Beitr. naturk. Forsch. SW-Deutschl.	Bd. XIX	Heft 3	S. 337-371	Karlsruhe, 1. 4. 1961

Ergebnisse der Deutschen Afghanistan-Expedition 1956 der Landessammlungen für Naturkunde Karlsruhe

Middle East Lepidoptera, XV (*)

A second contribution to the Lepidoptera of Afghanistan

by

E. P. WILTSHIRE, F.R.E.S.

(With 54 Figures and Plates II — IV)

Explanation of some abbreviations used:

A = leg. Dr. H. G. AMSEL
E = leg. G. EBERT
G = leg. Mme R. GHIRSHMAN
K = leg. J. KLAPPERICH
R = leg. RICHTER
J. R. = leg. Jutta RÖHRE
[ ] = not in Afghanistan
Prep. = microscopic preparation by author.
V, X, etc. = months of the year
W = leg. Frau Dr. WEGNER
EPW leg. E. P. WILTSHIRE
coll. M. = Sammlung des Bayerischen Staates, München
coll. m. = coll. mea, i. e coll WILTSHIRE

Bombycoidea

Family: Saturniidae

Neoris huttoni MOORE ssp. *galerope* PUNG.
1 ♂, Jebel Seratsch, Kodaman, 13. X. 52, K.

Family: Lasiocampidae

Chilena sordida Ersch. ssp. ?
2 ♂, Sarobi, 12. VI. 52 & Jalalabad 13. VI. 52, K.
Both examples are rubbed and perhaps do not correspond to the typical race of *sordida*, being whitish-brown in general colouring. On the forewing the short linear cell-spot is very distinct and white; the wing-shape is that of *sordida* rather than *laristana* DAN.

Malacosoma neustria ssp. *parallela* STGR.
5 ♂, Nuristan, Achmede Dewane, 2700 m. 26. VII. 52, K.

Malacosoma franconica DENIS.
2 ♂, 1 ♀, Badakhshan, Sarakanda, 4100 m., 1. VIII. 53, K.

Dendrolimus klapperichi WILTSHIRE 1958
4 ♂, 1 ♀, Nuristan, Bashgul-valley, 1100—1200 m. 9. IV. 53, K.

(*) The first contribution to the Lepidoptera of Afghanistan by me was no. XIV in this taxonomic series and appeared in Aug. 1958 in Journ. Bomb. N. H. S., 55, 2, pp. 225—237. Some species or forms described therein are referred to here as "WILTSHIRE 1958".

Nadiasa repandum HUBN.
1 ♂, Nuristan, Bahsgul-valley, 1100 m., 9. IV. 53, K.

Nadiasa siva LEF.
2 ♂, Nuristan: Bashgul-valley, 1100 m., 11. IV. 53, & Kunar valley, Asmar, 3. IV. 53, K.

Family: Lemoniidae
Lemonia sardanapalus STGR.
1 ♂, & 2 ♀, Kabul-River, Ferusch-Tagan, 1 &, 4. X. 52, K.

Lemoni peilei klapperichi subsp. n. (Pl. III fig. 25)
Smaller and brighter than *peilei* and its races *farsica* m. and *talhouki* m. The female is unknown and may be larger and duller.
♂, bright mauve brown, with paler yellow-orange markings. The termen is orange-chequered. A costal suffusion, broader basad, is deeper orange in hue than the postmedian fascia, which is formed as in *peilei*: the cell-spot on the forewing is a pale fine ring, of a deep orange like the costa. The hindwing fascia is of the same colour.
Under-side, distinctive, with its brown submarginal area crossed by orange nervures. The postmedian fascia is broader here than on the upper-side and the whole basal area is pale-suffused.
The head and thorax are pale orange; the abdomen and legs are clothed with pale orange hairs.
Span: 36 mm.
Holo-type: ♂, Jebel Seratsch, Selang-mouth, 2000 m, K. (in coll. K.)

Family: Sphingidae
For genus *Rethera* see DANIEL, 1958: „Zwei neue Rethera-Arten aus Afghanistan." (Beitr. naturk. Forsch. SW-Deutschl. *17*, H. 1, 83—84, with Plate.)
Acosmeryx naga MOORE.
1 ex., Mars, Panchjir, 2400 m., 10. VI. 53, K.
Similar to forms inhabiting N. India to Japan.

