cell almost triangular, its posterior angle not or but little more produced than the anterior.
- B. Base of fore-wing above without red area. Cell of h.-w. open; cell of f.-w. obtusely rounded at anterior end and long produced at the hinder angle so that it is semi-circular in shape (Seitz).

A. *EUXANTHE TRAJANUS*. Sub.-sp. Nov. Pl. XLII., fig. a & b.

Expanse: Male 90-98 mm. General colour black with white and cream spots.

F.-w.: Basal $\frac{3}{4}$ of cell and basal angle of 2, red-brown; distal $\frac{1}{4}$ of cell, pale creamy yellow proximally shaded with black; rest of wing black, carrying white and creamy-yellow spots as follows: three, sometimes four, submarginal at the apex in 5, 6 and 7; a series of four large oval white spots in 4, 5, 6, 7, forming a broken sub-apical bar, followed by three smaller submarginal white spots in 1b, 2 and 3; a yellow-shaded white bar continuous with the light spot at the apex of the cell, crosses the wing towards the hind angle, is made up by a series of spots, one each at the bases of 3 and 4, a large rectangular mark towards the base of 2, two spots in 1b, the upper large and situated about mid-point of upper edge, the other much smaller situated below and distal to the one above. Area 1a has a linear mark of blue-grey scales increasing in width from the base to just beyond mid point.

H.-w. black, with a submarginal row of double white spots from 1c to 7, with an occasional extra spot inset in 7, the central area of the wing with a triangular greyish-white patch shaded yellow in the middle, bounded below by the lower edge of 1c and above by the upper margin of 5.

Underside: F.-w ground leaden-brownish-black; markings as above with the sub-apical dots omitted, but an additional minute white dot at base of costa. H.-w blackish-brown with a suffusion of red-brown scaling especially towards the base of the wing and costa; pronounced black internervular and nervular rays; with a varying number of very small white dots usually in 1c to 3.

FEMALE:

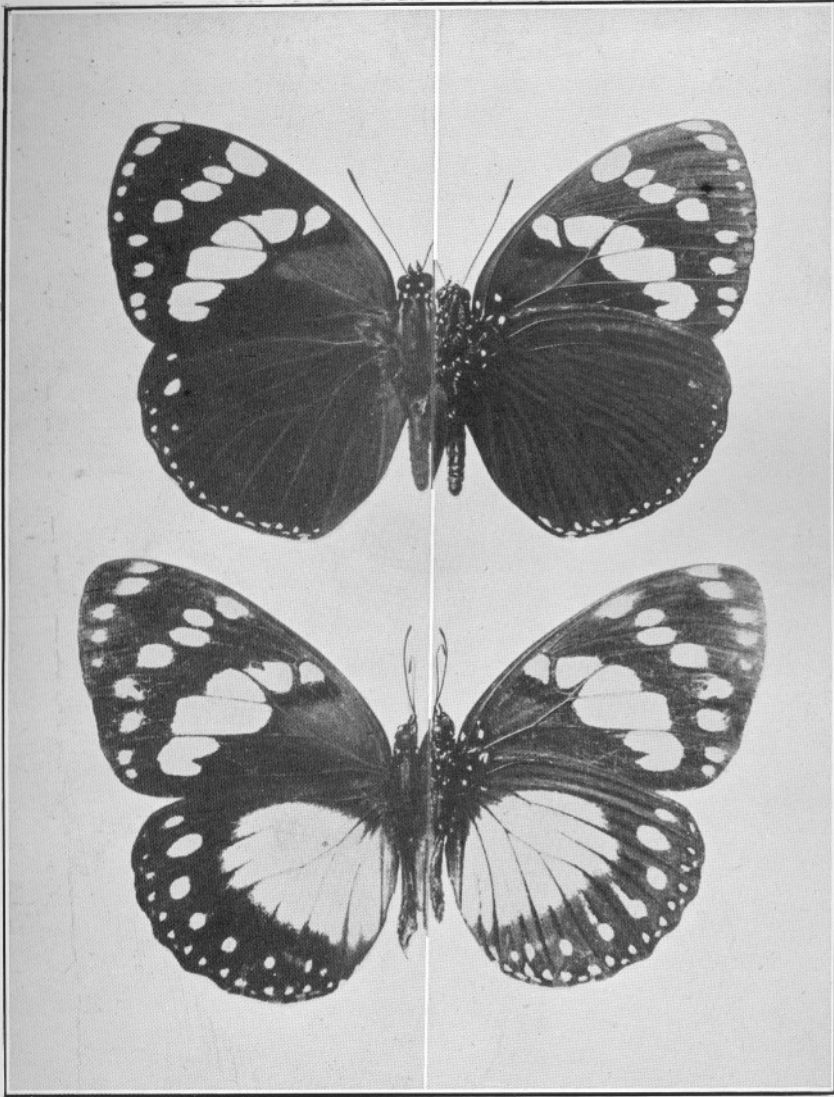
Expanse 116 mm. Upperside: F.-w. somewhat similar to the male, but ground colour less black, while the light area at the apex of the cell represented by a few white scales. H.-w. Markings as in the male but the central patch creamy-yellow shaded at the anal angle with rufescent scales; submarginal row of double spots larger, and internal to these, a second row of single larger spots on the inter-nervular rays.

