

PART 3.

BUTTERFLIES OF THE CHYULU RANGE.

A systematic list of the species taken by the Museum Expedition to the Hills. April-July, 1938.

By

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INTRODUCTION.

The following account of the Lepidoptera (Rhopalocera) taken by members of the Museum Expedition to the Chyulu Range, is mainly a systematic list of the species obtained.

At the time of the visit, April to July, 1938 (that is just toward the end, and after the long rains) insect life was remarkably scarce, and although systematic search was made over all portions of the hills from 3,000 to 7,000 feet, at no time were butterflies numerous. The material taken can be considered representative of the range for that particular season, but there is little doubt that insect life would be more plentiful just after the short rains, as it undoubtedly is on the surrounding plains, especially in the Kibwezi-Voi areas.

In spite of the paucity of insect life, certain new records have been established, thus *Papilio hornimani* is recorded for the first time from within Kenya boundaries, although known for many years to inhabit the forests of Mt. Kilimanjaro. *Charaxes fulvescens* nr. *acuminatus*, also of Tanganyika, was taken on the range. Two new races of Liptenines of the genus *Pentila* are recorded, whilst a new *Acraea*, a new *Papilio*, and a new race of *Amauris* are described.

The Lepidoptera collected have a definite relationship to the vegetational zones and the distribution of certain plant species at various altitudes and portions of the hills.

In the systematic list which follows an indication is given of the altitude range of each species so far as we were able to judge during the comparatively short stay on the hills.

Family: PAPILIONIDAE.

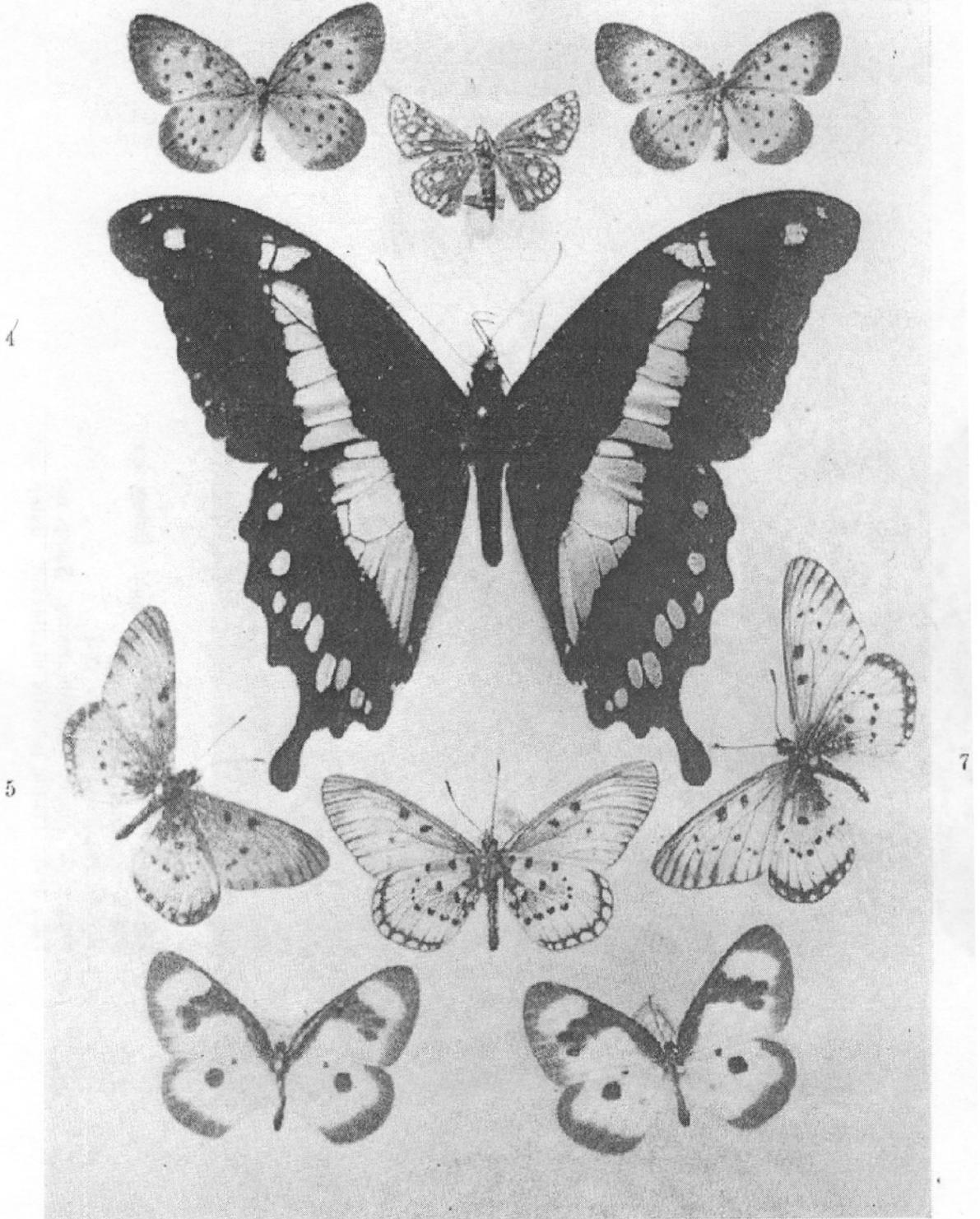
1. *PAPILIO DARDANUS TIBULLUS*, Kirby.