Dolbina exacta STGR.
1 ex., Nuristan, Bashgul-valley, 1100 m., 9. IV. 53, K.

Rhopalopsyche nycteris KOLLAR 1844.
3 ex., Nuristan, Kamdesch, 2200 m., 28. IV. 53, K.
Similar to *Nycteris* forms in Tring Museum from N. W. India Burma, Sikkim, & China and to material in coll. m. from Kashmir (7000—10, 000 ft.)

Noctuoidea

Family: Arctiidae
Sub-family: Nolinae
Celama fraterna MOORE (Pl. II Fig. 5)
1 ♂, (Prep. 936), (Text Fig. 1.), Nuristan, Bashgul-valley, 1200 m., 17. V. 53, K.

Celama turanica STGR.
1 ex., E. Afghanistan, Sarobi, 1100 m., 3. VII. 56, A.
1 ex., N. Afghanistan, Pulichomri, 700 m., 5. VI. 56, A.

Roeselia nanula sp. n. (Pl. II figs. 4, 6, 7.).
Similar to *gigantula* STGR., but smaller, with straighter postmedian fascia when visible, and genitalia of both sexes different.
Antenna, ♂ bipectinate, ♀ simple.
Thorax and abdomen less robust than *gigantula*.

Forewing, olive grey, sometimes much infused with whitish; usually faintly marked. A subtriangular costal shade, as in *gigantula*, forming part of a fuscous median band the rest of which may not be always distinct, is present even in the less-marked forms. Black discal spot, as in *gigantula* or even more distinct, usually present also. The fasciae are frequently obsolete. In both the new species and *gigantula* the postmedian fascia is more denticulate than the antemedian, but in the new species runs almost straight from the cell to the hind-margin. Submarginal line, termen and fringes of forewing, as in *gigantula*.

Hindwing and underside both wings, dirty grey, as in *gigantula*.

Span: 17—21mm. (cf: *gigantula* 25—29 mm.)

Genitalia (see figs. 2—7 for a comparison of both sexes of this species, *gigantula* and *togatulalis* HUBN. which is related to both): ♂, valves of the new species proportionately slenderer, with harpe anvilshaped and smoother and longer than that of *gigantula*, which is a stumpy finger-like process, more in the centre of the valvula and armed on the dorsal side of its base with many nodules. The aedeagus has its posterior tip dorsally prolonged in a sclerotised two-pointed probe or hook, whereas in *gigantula* the aedeagus tip is normal but the vesica contains a finger-shaped small cornutus.

♀, ductus bursae short, direct and almost cylindrical; (cf. *gigantula* has a prolonged spiral ductus bursae.)

Types: holotype ♂ and allo-type ♀, AFGHANISTAN, Kabul vicinity, 1740 m., 14. V. 52, K., in coll. KLAPPERICH.

Paratypes: AFGHANISTAN: 1 ex., Badakhshan, Koksha-valley, Senna, 1800 m., 16. VII. 53, leg. KLAPPERICH, in coll. KLAPPERICH.

1 ex., Nuristan, Bashgul-valley, 1100 m., 6. IV. 53, K., in coll. KLAPPERICH.

2 ex., ♂♀, Nuristan, Kutiau, 1550 m., K., in coll. m. Preps 923.

11 ex., ditto, (Kutiau), in coll. KLAPPERICH.

Since STAUDINGER, in describing *gigantula*, compared it with *Roeselia strigula* SCHIFF., it may be mentioned here that the ♂ genitalia of the latter shew that, though congeneric, it is more remote from *nanula* than are *gigantula* and *togatulalis*. I have examined ♂♂ from Prodromos, Cyprus and Pireh-Zan, S. W. Iran, and these *strigula* are distinguished from the three species mentioned by especially the tufts of black hair-scales on the socii and by the great length of the harpe, projecting like a finger far over the ventral border of the valve in *strigula*. These characters are of course clearly illustrated by BEIRNE in PIERCE's Genitalia of the "British Rhopalocera and Larger Moths".