Underside: F.-w a dull replica of above, but with only one sub-apical white spot; a marked white line at the apex of the cell and a black area at the base carrying a white dot.

H.-w.: Ground colour leaden-blackish-brown, with black nervures and inter-nervular rays; pale patch of above represented as a white area distally bordered with rusty scaling; base of wing rufescent, carrying two white spots in 9 and 8. The white spots of above are represented, but of reduced size, while in addition there are small white dots almost on the margin, internervularly.

EARLY STAGES:

The eggs of this species resemble to a marked degree those of the genus *Charaxes*, and in this as also in the form of the larva and pupa we have evidence of the relationship of the two genera. The egg is of the large spherical type, slightly flattened above and strongly fluted with a slight depression at the mid point. When newly deposited it is yellow, but within forty-eight hours it becomes slightly brownish above, turning a reddish brown a few days before hatching and then quite black just before the larva emerges. They are laid on the leaves of saplings of N'koba, a timber tree of considerable value in Uganda. The egg stage lasts eight to ten days. The newly-emerged larva is brownish-olive, with a black head, the whole surface finely papillated. This colour is retained until the second moult when it changes to a dull olive; the head at this stage takes on the characteristic shape peculiar of the *Euxanthe* group (v.p.) In the final stage the larva is a bluish-olive green above, laterally bordered with a whitish-yellow wavy spiracular line, the third to ninth segments strongly keeled so as to form a frill along the side of the body. The dorsum of the sixth segment carries a raised ovoid yellow spot while the eighth has a small round one. The anal segment has a markedly bifid tail. The head is almost circular in outline carrying along the upper arc eight spines or horns, in pairs; the outermost pair arise just before the junction of the lateral quadrants with the upper, they are long and gradually taper to a point, yellow at the base and black tipped, are directed outwards and slightly upwards for about two-thirds of their length then turn up abruptly and at the tips are inclined backwards; the next longest



A.

PLATE XLIII.

B.

Upper and Under surfaces of ♂ and ♀ *Euxanthe tiberius*.

pair arise at the midpoint in the halves of the upper quadrant, they are uniformly black, slender, straight, and sharply pointed; between these two are two short black spines and between them and the lateral curved horns, are two short yellow spines. All carry sharp lateral spikes, those of the lateral horns are mostly on the upper and posterior sides. Below the outermost horns and slightly posterior to the facial disc are two spines and a series of tubercles. The actual mouth-parts are black. The ground colour of the disc is olive-yellow with olive-green lines radiating from the centre towards the bases of the two long pairs of horns, and on either side of the mouth.

The larval stage lasts 20 to 30 days (captive specimens). The pupa is olive green, strongly ventricose and suspended from a stalk-like cremaster. The head case is bluntly bifid; the dorsum of the thorax keeled slightly, while the second and third abdominal segments are dorsally produced into two pronounced protruberances; each segment except the first bears a reddish spiracular spot; the lateral angles of the wing scutæ are well developed. The cases themselves are decorated with white enamel-like wavy markings especially at the bases of the wings. There are two transverse white lines on the dorsum of the thorax, while a white dot ornaments each lateral angle of the wings.

DISTRIBUTION:

The Uganda form of *Euxanthe trajanus* appears to be a rare insect and has only been taken by us in two localities in Uganda. Not more than a dozen specimens are known. It differs from the typical West African form.

EUXANTHE TIBERIUS, Smith. Pl. XLIII., figs. a & b.

Expanse: Male, 92-100 mm. General colour brown-black with light markings in forewing. Sexes unlike.

F.-w.: Ground colour black; upper half of base of wing red-brown, thus almost filling the whole of the cell; distal end of cell, black with a lemon yellow spot in upper corner.