This species was not found on the northern or central portions of the range, but was comparatively common at the southern end along the forest margins. It was not seen in the actual forest but always at the edges where sunlight penetrated; the interior of

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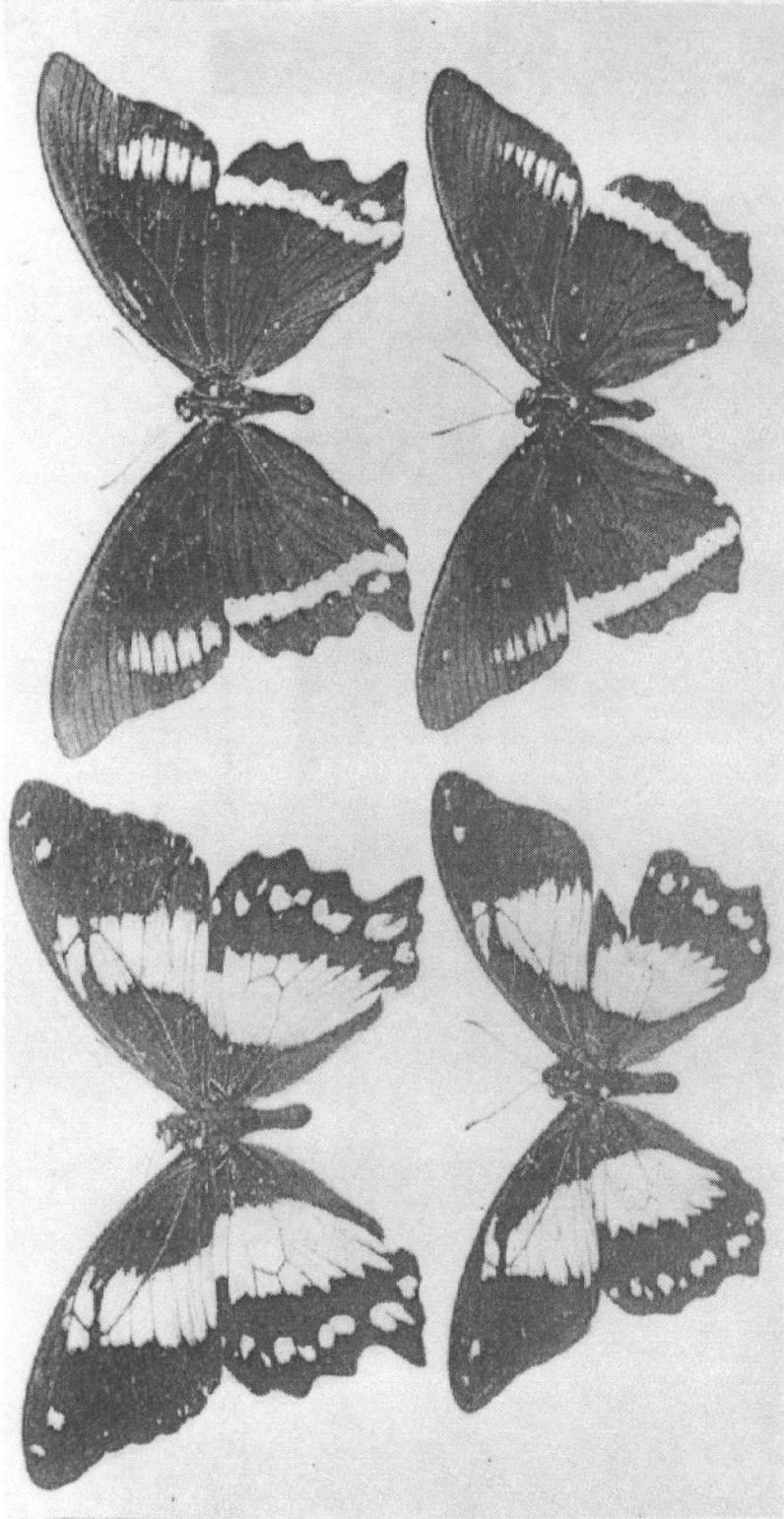
Figs. 1 and 2. *Pentila amenaida chyulu*. Subsp. nov.

Fig. 3. *Kedestes nerva*, Fab.

Fig. 4. *Papilio hornimani*. Dist.

Figs. 5—7. *Acraea anacreon chyulu*. Subsp. nov.

Figs. 8—9. *Pentila peucetia chyuluensis*. Subsp. nov.



³ Figs. 1 & 2. *Papilio brontes desmondi*. Subsp. nov.
Figs. 3 & 4. *Papilio brontes brontes*.

the Great Chyulu forest was too damp and dark for most species of diurnal lepidoptera. The food plant of the species was present in the lesser forests of the northern portions of the hills but there was no continuity between these forest patches and the lowland forests at 3,000-4,000 feet, whereas at the southern end there was a gradual merging of the low mixed forest with that of the mountain forest through ravine and valley forests in at least one point. The species was abundant in the low mixed forests on the lava flows between Noka and the main range. The twenty-odd males collected are remarkably uniform; all have a continuous heavy black band on the hind wing. Three forms of female were taken: *hippocoon*, a variation of *cenea* and an intermediate between the vars. *salaami* and *mixta* with the sub-apical f.-w. bar confluent with the light orange spot in the apex of the cell. The first two forms were numerous as were the respective models, *Amauris niavius dominicanus*, and *Amauris (albimaculata) hanningtoni*. The altitudinal range of the species was 3,000-7,000 feet. The *hippocoon* form of female predominated in the low forests, whereas the *cenea* form was more plentiful on high ground, the two forms being in definite ratio to the abundance of their respective models. The species was bred from larva obtained on the hills.

2. *PAPILIO ECHEROIDES*, Trim.

A common species throughout the range, on the whole more numerous at the north and central portions. Males outnumbered the females on the edges of the forests, but just within the marginal growth, especially at the north end, females were common. On the wing they bear a strong resemblance to their models, *Amauris hanningtoni* and *A. echeria* nr. *jacksoni*. This species was also bred on the hills from eggs and found larvae. They were raised on *Teclea*. Altitude 4,000-7,000 feet.

3. *PAPILIO CONSTANTINUS*, Ward.

Although extremely plentiful in the plains country, only one specimen was taken on the range at 4,500 feet.

4. *PAPILIO PHORCAS* nr. *ansorgei*.

Very few examples of this species were noted, and all were in very worn condition. Two males were taken at 6,000 feet. The species is very plentiful in the plains country around Kibwezi.

5. *PAPILIO HORNIMANI*, Dist.