The total range of *gigantula* confirmed by genitalia appears now to be from the Balkans in the extreme west (Macedonia, leg. DANIEL 1955) through Turkey to N. Iraq. There is no material of the species in coll. Staudinger from further East (I am indebted to Dr. B. ALBERTI for this information) and the correctness of the statement in SEITZ that it extends to the Far East appears to require examination Readers are requested to add *gigantula* Stgr. after *togatulalis* HUBN. in my book (1957) "The Lepidoptera of Iraq" The two species occur together in the scrub-oak zone of the north of that country.

Sub-family: Lithosiinae

Paidia conjuncta STGR.

5 ♂, 2 from Paghman Mts., 3000 m., 28. VIII. 53, K; 2 from Salang-valley, Ejan, 2050 m., 11. X. 52, K; and 1 from Salang-valley, Qulatak, 1950 m., 9. X. 52, K.

Sub-family: Micrarctiinae

Utetheisa pulchella L.

5 ex., E. Afghanistan, Kabul-River, Tang-i-Gharuh, 1600 m., 21. VIII. 52, K. 1 ♂ (Prep. 915), nr. Kabul, Darafulun, 1800 m., 27. VIII. 53, K. 1 ex., Kunar-valley, Asmar, 31. V. 53, K. 1 ex., Nuristan, Bashgul-valley, 1200 m., 9. V. 53, K.

Phragmatobia fuliginosa L. ssp. *pulverulenta* ALPH.

2 ex., N. E. Afghanistan, Wardusch (Vardush) valley, Barak, 1650 m. 5. VII. 53, K.

Sub-family: Spilosominae

Volgarctia spectabilis TAUSCH. ssp. *annellata* CHRIST.
1 ex., Badakhshan, Sarakanda, 3800 m., 22. VII. 53, K.

Creatonotus transiens WALKER.
Nuristan, Kutiau, 1450 m., 2. V. 53, K.

Sub-family: Arctiinae

Pericallia transversa MOORE.
c. 10 ex., Nuristan, Bashgul-valley, 1100 m., IV.—V. 53, K; 1 ex., Kutiau, 1450 m., 2. V. 53, K; 1 ex., Kunar-valley, Asmar, 900 m., 3. IV. 53, K.
Variable in size and clearness or smokiness of markings.

Axiopoena maura EICHW.
1 ex., E. Afghanistan, Kunar-valley, Doab, 1700 m., 4. IX. 52, K. 1 ex., Kabul, 1740 m., 7. VII. 52, K.

Carcinopyga proserpina STGR.
2 ex., Paghman Mts., 3000—3400 m., 7 & 28. VIII. 53, K.
1 ex., Djebel Seratsch, 1650 m., 18. X. 52, K.

Arctia intercalaris EV.
There appear to be at least two local forms of this species in Afghanistan, through there is insufficient material of the first mentioned below to decide its true status.
(I) *A. intercalaris* EV. (?) f. *aurantiaca* SEITZ.
1 ex., date but not locality given, probably Kabul River, 28. VII. 52, K.
[N. B. *C. thibetica* FELD., of which the unique type is in the British Museum, is an aberration of race *simplicella* Strand of which the British Museum has a long series from Chitral, etc. It has a more completely marked hind-wing and a browner fore-wing than any other forms of *intercalaris* EV. the fore-wing spots being yellowbrown in *simplicella*.]

(II) ***A. intercalaris badakhshana*** subsp. n.
The hind-wing of this race is very bright scarlet and lacks the cell-spot, or at the most has only a minute black hind-wing cell-spot.
Holo-type and 3 para-types: Badakhshan, Sarakanda, 3600 23—27. VII. 53, K. (in coll. K.)
[The same form inhabits West Turkestan and I designate as paratypes of this subspecies a series from there in the British Museum which agree with the Badakhshan forms.]

Sub-family: Callimorphinae

Callimorpha principialis Koll.
Badakhshan, Sarekanda, 3600 m., 21. VII. 53, K.

Family: Lymantriidae

Lachana ladakensis MOORE.
5 ex., Badakhshan, Sarakanda, 3500 m., 21. VII. 53, K.