A sub-apical row of white spots continued sub-marginally extends from 8 to 1b, that in 1b is doubled and those in 2 and 3 are set slightly internal to the line of the remainder. A sub-apical bar of four pale lemon-yellow spots crosses the wing at mid point of 7 and 4. This is followed by a slightly curved mid-alar bar composed of interrupted spots, pale lemon-yellow in colour extending from beyond the apex of the cell towards the hind angle, occupying the base of 4, 3, sub-basal in 2, and the proximal end of the distal third of 1b.

H.-w. uniformly brownish black with a violet bloom, with a sub-marginal row of small double spots from 2 to 7, areas 5 and 6 with an extra, larger inter-nervular spot set internal to the sub-marginal ones.

Underside: Ground colour blackish scaled with rusty-brown distally, pattern as above, with an additional white spot at the base of the cell which area is blackish. H.-w. uniform deep rusty-brown with black scaling along the veins and internervular rays; sub-marginal spots as above with transverse white internervular marginal streaks.

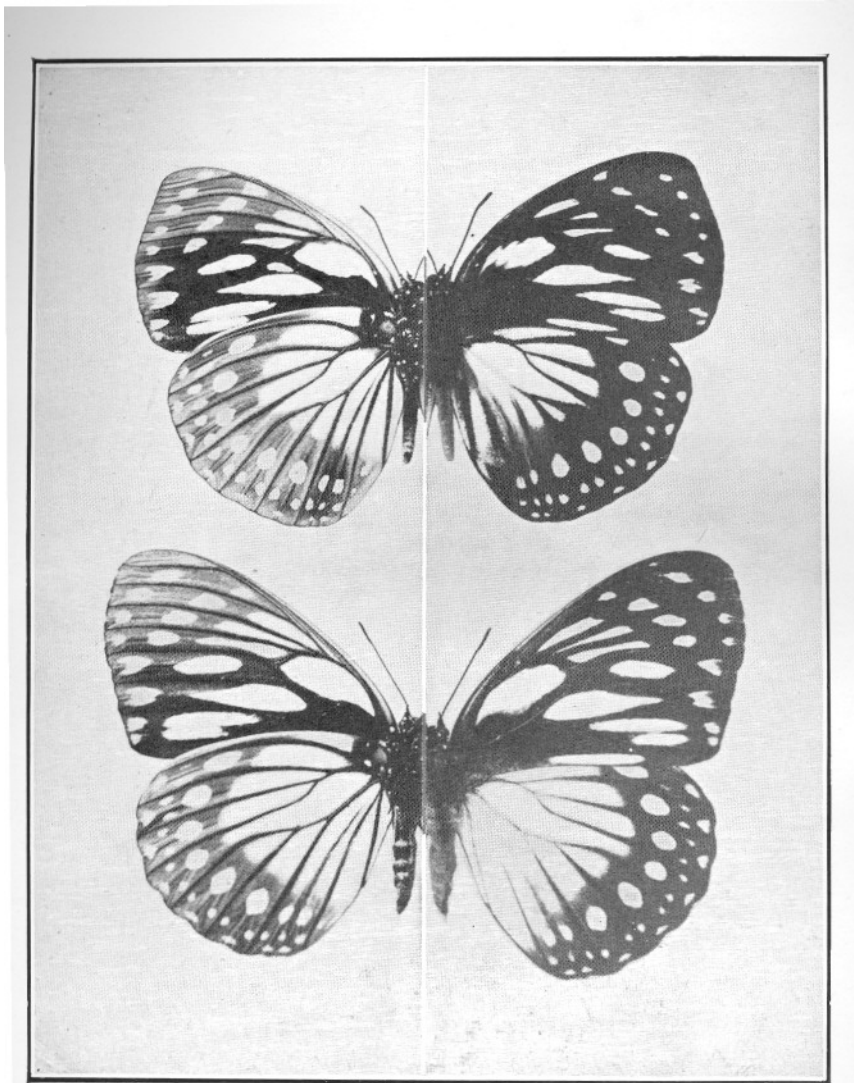
FEMALE:

Expanse: 110 mm. **F.-w.:** Pattern of the fore-wing as in the male, but the spots are white and larger. **H.-w.** black with a large white discal area which reaches the inner margin; the black border contains two rows of white spots, the inner ones larger and placed internervularly the outer sub-marginal and small, two to each cellule. The margin itself carries white internervular streaks.