Hitherto recorded only from Tanganyika, we found this species to be quite common at the northern end of the range. It did *not* occur in the southern portion. The reason for this break

in its distribution is difficult to understand. There was, however, a definite association between this species and *P. brontes*. There is a distinct resemblance on the wing and on the ground, when the wings are closed; and indeed their distribution tallied, for the latter was distinctly rare in the southern part of the range. The 14 males taken are very uniform; the only variation is in the number of blue spots at the apex of the fore-wing, being either one, two, or three. Two females were captured and confined in cages to obtain eggs; the larvae subsequently obtained were not reared owing to lack of food after leaving the hills.

6. *PAPILIO BRONTES DESMONDI*. Subsp. Nov.

As indicated under the previous species, these butterflies were very numerous at the first camp toward the northern portion of the range. They were certainly the common *Papilio* of the area. The forests at this portion of the hills were not very thick and more or less clear of heavy undergrowth in most instances. Thus one found this species inside the forests, but to a far greater extent on the outer margins where indeed most of the flowering herbs, on which they fed, for example *Pentas*, occurred. Apart from forest one noted the species in numbers at the "water drip" drinking at the moist earth below the water troughs. We attracted this species and *P. hornimani* to the door of our tents by keeping a small area wet with waste water; we were thus able to secure a long series with little effort. The series is very uniform, all but two of the males exhibit a considerable expansion of the blue band in 1a and 1b. The females have narrower fore-wing bars.

DESCRIPTION:

This race of *Papilio brontes* is in general shape very similar to *P. bromius chrapkowskii*, i.e. it has the same elongation of the posterior angle of the hind-wing; it, however, is to be distinguished at a glance from this species by the shape and colour of median band above, and the size and shape of the submarginal creamy spots on the underside of the fore-wing. From the nominate race of *brontes* of Kilimanjaro area, with an extension to the Teita Hills (Mbololo, Wandanyi, and Bura) this new race differs in the shape of the median blue band, which in the fore-wing is less triangular in outline; slightly concave on its inner side, for the blue does not reach the base of area 2, and on its outer side it is more strongly dentate, but not so inclined toward the hind angle: thus narrower than in *brontes brontes*. In the hind-wing the median band is almost parallel sided in its middle section, maintaining an almost straight line on its outer aspect, it tapers rapidly toward a white spot, marginal in 1b.

The fore-wing margin is more falcate, whilst the hind-wing is more strongly dentate, the end of vein 4 being extended to form a truncated "tail." The sub-marginal row of blue spots in the hind-wing are larger and in the fore-wing there are small double blue spots in areas 1a-5.

On the under surface, the fore and hind-wing submarginal bands differ considerably as can be seen from the illustrations.

The female differs from the male in that the fore-wing median band is narrower. Type, male, Chyulu Range, 6,800 feet, April, 1938. Coryndon Museum Expedition, 1938. Taken by Desmond van Someren. Alt. range, 5,000-7,200 feet. Described from a series of fifty specimens.

General remarks: Examples of this race together with nomino-typical *brontes* were submitted to Dr. Karl Jordan, who writes as follows: "Papilios from Chyulu. . . . The general aspect is very misleading. It is a subspecies of *P. brontes*, differing markedly from *P. brontes brontes* in the shape of the median band and in the shape of the hind-wing. The harpe of the clasper has the characteristic shape of the harpe of *P. brontes*, elongate-oblong, flat, with two narrow sharply pointed, widely separated, curved, apical horns; in the Chyulu males the harpe is narrower than in *brontes* from Wandanyi and Kilimanjaro. . . . The Chyulu subspecies is interesting, as it bears a superficial resemblance to *P. bromius chrapkowskii*. I think *P. brontes* is a species distinct from *P. bromius*."

In describing the Chyulu race I have accepted the suggestion that *P. brontes* is a species.

It is a matter of considerable interest to note that *P. brontes desmondi* was extremely plentiful on the Chyulu range from a level of 5,000 feet and up to 7,200 feet. It was associated with *Papilio hornimani* and was indeed difficult to distinguish from that species except by its smaller size, and absence of long tails, which could only be noted on close examination.

7. *PAPILIO NIREUS LYAEUS*, Dbl.

This species was *not* found on the range. Only one example was obtained at the south end at 4,500 feet. It was one of the commonest species on the plains especially at Kibwezi.

8. *PAPILIO DEMODOCUS*, Esp.

Was only seen on the lower larva flows at 4,000 feet and did *not* occur on the hills proper.

No other Papilios were noted on the hills, but several species were common on the plains.

PIERIDAE.

9. *LEPTOSIA ALCESTA*, Cr.

Abundant in the more open forests of the northern end and occasionally noticed in the Great Chyulu Forest of the south. Eggs and larva were noted on species of *Capparis*. 4,000-5,600 feet.

10. *HERPAENIA ERIPHIA*, Godt.

A common species along the margins of the northern forests and on the great lava flow between the main range and the South Chyulus. It was very much more numerous on the plains.

11. *MYLOTHORIS AGATHINA*, Cr.

Was noted as plentiful in the northern and central portions of the range between 4,500 and 6,000 feet, frequenting the lesser forests and the edges of the larger patches, particularly in the vicinity of trees which carried quantities of *Loranthus* on which both eggs and larvae were found. Two species of *Loranthus*, *dregei*, and *woodfordioides* were the chief food plants, on the range, while on the plains *panganensis*, parasitic on *Sterculea* sp. was infected.

The sexes were noted in about equal proportions, whilst the orange females outnumbered the form approaching the male colouration.

12. *MYLOTHRIS RUEPELLI*, Koch.

This species was very common, more particularly in the central and southern portions of the hills. The larvae fed on *Loranthus woodfordioides*, 5,000-7,000 feet.

13. *MYLOTHRIS SAGALA*.

A common species, noted throughout the range from 5,000-7,000 feet. The series taken during April to July are uniform in that there are no marginal black spots to the hind-wing in either sex. I have not designated the actual race or form as there is still considerable uncertainty as to grouping of this species. The series taken do not agree with material from the Teita Hills nor yet with a long series from near Nairobi.