Laelia coenosa HUBN. f. near subsp. *candida* LEEC:
1 ♂, Sarobi, 1100 m., 3. VII. 56, A.
This ♂ matches some *candida* well, but a ♀ is also required to be sure of the determination.

Lymantria obfuscata WALKER.
2 ♂, Nuristan: 1 ♂, Bashgul-valley, Kamdesch, 2000 m., 16. VII. 52, K, & 1 ♂, Achmede-Dewane, 2700 m., 28. VII. 52, K. Also 1 ♂ Kabul-River, Sarobi, 900 m., 12. VIII. 52, K.,

The same species is a pest on willows in Kashmir, and was erroneously called "*dispar*" in my article "A narrative of a trek with Natural history observations in Kashmir, 1942." (Journ. Bombay N. H. S. 51, 4, Dec. 1953) in which readers are now asked to correct on p. 826, 831, & 838 "*L. dispar*" to read: "*L. obfuscata* WALKER".

Lymantria amabilis CHR.
2 ♂, Paghman Mts, 3000 m., 28. VIII. 53, K.
The orange of the hind-wing is slightly brighter and the grey of the fore-wing is slightly darker than in the average Persian specimen.

Euproctis karghalika MOORE.
5 ex., N. E. Afghanistan, Badakhshan, Schiva high steppe, 2800 m., 7. VII. 53, K.

Euproctis signata BLANCH.
2 ♂, Badakhshan, Kakscha-valley, 1800 m., 16. VII, 53, K.
The same form as in Kashmir.

Euproctis froitzheimi WILTSHIRE 1958.
2 ♂, 5 ♀, Nuristan, Achmede Dewane, 22. VII. 52, K.; and 1 ♂, each, from Ghorband-valley, 1900 m., 26. VIII. 52, K, and Khinjan-valley, 1900 m., 25. IX. 52, K.
The ♀ requires description: I designate as ne-allo-type a ♀ from Achmede Dewane. This sex is not yellow, as the male, but white or pale brown. The antenna has shorter pectinations than the ♂ and only to 2/3 the length of the antenna. The costa-under-side is sometimes not black basad.

Family: Notodontidae
Damata dicyma WILTSHIRE 1958
1 ♀, Nuristan, Bashgul-valley, 1100 m., 9. IV. 53, K.

Cerura vinula L. ssp. *himalayana* MOORE.
1 ♀, Nuristan, Bashgul-valley, 1100 m., 6. IV. 53, K.
This fine specimen approaches ssp. *felina* Butl. from E. ASIA.
1 ♀, Kabul, iv. 42, G. This is slightly paler than the above but appears conspecific.

Harpyia lanigera BUTL.
2 ex., Koksha-valley, Faizabad, 1450 m., 2 & 7. VIII. 53, K.
As suggested in my original description, f. *terminata* WILTSHIRE 1958, proves to be an aberration, not a race, as the second example has the normal termen with black dots.

Harpyia pulcherrima BRANDT subsp. *nuristana* WILTSHIRE 1958.
2 ex., Nuristan, Bashgul-valley, 9. & 14. IV. 53, K.

Family: Noctuidae (= Phalaenidae, Agrotidae)
(The Trifinae group of sub-families are being done by C. BOURSIN.)

Quadrifinae

Sub-family: Jaspidiinae
Metachrostis sefidi BRANDT (?)
1 ♀, E. Afghanistan, Sarobi, 1100 m., 8. VI. 57, W.
BRANDT's Persian species, described as a *Leptosia*, is well distinguishable from *velox* and *velocior* particularly genitaliter, but this rubbed female does not permit certain identification.

The genus Porphyrinia HUBN.
The complete revision of this genus, with its many Tropical species, is very desirable but not yet possible. Certain general remarks on it, however, may perhaps now be ventured.