Underside: F.-w. as above but ground colour rusty especially towards the apex; the extreme base of the cell is black and carries a white spot; the base of the costa is black with a white spot. **H.-w.:** Markings as above, but the ground colour is red-brown intersected with black veins and internervular rays to the margin of the white patch.

EARLY STAGES:

The eggs of *E. tiberius* are laid singly on the leaves of a forest tree not yet identified, but known to the Baganda as "Muziru." When first deposited they are creamy, but develop a brownish ring within 48 hours and as development proceeds the brown colour extends to the entire base, subsequently becoming black just before the larva emerges. The egg is a slightly depressed sphere with a central depression from which fluted rays extend outward to form a star. The young larva up to the first moult is olive brown turning more greenish at the next instar, at which time the head, which was originally black, becomes olive and surmounted with short spines. At the third and fourth instar, the ground colour is olive-brown with olive-green patches on the dorsum of the third to ninth segments; the lateral aspect of these segments are expanded in the form of a frill which is pinkish or red in colour. Below this wavy line the body is ochreous pink; the forelegs brown, and the suctorial ones ochreous. The 6th and 8th segments are dorsally ornamented with raised crescentic white patches. The anal segment carries a flattened bifid tail. The head piece is characteristic, very like that of *E. trajanus* but the long lateral horns taper more abruptly and are not inclined backwards at the tips. The posterior aspect is black; the anterior is yellow at the base shading to orange up to the bend, while the tip is jet black. The central long pair of horns are slender, finely pointed and black anteriorly, green at the back. The short spines of the interspaces are orange. The facial disc is ochreous-orange with olive-green markings arranged as follows: Four lines arise from the



A.

PLATE XLIV.

B.

Under and Upper surfaces of ♂ and ♀ *Euxanthe crossleyi ansorgei*.

centre of the disc and pass upwards, one to each of the four uppermost horns, two short lines are directed towards the long lateral horns but do not reach their bases; a green spot is however present at the base of these horns. A green transverse line is present above the black mouth parts surmounted by a brown dot at the extremities. The spines on the posterior surface of the margin of the facial disc are orange at the bases and black tipped; the longest of these is branched.

DISTRIBUTION:

This species is found in the forested areas of the Coastal belt, and has recently been taken by us in the Meru forest near Kenia. This distribution is peculiar and it would be of great interest to know whether the species occurs in the forests along the Tana River. Rogers has taken *E. tiberius* in some numbers at Rabai, but it cannot be called common. It is entirely a forest species keeping to the dense areas where it is difficult to detect unless in flight. It usually settles on some sapling under the shade of large trees. Its flight is rather slow and not of long duration. Females are much rarer than males, and even more sluggish in their movements.

EUXANTHE CROSSLEYI ANSORGEI, Rothsch. Pl. XLIV., figs. a & b.

Expanse: Male, 90-95 mm. General colour black with yellow-green markings.

F.-w.: Ground colour black slightly rufescent at the base of the costa. Markings as follows: A series of five small sub-apical white dots extending from 8 to 4 followed by two irregular spots set more internal in 2 and 3; a double sub-marginal spot in 1b. A series of four somewhat linear marks, yellowish-green in colour cross the apex of the wing from 8 to 4; internal to these are four larger linear yellowish-green marks distal to the apex of the cell; a further four large linear or irregular shaped marks cross the wing from the distal half of the cell to the posterior angle; a long linear mark of the same colour fills the mid-third of 1a.

H.-w.: Discal area yellow with a greenish tinge, this invaded by the black of the border extending up along the veins; the black border ornamented with three rows of spots as follows: a sub-marginal series consisting of somewhat triangular white marks, duplicated in 1c, at mid-point between the veins; a second row of twin spots in each internervular space follows the contour of the wing; this in turn is followed by a third row of large ovoid lemon-yellow spots, double in 1c, placed parallel to the second row and at mid-point in each internervular space from 1c to 7. The abdomen is tawny-orange in colour.

Underside: F.-w.: Distribution of spots as above; distal half of wing ochreous-brown, proximal, black.

H.-w. : Light marks as above; veins black-scaled and prominent; base of wing tawny; border of wing ochreous-brown.

FEMALE:

Expanse 108-110 mm. Somewhat like the male, but black ground less intense; light markings similar in distribution but larger and pale yellowish-white.