14. *GLUTOPHRISSA EPAPHIA*, Cr.

This species was seen all along the range. Males predominated. The females taken are of the wet-season form. As there were no *Phrissura* present on the hills one is justified in assuming that all the males of this group one noted, were of this species. In localities where *Ph. udei* occurs along with *G. epaphia* males are impossible to distinguish on the wing.

15. *PIERIS MARGARITACEA*.

Examples of this species, which would appear to be a distinct species from *raffrayi* (for both occur together over a wide range, without interbreeding) were noted on the southern portion of the range at between 6,000-7,000 feet. Chyulu examples belong to the Teita race which is distinct from either the typical race from Mau and Sotik, or the Meru race *somereni*, which has a very rich orange on the underside. Only males were secured, though a few females were noted. It was not common.

16. *BELENOIS SEVERINA*, Cr.

17. *BELENOIS MESENTINA*, Cr.

18. *BELENOIS ZOCHALIA*, Bdv.

These three species were well represented on the hills and were mostly found along the forest margins where flowering herbs were most plentiful. Of the three species *zochalia* was by far the commonest. Three forms of females of this last were taken in about equal numbers. 4,000-6,800 feet.

19. *BELENOIS THYSA*, Hpff.

This was a common species at the southern portion of the range more particularly at the 6,000 feet level, though it also occurred at lower levels. Its distribution was largely governed by the distribution of food plants which existed along the forest edges and not on the grass lands. One noted the species flying over the moorlands but there was a definite concentration along the high forest margins. Two types of female were taken; the orange-buff variety being numerous and in association with the female of *Mylothris agathina* of more or less the same colour.

20. *TERACOLUS CELIMENE*, Luc.

Very few of this species were noted on the hills, but it was plentiful in the low country.

21. *TERACOLUS HETAERA*, Gerst.

Occasionally seen on the lower levels at 5,000 feet; most of the specimens taken were from the Noka road at 3,000 feet. Males and females are of the dry season form.

22. *TERACOLUS ERIS*, Klug.

Not seen on the range proper but numerous on the great lava flow at the south end.

23. *TERACOLUS ACHINE*, Cr.

24. *T. OMPHALE*, Godt.

25. *T. ANTIGONE*, Bdv.

26. *T. DAIRA*, Klug.

Examples of these *Teracoli* were taken sparingly on the hills in the moorlands, but the country was definitely unsuited to this group, doubtless owing to the damp and cold, and lack of the food plant. They were, of course, very numerous all through the thorn bush of the plains at 3,000-4,000 feet.

27. *TERACOLUS INCRETUS*, Btl.

Numerous on the plains. Very few seen on the lower hill lands at 5,000 feet.

28. *ERONIA THALASSINA*, Bdv.

Though noted at various places along the range, this species was by no means common. It was not seen above 6,000 feet, but was numerous on the lower ground of the plains.

29. *CATOPSILIA FLORELLA*, F.

Only once seen on the main range at 5,600 feet, but very plentiful on the lower levels at 3,000-4,000 feet.

30. *TERIAS SENEGALENSIS*, Bdv.

This species was widely distributed along the hills but nowhere numerous. 5,000-6,000 feet.

31. *TERIAS BRIGITTA*, Cr.

Fairly plentiful, more so toward the southern portion of the range. The form zoe was not numerous.

32. *TERIAS REGULARIS*, Btlr.

Was only met with in the low country around the lava flows at 4,000 feet.

33. *TERIAS* nr. *MARSHALLI*.

This form was very numerous all along the hills from 4,000 feet to 6,500 feet. The collection contains a long series, which is very uniform in both sexes, taken from April to July.

34. *COLIAS ELECTO*, L.

Was plentiful in the high ground up to 7,000 feet, but most numerous at about 6,000 feet. Both the pale and the dark forms of females were taken in about equal numbers.

DANAIDIDAE.

35. *DANAIDA CHRYSIPPUS*, L.

The species was common throughout the grass lands of the range and along the clumps of bush where various species of *Asclepiads* were growing. It is of interest to note that of the long series taken, all, with the exception of one, are of the form *DORIPPUS*, Klug. The exception is the form *albinus*. The typical form was noted as plentiful on the lower ground at 3,000-4,000 feet.

36. *MELINDA FORMOSA*, Godm.

Several examples of this species were noted at the southern forests; it was absent from the northern portions.

37. *AMAURIS NIAVIUS DOMINICANUS*, Trim.

A common species most plentiful in the lower mixed forests, but extending up the hills to the 6,000 foot level. The mimetic female form of *Dardanus*, *hippocoön*, was often seen in association with this insect.

38. *AMAURIS (albimaculata) HANNINGTONI*, Btlr.

A very long series was taken. They are very constant in type. This species was frequently noted passing over the open moorlands some distance from forests. Larva and eggs were taken on creeping *Asclepiad* in the forest. It was certainly the commonest *Amauris* of the range and acted as model for *P. dardanus*, f. *cenea* and the females of *P. echeroides*. Females were as numerous as males and the species was about equally distributed along the range.

38a. *AMAURIS ECHERIA CHYULUENSIS*. Subsp. Nov.

The form of this species found on the range differs from the nomino-typical *jacksoni* from Kericho-Sotik area in having a much paler hind-wing patch with a greater extension of this pale ochreous area towards the hind angle; the sub-marginal spotting is paler: there is an even more marked difference between the females of this race and typical *jacksoni*. Besides the much paler-cream- hind-wing patch, the sub-marginal and marginal spots are more numerous and larger and white. A long series of over 30 was taken. Type: Male, Chyulu Hills, April, 1938. Coryndon Museum Expedition.

There is a close resemblance between this insect and the pale race of *A. albimaculata*, *hanningtoni*; in fact they cannot be old apart when on the wing. They may be distinguished in the

hand in that *A. a. hanningtoni* has a pale lower surface to the abdomen, and of course, the "brand" is of a different shape.

DISTRIBUTION: This pale race of *echeria* ranges over the Chyulu and Teita Hills.