Though many species described as *Eublemma* must be classed as *Porphyrinia*, one may provisionally retain the name *Eublemma* (type: *suava* HUBN.) for the group so separated in Warren-Seitz. There are none of this group in the Afghan material submitted to me. I follow AUBERT (AUBERT & BOURSIN, 1953) (Les Phalénides du Jura: Bull. Mens. de la Soc. Linn. de Lyon, 22me A., No. 5.) in using the name *Porphyrinia* for the group including *ostrina* HUBN. and *parva* HUBN. AUBERT considers *purpurina* SCHIFF. the genotype, whereas WARREN SEITZ considered *ostrina* HUBN. It seems not to matter which is the type. The separation of *Thalomicra* from this large genus, on the ground of tonguelessness and hind-wing neuration, is unjustified, as many *Porphyrinia* are tongueless or have short tongues, and some of these have the hind-wing neuration of *Thalomicra* while others do not; moreover at least one species varies individually in this hindwing character. The genotype of *Thalomicra* SPULER, *debilis* CHRIST., of which I recently received a male from S. Iran, has typical *Porphyrinia* genitalia. I propose therefore to sink *Thalomicra* SPULER to *Porphyrinia* HUBNER (SYN. NOV.).

I should like to express my gratitude to Dr. B. ALBERTI and Mr. D. S. FLETCHER who have both assisted me in determining the difficult Afghan material of this genus. The difficulties are partly due to some misidentifications committed by WARREN in Seitz III following HAMPSON, and partly to the disappearance of certain types. Once the non-existence of these types was established progress could be made by selecting neo-types; this is necessary particularly in the *pallidula* H.-S.- *griseola* ERSCH. group, of which the Middle East and Central Asia contain a number of distinct forms. For years the British Museum has classed as *griseola* a quite different species from that described and figured by ERSCHOFF. This species appears below under the name *conistrota* HAMPS. I am particularly grateful to Dr. ALBERTI for sending me a drawing of the genitalia of the type of *P. leucanides* STGR., and for loaning to me the actual genitalia of the types of *P. suppura*, *lutosa*, *deserta*, *straminea* & *uniformis* STGR.; it was necessary to consider all these names when determining the three species in Section B below. (Figs 8—13 & 23 illustrate the Staudinger type genitalia).

For purposes of convenience I propose to divide the genus into two sections, the first with distinct cross-markings and the second without.

Section A. Fore-wing with cross-lines or at least terminal line distinctly marked.

Porphyrinia ostrina HUBNER
3 ex., Nuristan, Bashgul-valley, 6 & 9. IV. 53, K.
1 ♂, Gulbahar, 1700 m. V. 1956, A.

Porphyinia parva HUBN.
11 ex., Herat, 970 m., 25. IV. & 5. V. 56, A. (Prep. WM. 18).
2 ex., Sarobi-Gulbahar Rd., Artemisia steppe, 1600 m., 27. VI. 56, A.
14 ex., Gulbahar, 1700 m., 25. VII. and 15.—25. VIII. 56, A.
1 ex., nr. Kabul, 1740 m., 7. IV. 54, A.
9 ex., Sarobi 1100 m., 28. VI.—3. VII. 56, A; 151. IX. 57, E.
1 ex., Kandahar, 950 m., 10. V. 57, E.
15 ex., Darweshan (Registan-Wüste) Hilmendfluß, 15. V. 57, E.
1 ex., Fluß Arghandab (30 km nördlich Kandahar), 1100 m, 23. V. 57, E.

Porphyrinia compuncta LED.(Pl. I fig. 13)
I identify this species from the British Museum Persian material so identified. The male genitalia (Prep. 918) appear not to differ appreciably from those of *albida* DUP. I may report further on this in a later article.

Porphyrinia leucota HAMPS.
1 ♂, Sarobi, 1100 m., 3. VII. 56, A. (Prep. WM. 18)
3 ex., Gulbahar, 1700 m., 15. VI. & 15. VIII. 56, A.
1 ♂, Nuristan, Bashgul-valley, 1100 m., 11. IV. 53, Prep. 920, K.
1 ♀, Panchir-valley, Bazarak, 2200 m., 27. VI. 52, K.