EARLY STAGES:

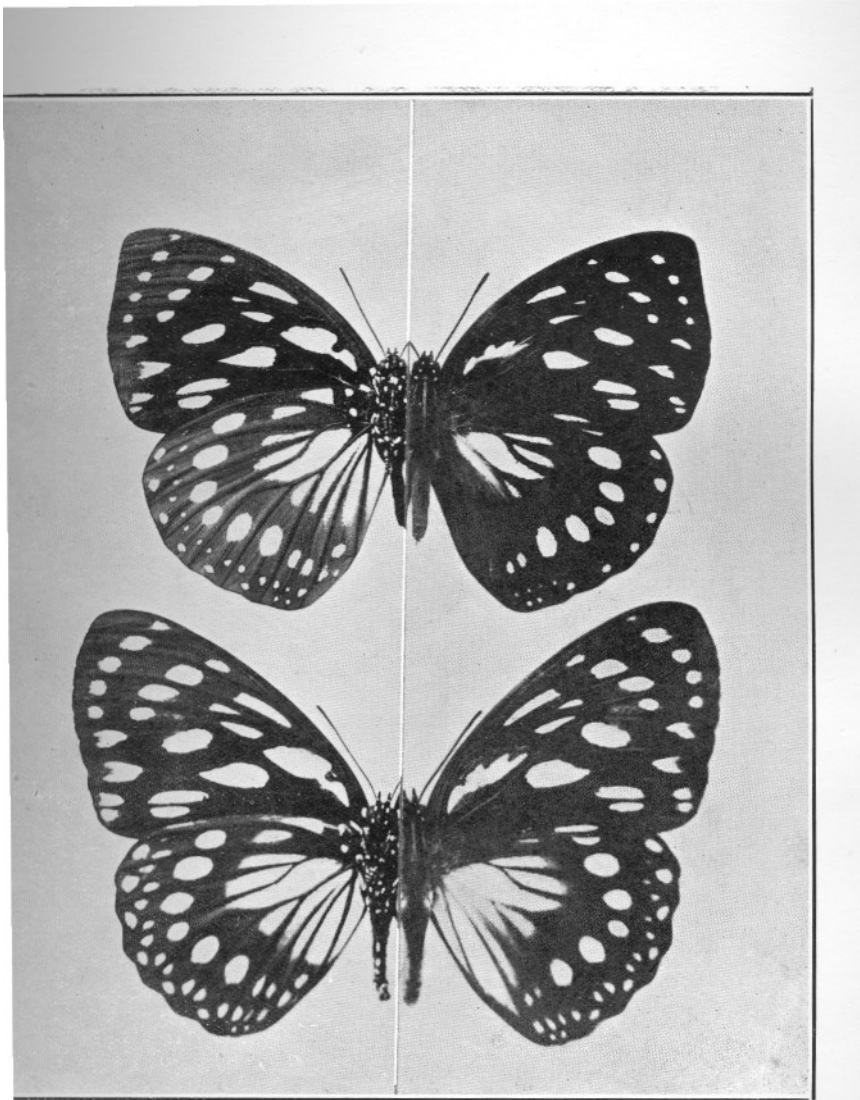
The eggs of *E.c. ansorgei* are almost spherical with a slightly flattened area on top, faintly fluted. The surface is semi-matt and creamy in colour. As development proceeds the egg turns brown, first at the rim and then throughout the entire surface. The eggs are laid on the mature leaves of a forest tree—known to the Baganda as N'kuzanyana. The larva is at first olive-brown with a black head. It becomes olive-green at the first moult with a strongly bifid tail, while the head is ornamented with short spines arranged as in the mature insect (q.v.) In the final stage the larva is sage green with two raised yellow oval marks on the sixth and eight segments; the spiracular line is prominent and pinkish-yellow in colour, undulating and forming a frill along the side of the body. The underside of the body is greyish-brown. The head-piece consists of a disc surmounted by four pairs of horns; the lateral pair, 10 mm. long, arising from the upper end of the lateral quadrants are long and cylindrical with a slight bulbous end, finely papillated all over and spined on the posterior surface. They are brown in colour and are directed outward and upward for two-thirds their length, then curve inwards. The next and central pair are short, laterally spined and yellowish in colour.

The intervening pair are 5 mm. long, straight, and taper abruptly to a point, heavily spined basally and reddish brown in colour. The ground colour of the disc is dull green, with a marginal border of yellow widest at the bottom. Mouth parts brown. Two yellow stripes form a V in the centre of the face.