ACRAEIDAE.

39. *PLANEMA AGANICE MONTANA*, Btlr.

Was noted and obtained along the edges of the Great Chyulu Forests. The females were noted in association with the black and white form of *Acraea esebria*.

40. *ACRAEA ESEBRIA*, Hew.

Noted only in the southern parts of the range. Three forms of females are in the series taken: *esebria*, *monteironis*, and *jacksoni*. The females were taken laying on a creeper *Urerea* sp. (*Urticaceae*).

41. *ACRAEA JOHNSTONI*, Godm.

Was occasionally seen on the edges of the southern forests, at 6,000 feet.

42. *ACRAEA CABIRA*, Hpff.

This was the commonest of the smaller species of *Acraea* and occurred all along the forest margins throughout the range. It is worthy of note that on this range, the form is entirely different to that on the Teita hills a little to the south.

43. *ACRAEA ACERATA*, Hew.

This was a scarce species and very few were noted and always at the northern and central portion of the hills.

44. *ACRAEA TERPSICHORE*, L.

Although found on the hills, this species was far more numerous on the lower ground at 3,500 feet. A long series was bred from larvae found on *Triumfetta* sp. It is noteworthy that the female form produced was scarce on the hills.

45. *ACRAEA NATALICA*, Bdv.

A common species, particularly plentiful on the lower ground but extending on to the hills up to 6,000 feet. The larvae were found feeding on a species of creeping *Adenia*. Five forms of females are included in the long series taken.

46. *ACRAEA CAECILIA*, F.

A few specimens were noted at the 4,000 level but below this it was very common.

47. *ACRAEA BRAESIA*, Godm.

Plentiful at 3,000 feet, but seldom noted on the hills at the 5,000 level.

48. *ACRAEA AEQUATORIALIS ANAEMIA*, Eltr.

This was a common species in the northern and central portions of the range all over the grass lands. It was noted to lay on a small species of Passiflor (*Adenia* sp.) which grew in abundance in the grass, and from this plant several mature larvae were secured. The pupae were found hanging on adjacent grass stems. It is to be noted that the nominate race also feeds on an allied though distinct species of Passiflor. There is a very considerable variation in the female forms.

49. *ACRAEA ACRITA*, Hew., *pudorina*, Stgr.

Throughout the grasslands of both the hills and the low country—6,000-3,000 feet—this species was plentiful. Males are of two types, a dry form in which the marginal loops are obscure and the other in which these are clear and well defined. Six of the females are of the very dark blackish type.

50. *ACRAEA EGINA ARECA*, Mab.

Rather scarce on the range, but plentiful at below 4,000 feet.

51. *ACRAEA ZETES ACARA*, Hew.

The 5,600 feet level appeared to be the upper limit of this species, where a few were noted and obtained. At 3,000 and 4,000 feet it was more plentiful.

52. *ACRAEA ANEMOSA*, Hew.

Was only taken at the base of the hills at 4,000 feet.

53. *ACRAEA BAXTERI*, E. Sharpe.

This was entirely a montane species and kept to the borders of forest at 5,500 to 6,500 feet. It was frequently seen feeding on the flower heads of certain tree *Umbelliferae* quite out of reach and when disturbed would sail over the tops of the forest trees. A small series was obtained and these should be referred to the form *subsquamia*, Thur. When seen from below, with the sunlight overhead, the red of the wings shows up as orange. They then bear a strong resemblance to a diurnal moth which was plentiful throughout the range. This moth is highly distasteful

and it would seem that the butterflies derive added protection from their resemblance to it.

54. *ACRAEA NEOBULE*, Dbl. and Hew.

Present on the range but in small numbers; plentiful on the lower slopes and on the plains.

55. *ACRAEA ANACREON CHYULU*, Sbsp. Nov.

A series of this interesting insect was taken along the forest margins at the central and southern portions of the range on the eastern side at altitudes of 5,500-7,000 feet. They bear a superficial resemblance to *A. rahira* and *A. anacreon anacreontica* but differ from both in many respects.

Examples of these insects were submitted to Prof. Carpenter, and Capt. Riley of the British Museum. The latter writes as follows: "Although there is nothing in our series (of *anacreon*) quite like your two specimens, I feel sure that they are a race of that species. . . . If this pair represents a constant race, then I should think that van Someren would be quite justified in describing it." As the nineteen examples show a remarkable degree of constancy, I have no hesitation in describing them as a new race.

Type: Male, Chyulu hills, 6,500 feet, June, 1938.

Male, upperside: length of f.w., 22 mm., tawny-ochreous with a suffusion of pink, particularly in basal half. Compared with the race *anacreon anacreontica* of the Mara River, Sotik, Lumbwa, Kavirondo, and Elgon areas, there is a marked reduction in the number of f.w. spots which are arranged as follows: one in cell, just beyond mid-point; a larger one at apex of cell at roots of veins 5-6; a double spot sub-distal in cellule 1b, with a spot directly above it in 2, just distad to origin of vein 3, with another small one sub-basal in 3. Veins 1-7 blackish scaled distally toward the margin, shorter and thicker from 1-3, longer and narrower from 4-7; between the rays a slight increase in the orange colour. It lacks the submarginal black bar which joins up the rays in the race *anacreontica*. Costa, toward distal end black scaled. There is a small area of blackish scales at the extreme base of the wing.

H.-w.: Ground colour as in f.w., but basal area with a greater amount of black scaling, greater than in the race *anacreontica*. The spotting also differs in that the post-discalars are in almost a straight line from the inner margin at 1c-4 then curving up to about the mid-point, sub-costal in 7. There is one large black spot in the cell. The marginal border is black, less than 2 mm. wide and carries orange internervular spots. It will be noted then that in this race there is no angling of the post-discal spots at 2, toward the end of the cell as in *anacreontica*.

There is only this slight variation in the males: some few have an extra small spot in 6, sub-basally.

UNDERSURFACE: F.-w., ground colour pinkish-ochreous at basal half, shading to tawny ochreous distally; distal portions of veins narrowly black scaled and forming rays; black spot at apex and mid-cell, other spots of above only faintly indicated.