[*Porphyrinia pallidula* H.-S. (Plate II fig. 12)]

I propose as neo-type of HERRICH-SCHAEFFER's species a non-Afghan form, ocurring in Iran, Arabia and elsewhere; further details of it will be given in a subsequent article on material from those parts of the Middle East. The figure shews a form of it from Bahrain. It is exceedingly variable in size, colouring and pattern, but may be distinguished structurally from the Afghan forms of this group by being both tongueless and having "*Thalomicra*" hindwing neuration; as regards fore-wing pattern, the termen (which in all pallidula-group forms is clearly delineated) is usually an interrupted line; there is usually one cell-spot, and in the darker forms a curved post-median fascia usually appears. The form figured, though not typical of the Bahrain race, well matches HERRICH-SCHAEFFER's figure. Enquiries in the Berlin and Halle Museums have shewn that the original type has disappeared.]

Porphyrinia griseola ERSCH. (Pl. II Fig. 10)

The original description of this form says it differs from *pallidula* in being grey, not yellow. The single type, from the high Alai plateau (Kokand), appears to have been lost.

The example from Badakhshan shewn in the figure is also grey and otherwise matches well ERSCHOFF's figure, though that shewed only one cell-spot, not two as in the Badakhshan example. Doubtless this character is variable. ♂, (Prep. WM. 32), Badakhshan, Sarekanda, 2800 m., 21. VII. 53, K. (but sent to me by the Muenchen Staatssammlung). This form has a rudimentary tongue and normal *Porphyrinia* hind-wing neuration. *)

Porphyrinia nuristana sp. n. (Pl. II fig. 9)

Larger and paler than other "*pallidula*" forms. Tongue, well developed. Antenna of ♂, ciliate, the cilia being longer than the diameter of the antenna-shaft.

Thorax and fore-wing, dull whitish deepening to yellow-brown terminad. Outer margin, a brown line, followed by a narrow pure white line along the base of the fringes. Under magnification one or two isolated black scales can be seen irregularly placed on the fore-wing; one is placed on the cell-spot of the right, but not of the left wing. It sowewhat resembles the N. African *virginalis* OB.

Hind-wing, and both wing-fringes, pale buff.

Under-side, fore-wing, dull yellowish-brown infused with pale buff below the cell; fringes distinctly pale buff but termen less contrasted than on upper-side; hind-wing, as upper-side.

Span: 24 mm.

Male genitalia, (fig. 15) of usual *Porphyrinia* form; the two processes of the harpe seem more distinct from one another than in the other "*pallidula*" forms and cross one another in divergent directions.

Hind-wing neuration, of normal *Porphyrinia* type, i. e. vein 8 touches but does not fuse with a stretch of the median nervure in the cell.

Type, ♂ (Prep. 1009), Nuristan, Bashgul-valley, 1200 m., 30. IV. 53, K. (in coll. K.)

Porphyrinia striantula sp. n. (Pl. II Fig. 11)

The largest examples are similar in size to *griseola* ERSCH. (see above), but tongueless and with fore-wing less pointed; in the darker forms there is no trace of a postmedian fascia; instead, striation along the nervures give it, in such forms, a "wainscot" pattern; but the clear terminal line at once distinguishes it from *conistrota* HAMPS. (see section B below).

The short series seems to be an autumnal generation; it contains one large pale male, one large dark female, and two smaller females, one of which is pale and the other dark.

Male antenna, ciliated, the cilia being shorter than the shaftdiameter. Female antenna cilia much shorter.

(*) I had intended designating this example as a neo-type, but the Leningrad Museum belatedly sent three examples determined as „*griseola Ersch.*". These are more yellowish but appear conspecific with the above example; they match perfectly a form common in N. Iran. I consider that the type of *griseola* may, after all, be preserved in U.S.S.R. although an enquiry about it was not answered.

Thorax and head, white or pale brown. Fore-wing of the pale form, plain dull white, purer on costa, deepening to yellow terminad, with a small dark brown apical point or shade and a brown terminal line, adjacent to a distal white line along the base of the fringe. In one example both wings have a clear black cell-spot. The hind-wing of the pale form is similarly whitish in both sexes, without being infuscated terminad. Fore-wing of the darker form, mostly suffused with dull sandy brown leaving the veins and costa paler brown or white. Hind-wing of the dark form, pale brown with a brown terminal line similar to that on the fore-wing.