The pupa is large with laterally expanded wing-cases; the shoulders are prominent while the abdominal segments, especially the third, project in the form of a hump. The cremaster is stalked and supported at the base by two series of rounded protruberances. The ground colour of the pupa is olive-green ornamented with wavy enamel-like white markings, especially on the wing scutæ.

DISTRIBUTION:

Ansorge's *Euxanthe* ranges through the forests of Uganda to those of the Nandi Escarpment. It is entirely a forest species which keeps to the denser parts, frequenting the shady hollows frequently in



A.

PLATE XLV.

B.

Under and Upper surfaces of ♂ and ♀ *Euxanthe eurinome ansellica*.

the vicinity of standing water. The males are commoner than the females and come to bait or damp mud in much the same way as do Charaxes.

Both sexes enter into the *Tirumala petiverana* mimetic association.

EUXANTHE EURINOME ANSELLICA, Butlr. Pl. XLV., figs. a & b.

Expanse: Male, 90-96 mm. General colour black with pale green markings. Abdomen orange tawny.

F-w: Velvety black, with slight rufescence at the base of the costa. The size of the spots somewhat variable but position constant. The average specimen is as follows: A sub-apico-marginal series of single spots duplicated in 1b extending from this cellule to 8, that of 2 considerably set in from the line; a short series of four passing obliquely through the cellules 4-7, followed by three linear marks beyond the apex of the cell, below and distal to which is an ovoid spot in 3; an irregular spot with dentitions on the anterior edge is present in the cell followed by a pear-shaped spot sub-basal in 2, followed by a double linear streak at distal end of mid-third of 1b, with a linear mark at mid-point in 1a. All spots pale green, the sub-apical one almost white.

H.-w.: Ground colour velvet black slightly rufescent at the costa; basal patch pale greenish occupying most of the cell, the bases of 2, 3, 4, and 5, and 1c; the veins heavily emphasised by black scaling. A row of large ovoid pale green spots traverses the black border at about mid-point, followed by a sub-marginal series of triangular inter-nervular spots of the same colour. Very often there is a series of very small double spots internal to the sub-marginal series.

A variety of male *F. RADIATA*, *VAR. NOV.* (Pl. XLI., fig. a) has the area of 1a and 1b chestnut, with an extension of this colour between the basal green and the first series of spots; and has the sub-marginal row larger than normal and connected with the first row by graduated lines of green.

Underside: Male and female. The ground colour is ochreous-brown with the central area of the fore-wing blackish shaded with chestnut along the margins. The under surface of the female is more greyish-brown. The spots in both sexes are more pronounced and larger than above.

FEMALE:

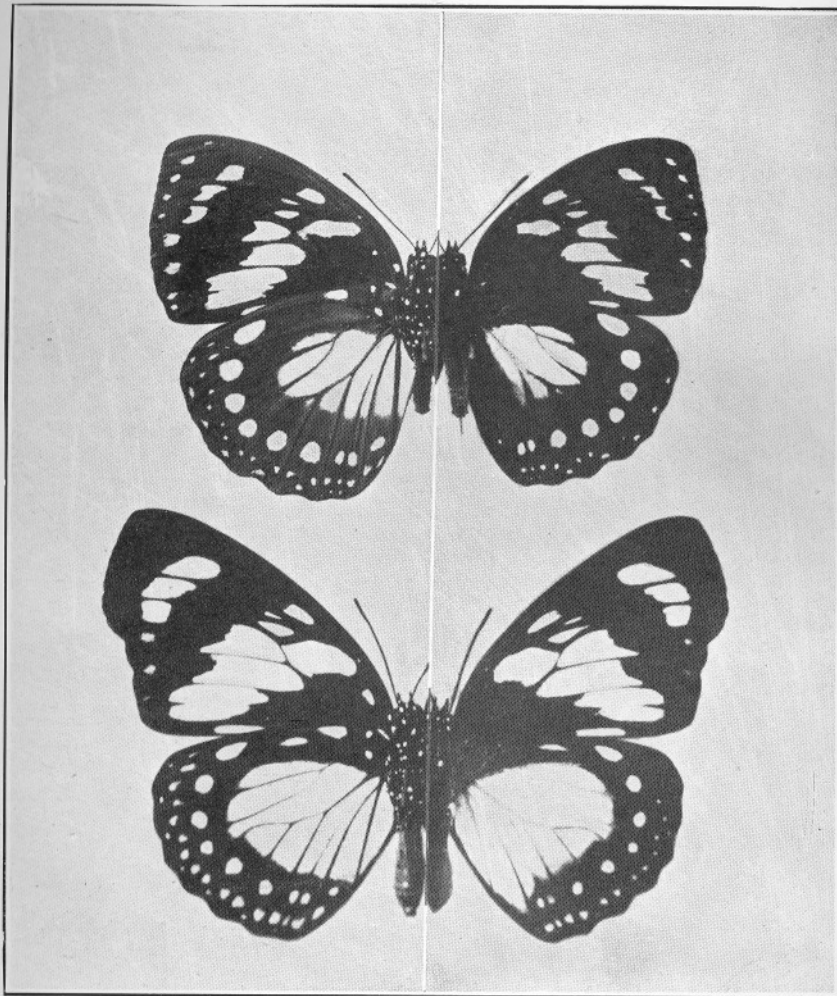
Expanse 110 mm. Very like the male but the ground colour not so black, more brownish, the pale spotting larger and more bluish with a greater degree of bluish scaling in the fore-wing cell and most of 1a, 1b, and 1c in the hind-wing white or very pale blue. Upper surface of abdomen dark brown, underside tawny orange.