H.-w., ground colour ochreous with pink suffusion over basal area. Black spots as above but more distinct with an additional large spot sub-basal, and a series of three contiguous in 1a-1c sub-basal. The two rows of spots are joined up by pink longitudinal marks. Marginal border consisting of contiguous loops enclosing ochreous spots.

FEMALE, UPPERSIDE: F.-w. rather thinly scaled buffy, with pink tinge in basal half, but basal area blackish scaled. Blackish spots as in the male but with extra spots sub-basal in 4 and 5. The margin of the wing orange tinged internervularly. H.-w., ground colour as fore-wing, the black spots as in the male, with rather more black scaling at the base.

Underside: Ground colour buffy ochreous; blackish spots as in the male; pink quadrate bars between the two rows of spots very strong and showing through on the upper surface.

The genital armature has been examined by Prof. Carpenter, who states that it agrees with *anacreon* in general form.

56. *PARDOPSIS PUNCTATISSIMA*, Bdv.

Only one specimen was taken on the hills although it was comparatively common on the lower lava flows in the plains country, especially in the dongas between the lava outcrops where vegetation was rank and the conditions humid. It was taken in association with *Pentila amenaïda*.

SATYRIDAE.

57. *HENOTESIA PERSPICUA*, Trim.

A few were noted in the grass lands bordering the forests and in dongas.

58. *NEOCOENYRA GREGORII*, Btlr.

This was the commonest of the small "Ringlets" and was everywhere plentiful along the edges of the forest lands.

59. *YPITHIMA ASTEROPE*, Klug.

Plentiful in the grass lands, but owing to the continuous winds, all the specimens seen were very worn and battered.

60. *MYCALESIS SAFITZA*, Hew.

A few were noted in the more open forests of the hills, but it was most abundant in the mixed forests on the laval ridges of the plains.

NYMPHALIDAE.

61. *CHARAXES HANSALI BARANGANA*, Rothsch.

One seen on the great lava flow at the south end, but fairly numerous just before the Ithaba Swamp on the Kibwezi-Chyulu trail.

62. *CHARAXES PELIAS SATURNUS*, Btlr.

Common on the plains and very few noted on the lower lava flows at 4,000 feet.

63. *CHARAXES ACHEMENES*, Fldr.

On the Noka-Chyulu trail this species was common but extremely difficult to obtain as they either rested very high up or amongst thorns, making it impossible to secure them. A male and female, the latter bearing a very strong resemblance to *saturnus*, were secured by climbing the tree on which they were resting. A few were noted on the great lava flow on the Italweni path, 4,000 feet.

64. *CHARAXES CITHAERON*, Fldr.

This was the only species of this group seen on the hills at 6,000 feet. As no specimens were secured, it is impossible to state whether or not there was any transition to the coastal race *kennethi*.

65. *CHARAXES ETHEOCLES PICTA*, Rothsch.

A few of this species were noted on the *Albizzias* of the lower plains. A larva was taken on *Acacia mellifera* and eggs on *Entada* sp. The females taken are of the *kirki* form.

66. *CHARAXES ETHALION*, Bdv.

Plentiful on the plains at 3,000-4,000 feet but were only noted on the hills at the Italweni lava flow, and at 4,500 feet. No females were taken.

67. *CHARAXES JAHLUSA*, Trim.

Only females of this species were seen at 4,000 feet in the abandoned banana shambas. They were feeding on decaying bananas still on the trees. One pupa was located on a sapling, obviously not its food plant, and from this a female emerged.

68. *CHARAXES CANDIOPE*, Godt.

This was one of the few species to occur actually on the mountains at 6,000 feet. They here laid on a sp. of *Croton*, which grew in profusion on the tops of certain of the forest hills, and along the forest edges.

69. *CHARAXES FULVESCENS* nr. *ACUMINATUS*, Thurau.

Several of this species were seen from time to time on the edges of the Great Chyulu forest at the southern end. They were extremely difficult to secure as they flew high and would not be attracted to bait. The only specimen obtained was taken at oozing sap on a tree at about 15 feet. It is noticeable that in this example the whole of the wing border, fore and hind, are very much darker than the race which inhabits the Kikuyu forests; this is especially the case in the hind-wing, so that the black spotting is almost obscured. The orange spotting on the fore-wing is smaller, whilst the falcate apex of the wing is of a different shape. There are other minor differences which need not be gone into here; suffice it to say that the Uplands race would appear to be a good one. The characters of the Kenya Highland race have been detailed in my paper in the *Journal of the Society, Butterflies of Kenya and Uganda*, part 7. More material of *acuminatus* must be taken before a name can be applied. Larvae of *acuminatus* were found on a species of *Allophylus*, and two full-grown were recovered from the stomach of a Trogon, *Apaloderma narina*.

70. *CHARAXES ZOOLINA*, and

71. *NEANTHES*.

A few of this species were noted on the lower lava flows, but it was absent about 4,000 feet owing to absence of the food plant.

NYMPHALIDAE.

72. *NEPTIS SACLAVA MARPESSA*, Hpffr.

Sparsely distributed in the drier forests of the northern portion of the range.

73. *NEPTIS AGATHA*, Stoll.

This was the common *Neptis* all along the range and was found near the *Erythrina* patches of the lower slopes as well as on the edges of the forests.

74. *NEPTIS SEELDRAYERSI*, Auriv.

A few examples of this species were taken at the southern forests, but it was distinctly scarce.