EARLY STAGES:

The eggs of this species are laid singly on the upper surface and near the mid-rib of the more mature leaves of the forest tree *Nkuzanyana* (Luganda). They are bright yellow in colour, 2 mm. in diameter, resembling those of other species of *Euxanthe*, being almost spherical with the top depressed and markedly fluted from the central dimple. In two days a brown mark develops at the rim of the depression, and the whole egg gradually turns black, the larva hatching out in from seven to ten days. It devours the egg shell before commencing to eat any green food. When newly emerged it is pale olive with a black head, which under a magnifying glass appears covered with fine papillæ. At this stage the body is immaculate but as the various instars are completed the body becomes greener and at the third moult white spots appear on the sixth and eighth segments. The head turns from black to brown and then to green. After each moult the horns are whitish but darken to a grey-brown. At all stages the larvæ prefer the mature leaves to the young shoots. The adult larva has a smooth, broad, somewhat flattish body, sage-green in colour with two raised enamel-like white spots on the segments afore-mentioned. These spots are oval and placed transversely; each spot has two black dots placed side by side in its centre.

The spiracular or body line is white and projects in a wavy line along the length of the body in the form of a frill. The anal end carries a strongly bifid tail which is white. In some specimens the horns, tail and frill are rusty red. The head-piece is circular in outline and covered with fine papillæ. A central groove, commencing between the two median spines passes downwards, and at about the centre divides into two, enclosing a triangular area just above the mouth parts. The ground colour is sage-green. From the upper end of the lateral quadrants there arises on each side a strong cylindrical horn with a slightly thickened end, greyish white in colour, covered with fine papillæ and with spines on the posterior and outer surfaces. These horns are 9 mm. in length and are directed out and up and slightly inwards. Two other strong horns arise from the top of the disc; these are broad at the base but taper abruptly to a fine point. They are 4 mm. long and carry lateral spines. Between these two and between them and the outer pair, there are short sharp branched spines. The edge of the facial disc is white from the base of the lateral horns to above the mouth. Two convergent lines pass from the upper horns to just above the mouth.

The pupa has a very deformed appearance, due to the prominent dorsal hump of the second and third segments, particularly the latter; the thorax is also prominent dorsally. The angles of the wing shoulders project. while the wing cases are flattened and extended



A.

PLATE XLVI.

B.

Under and Upper surfaces of ♂ and ♀ *Euxanthe wakefieldi*.

laterally. The colour is dark green, with a glazed surface ornamented with white marbling on the wing cases, the thorax and the head.

DISTRIBUTION :

This species is confined to the forests of Uganda from Toro to the Elgon district. It is quite plentiful in the deep shady recesses but the males will come out into the open when attracted by bait such as leopard droppings, etc. They are slow of flight and display themselves in the patches of sunlight which penetrate the gloom of the forests. The males are fond of settling on the festoons of dried creepers in the forest clearings.

Both sexes, especially the female, bear a strong likeness to their model *Tirumala petiverana*.

EUXANTHE WAKEFIELDI, Ward. Pl. XLVI., figs. a & b.

Expanse: Male, 80-90 mm. General colour black with green-blue markings. Sexes unlike.

F.-w. velvety-black, with a series of pale greenish blue spots (which when viewed from certain angles appear white) arranged as follows: a sub-marginal row of small dots placed internervularly in cellules 2 to 8, sometimes only present in 2 and 3; a sub-apical row of angled spots in 4, 5, and 6, sometimes with a small dot under the costa; a series of irregularly shaped marks placed obliquely across the wing from the sub-costal mid-point to just before the hind angle, divided up by the black-scaled veins. Apex of cell with a large spot, with occasionally a small dot at the base.

H.-w.: Black, tinged rufescent at the base of the costa; a large bluish white area fills most of the cell, the bases of 2, 4, 5, and 6. The black border carries three rows of green spots; very small sub-marginal internervular, internal to which are double spots in 1c, 2 and 3; and a row of large ovoid ones following the contour of the wing from 1c to 7, that in 1c double and small.

Underside: The ground colour of the F.-w. is blackish at the base shading to rusty along the costa and the apex. Spotting similar to above with two additional spots at the base of the costa and cell.

H.-w.: Ground colour rusty brown; spotting as above but more pronounced, with extra white spots in 8 and 9. Abdomen tawny orange.

FEMALE:

Expanse 100-105 mm. General colour black and white.

F.-w. black with very pale bluish white or white markings similarly placed to those in the male, but all spots larger; the sub-apical series is usually missing.

H.-w.: As in the male but hind patch more extensive and reaching almost to the inner margin. the second row of spots are larger and more pronounced and extend to area 8, whilst the sub-marginal series is often missing or obsolete. In many specimens the large spot in the forewing cell is continuous with the basal one.

Underside: Very like above but the bases of the costa of fore and hind wings chestnut; area 7 carries three white spots while 8 has two and 9 one.

EARLY STAGES:

The egg of this species does not differ from that of other *Euzanthe*. The food plant is known to the Baganda as M'ziru—a forest tree which is plentiful at the coast and extends to Mt. Kenia. In the first two stages the larva is similar to that of *E. e. ansellica*, but after the second moult the larvæ can be distinguished by their heads. In the final stage the larva is sage green with a red spiracular line heavily serrated on the lower edge, shading to white along the upper edge, and outlined with a fine line of black. The strongly bifid tail is white; while the sixth and the eighth segments are each ornamented dorsally at their anterior edge with a raised oval patch reddish in colour, outlined with black, each carrying two green dots set transversely.

The head is oval in outline with a serrated margin, carrying on its upper half four pairs of horns; the outer pair are long (10 mm.), cylindrical for the greater part of their length, becoming bulbous at the end. The entire surface is heavily papillated, and on the upper and posterior surfaces there are three sharp spines; in colour these horns are brownish, with the papillæ ochreous. They are directed outward and slightly upwards, and at the point of expansion are inclined more vertically upward. The second pair are short spines with lateral branches; the third are 5 mm. long, black at the base and brown to as far as the tip; they are laterally spined and covered with papillæ; the central pair are short and heavily branched. Below the outermost pair there are two much branched spines directed backwards. The facial disc is centrally grooved; sage green in colour with a wide yellow marginal border, widest above the mouth. From the bases of the third pair of horns ochreous lines pass down in a V to just above the mouth. The mouth parts are blackish-brown. The first thoracic segment is dorso-anteriorly red. The anterior-lateral aspect of segments 1 to 6 is crimson. The forelegs are ochreous while the suctorial ones are pink. The ventral surface of the insect is ochreous.

The pupa is large and green in colour with a high glaze. The inferior surface is almost straight, but the dorso-thoracic segments are prominent and keeled, while the abdominal ones, especially the second and third, are protruded in the form of a hump. The wing

cases are expanded laterally and much angled. The cremaster is long-stalked and arises from a base of rounded knobs, four anterior, three lateral, on either side. The dorsal surfaces of the second and third abdominal segments are mostly enamel white in colour, while the wing scutæ are decorated with wavy lines of the same colour. The facial mask is white below. A diamond shaped white line outlines the thoracic segment.

DISTRIBUTION :

Wakefield's *Euxanthe* is common at the Coast and at Dabida, and it has recently been found to extend to the forests of Meru near Mt. Kenia. It is a forest species, but many examples find their way into the shady cocoanut groves where their slow flight and brilliant colour make them conspicuous. The males are fond of sailing about in some sunny forest clearing and should two appear in the same spot they immediately attack and chase each other until one is forced to retire.

When at rest they sit with their wings tight closed and owing to their peculiar marking are difficult to see, especially if the resting spot happens to be some brown dead creeper. The males are considered to be associated in colour with the mimetic group centred round *Tirumala petiverana*, while the females with their marked black and white pattern come into the *Amauris niavius* and *A. ochlea* association.