75. *BYBLIA ILITHYIA*, Drury.
A common species in the tall grass along the forest edges, particularly in the northern areas.
76. *BYBLIA ACHELOIA*, Wall.
A few were noted at 5,600 feet at the southern end of the hills.
77. *EURYTELA HIARBAS LITA*, Rothsch.
Plentiful in the southern portions of the range and less so in the middle section. Eggs and larvae were found on the stinging Euphorbiaceous "nettle," just within the forest edges.
78. *EURYTELA DRYOPE*, Cr.
Comparatively scarce: very few were noted at 6,000 feet on the south end.
79. *HYPOLIMNAS DUBIA MIMA*, Trim.
80. *f. WAHLBERGI*, Wall.
Both males and females of these two forms were in about equal numbers, more particularly in the southern forest edges, but they were nowhere common.
81. *SALAMIS PARHASSUS AETHIOPS*, Pal.
Although met with on the range at altitudes of 5,000-6,500 feet, this species was more abundant in the low mixed forests on the lava ridges at 3,500-4,000 feet.
82. *SALAMIS ANACARDII NEBULOSA*, Trim.
Only slightly less numerous than the preceding species and with a similar distribution, but very often noted in the drier portions and amongst the Acacia associations of the plains.
83. *CATACROPTERA CLOANTHE*, Cr.
Not very numerous, but occasionally noted in the grass lands all along the main range, at 5,000-6,000 feet.
84. *PRECIS LIMNORIA TAVETA*, Rog.
A few were taken along the forest edges at 5-6,000 feet and mostly in grass.
85. *PRECIS NATALICA*, Fldr.
Very few were noted on the range, but the species was plentiful in the low ground at 3,000-4,000 feet.
86. *PRECIS OCTAVIA SESAMUS*, Trim.

87. *f. NATALENSIS*, Stgr.

Both wet and dry season forms were sparingly distributed along the range; they were nowhere common although on the low ground at 3,000-4,000 feet they were numerous especially in the shaded dongas between the lava ridges.

88. *PRECIS TUGELA*, Trim.

89. *f. AURORINA*.

Occurred in both the wet and dry forms, but not common on the range.

90. *PRECIS ANTILOPE*, Feisth.

Was only noted on the lower ground at 4,500 and below.

91. *PYRAMEIS CARDUI*, L.

Common all along the hill sides and most conspicuous in the late afternoon, especially after a shower of rain.

92. *ATANARTIA HIPPOMENE*, Hbn.

93. *A. SCHAEENEIA*, Trim.

Both species were present throughout the range at 5,000-6,500 feet and were taken along the forest edges.

94. *HAMANUMIDA DAEDALUS*, F.

Common all along the plains toward the foothills of the range, but not seen above 4,000 feet.

LYCAENIDAE.

95. *PENTILA AMENAIIDA CHYULU*. Subsp. Nov.

In the warm humid dongas between the laval ridges toward the base of the range, at altitudes of 3,500-4,000 feet this species was extremely plentiful during the month of April and May. One noted them in dense numbers clustering around the flower heads of a Leguminous plant (*Crotolaria* sp.?) at the glands of which ants and Aphids were feeding; on others ants and Coccids. One was able to capture fifty or more with one sweep. Associated with this species was *Pentila peucetia*, Sbsp. By the end of June, very few specimens were noted, and by July 20th not a single individual was noted, although hunted for.

As already noted under *Pardopsis punctitissima* (Acraea), the two species, bearing a very close resemblance, were associated in these dongas.

DESCRIPTION: The Chyulu race differs from the coastal *mombasae* in having a much wider and darker black border, and being more strongly and more numerous black spotted in both fore and hind-wings.

RANGE: The Chyulu foothills. Although there is some variation in the coastal race, none are as dark as the Chyulu race which, in a long series of over fifty, shows a marked uniformity of colouration.

96. *PENTILA PEUCETIA CHYULUENSIS*. Subsp. Nov.

This species was common and in association with the previous one, on the flowering spikes of the *Crotalaria*. Where one found up to fifty or so *amenaida* there would be four to six of *peucetia* amongst them. When a sufficient series of the former had been collected, the capture of *peucetia* was done with tweezers or fingers without disturbing the rest of the insects. I failed to note any insect which could act as a model for this species and am inclined to think that it is in itself distasteful, for a yellow secretion from the body has a disagreeable odour.

DESCRIPTION:

These specimens, of which a series of some 30 were taken, differ from the coastal race in that the dark areas are blacker, and the hind-wing has three distinct black spots on the lower side and two above with the third showing through distinctly. Although in a long series from the coast two out of twenty show traces of a third spot toward the costa on the hind-wing, these are not nearly as large or defined as in the Chyulu material. The spot on the underside toward the fold of the hind-wing is large; conversely only two of the Chyulu series have this spot faintly indicated.

97. *TERIOMIMA ASLAUGA*.

A few of this species were noted in the humid mixed forests on the lower levels at 4,000 feet. They did not occur on the range.

98. *HYPOLYCAENA PHILIPPUS*, F.

Was very numerous on the lower levels at 3,500-5,000 feet, but comparatively scarce above that level.

99. *DEUDORIX ANTALUS*, Hpffr.

Plentiful throughout the acacia and bush country but scarce on the hills. Larvae were located in seed pods of two species of legumes.

100. *EPAMERA SIDUS*, Trim.
Was occasionally noted on the range, and larvae were taken on *Loranthus woodfordioides*.
101. *AXIOCERSES HARPAX*, F.
Fairly numerous in the grass lands from 4,000-6,500 feet. In the early mornings these insects could be taken with the fingers as they rested benumbed with the cold. They were seldom on the move until near 11 a.m.
102. *LYCAENESTHES LARYDAS KERSTENI*, Gerst.
A few were seen and secured, but this group as a whole was badly represented on the hills.
103. *LYCAENESTHES OTACILLIA*, Trim.
Found feeding on the flowers of Acacias of the lower levels, but otherwise not seen on the range. 5,000 feet.
104. *CASTALIUS GREGORII*.
Only one example was seen and taken at 5,000 feet in the grass lands.
105. *URANOTHAUMA CORDATUS*, E. Shp.
A few of this species were taken at damp earth at the edge of the forest at 5,500-6,500 feet.
106. *URANOTHAUMA FALKENSTEINI*, Dew.
Fairly common at the higher altitudes 5,600-6,500 feet.
107. *CACYREUS LINGEUS*, Cr.
Common along the forest edges and adjacent grass lands.
108. *CACYREUS PALEMON*, Cr.
Fairly common in the bush and scrub surrounding the forest patches. The undersides are rather darker than Nairobi material.
109. *CUPIDO TELICANUS*, Lang.
Very common in the grass lands bordering the forest and at the "water drip."
110. *CUPIDO MALATHANA*, Boisd.
On the grassy slopes of the northern and central portions of the range this species was fairly numerous.
111. *CUPIDO CISSUS*, Godt.
Was undoubtedly the dominant species of the moorlands and grassy slopes throughout the range. The season for this species seemed at its height about June.

112. *CUPIDO IOBATES*, Hopff.
Only slightly less numerous than the preceding species and found in similar surroundings.
113. *CUPIDO MALATHANA*, Boisd.
Common in grass country.
114. *CUPIDO MAHALLAKOENA*, Wallengr.
Of the small species this was by far the commonest and occurred all along the range in the exposed grassy slopes.
115. *CUPIDO KIDONGA*, Gr.-Sm.
Very few were noted and taken although on occasions we searched the grass lands exclusively for Lycaenids (species of *Acacia*). Its distribution was undoubtedly governed by its food, which did not extend high on the range.
116. *CUPIDO CRAWSHAYINUS*, Auriv.
A common species at altitudes of 4,500-6,000 feet.
117. *CUPIDO TROCHYLUS*, Freyer.
A few were taken in the grass country, but it was not common.
118. *CUPIDO LOUISAE*.
Only one specimen was taken at 6,000 feet in grass lands.
119. *CUPIDO GAIKA*, Trim. *LYSIMON*, Hbn.
These little insects were common in the grass country and amongst the bordering scrub of the forests.
120. *AZANUS UBALDUS*, Cr., and *JESOUS*, Guer.
Not numerous, but a few were taken on damp soil at Camp 1, 5,200 feet.
121. *LAMPIDES BOETICUS*, L.
Extremely common from 4,000-7,000 feet in the grass and scrub surrounding forests. Larvae were taken from the seed pods of the wild blue Lupin.
122. *HEODES ABOTTI*, Holl.
Was found to be very numerous in the grass country and larvae were taken on Dock.

HESPERIIDAE.

123. *COELIADES ANCHISES*, Gerst.

Was a plentiful species at the lower altitudes but extended on to the range up to 6,000 feet.

124. *COELIDES FORESTAN*, Cr.

Very numerous at low altitudes of 3,000 feet and was found on the range up to 6,000 feet.

124a. *COELIDES PISISTRATUS*.

Common at the north end of the range.

125. *CALAENORRHINUS GALENUS* f. *BISERIATA*, Btlr.

In most of the semi-clearings of the larger forests and in the more open lesser forests this species was fairly plentiful but difficult to secure. They are partial to patches of sunlight in the forest and settle on the undergrowth. I found it best to catch them in the late afternoon as at that time they were less inclined to move far. This was the only form noted on the hills at 6,000 feet.

126. *EAGRIS SABADIUS ASTORIA*, Holl.

A few specimens were taken at the mid altitudes of 5,000 feet, but it was not noted above this limit, though plentiful in the forest (mixed) of the lava ridges.

127. *ERETIS DIAELAELAE MACULIFERA*, Mab.

Was taken along the edges of the forests, but not in any numbers.

128. *ERETIS MELANIA*, Mab.

Not very plentiful, but doubtless would have been seen more often had one hunted for them.

129. *SARANGESA PHYDYLE*, Walk.

Numerous on the edges of the track through the mixed forest on the lava ridges but distinctly scarce over 4,500 feet.

130. *SARANGESA MOTOZI*, Wall.

Not noted on the range proper but many seen at the 3,000 feet level.

131. *CARPRONA PILLAANA*, Wall.

A species which was noted on the lower plains and did not extend above 4,000 feet.

132. *GOMALIA ELMA*, Trim.
Was noted along the lower forests in the north and less numerous at the south. Its range appeared to be about 6,500, controlled by the distribution of its food plant.
133. *SPIALIA SPIO*, L.
This was the most numerous species of the group and occurred in the grass lands and along forest margins. Larvae were taken on *Sida*.
134. *SPIALIA HIGGINSI*, Evans.
Fairly evenly distributed along the range up to 5,600 feet and certainly more numerous below this level.
135. *SPIALIA CONFUSA OBSCURA*, Higgins.
Not very plentiful and apt to be overlooked as it is one of the smaller species of the group.
136. *METISELLA QUADRISIGNATA NANDA*, Evans.
Was very numerous along the entire range in the borders of forest up to 6,500 feet.
137. *KEDESTES ROGERSI*, Druce.
Only a few seen, mostly in low ground at 4,500 feet. It appears to favour areas which, during the rains, became waterlogged.
- 137a. *KEDESTES CALLICLES*, Hew.
One specimen was taken at the foot hills.
138. *KEDESTES NERVA*, Fab.
This interesting insect was noted at 5,000 feet. The specimen has been identified by General Evans as above. It is the first Kenya record of this South African species. It is possible, that when more material is available, some difference between Kenya and South African examples may be detected.
139. *PAROSOMODES MORANTII*, Trim.
A few were noted in the low ground between 3,000 and 4,500 feet.
140. *ACLEROS MACKENII*, Trim.
Very common in the more open forests frequenting the undergrowth of Acanthaceae.

141. *ZENONIA ZENO*, Trim.

Very abundant in the grass lands and in the forests where certain grasses were growing and on which the larva feed.

142. *BAORIS FATUELLUS*, Hopff.

Fairly numerous in the grass and bush along the forest margins. 4,500-6,000 feet.

143. *PELOPIDAS DETECTA*, Trim.

Very numerous throughout the range and found up to 6,500 feet.

144. *PELOPIDAS BORBONICA*, Boisdv.

Plentiful, but not as numerous as the last species.

145. *GEGENES LETTERSTEDTI BREVICORNIS*, Plotz.

This was by far the commonest Skipper throughout the range and was found from 3,000 up to 6,500 feet in the grass lands particularly. Males and females were equally numerous.