Under-side of the pale form, whitish buff, with fore-wing only very slightly infuscated. Fore-wing under-side of dark form, brown including the costal area; hind-wing under-side of the dark form, also brown but less dark than fore-wing.

Span: 15—22 mm.

Holo-type, ♂, Prep, WM. 45, East Afghanistan, Sarobi, 1100 m., 20. IX. 57, W. (in coll. Muenchen).

Allo-type, ♀, and two para-type ♀♀, same data but also two on 15. IX. 57, W. (Allo-type and one para-type in coll. Muenchen, one para-type in coll. mea.)

The male genitalia of the above four and the female genitalia of two are illustrated in text figs. 14—19, although in fact the male genitalic characters are less obvious than the other characters mentioned. *P. griseola* (Fig. 16) has a more than usually spiculated vesica and also, quite separate, a cluster of about six very small sharp cornuti; in *striantula* (Fig. 17) there are no cornuti but the distal wall of the aedeagus is minutely scobinate, rather as in *afghana* (Fig. 24 below); the aedeagus of *nuristana* (Fig. 15) appears longer and slenderer than that of the others. The female of *nuristana* and *griseola* were not available; in *pallidula* female (Fig. 18) the bursa has a narrow central transverse band of internal minute spines, while *striantula* (Fig. 19) has a bursa entirely lacking such spines.

Porphyrinia salangi sp. n. (Pl. II Fig. 8)

A rather small but distinctively marked new species of which only one female has been caught. Probably related to *P. semiochrea* Krueger which it somewhat resembles.

Palp, pale brown and white, rather smoother than in most *Porphyrinia*, with a few jutting scales shewing at the end of the second joint. Third joint, short, fine, porrect.

Antenna (♀), filiform, Tongue, rather reduced. (cf. *semiochrea* is tongueless.)

Head and thorax, with pale brown and white scales.

Neuration; on hind-wing, nervures 3 & 4 on a rather short stalk; course of nervure 8, normal.

Forewing, pale brown, more brown-powdered in its basal half, more white-powdered in its outer half, and crossed by a deep purple-brown wavy median shade passing through the black cell-spot. Basal and ante-median fasciae, obsolete, the latter represented on the costa by a deep brown spot. Median shade, which is preceded by a paler brown shade, leaves the costa at right angles, bends slightly terminad to reach the cell-spot, bends basad again below the cell, then curving slightly terminad again reaches the hind margin at a less than right angle. Post-median fascia, faint, brown, proceeding from a brown costal spot and forming two strongly curved bulges, the angle between which is acute, pointing towards the discocellar; below the cell this fascia becomes fainter and runs parallel to the median shade. Marginal field, scattered with purple-brown and yellow-brown shades or spots, including a purple-brown apical spot. Termen, whitish except at apex, checkered with purple-brown along the fringe-bases. Fringes, pale yellow-brown, finely white at their base.

Hind-wing, pale brown, scattered with whitish and purplebrown scales, forming vague wavy bands. Termen less defined than on forewing, fringes paler.

Under-side, both wings, pale brown with faint vague cross-markings indicated by brown scales.

Span: 16 mm.

Female genitalia: (text figure 20): Posterior apophyses about $1\frac{1}{2}$ times size of proximal apophyses. Ostium, sub-triangular, with obtuse apex, its base only being sclerotised by a

ventral plate similar in form to that of all *Porphyrinia* species which I have examined. Ductus bursa: distal section, of about same length as ventral plate, sclerotised, funnel-shaped; central section, membranous, narrow; proximal section, slightly longer than the distal and central section together, consisting of two parts, a sclerotised cylindrical distal part leading from the central section, and a more transparent but also sclerotised swollen spiral section, next to the bursa. Bursa, roughly oval, without signum, and with only a very small field of minute internal spinules, situated not far from the beginning of the ductus, and not extending over more than $^1/_4$ of the diameter of the bursa; its proximal end (or bottom) is also darkened over a considerable area, but this may not be typical.

Holo-type: ♀; East (O.) Afghanistan, Hindu-Kush, Salang-valley, Qulatak, 9. X. 52, K. (in coll. K.)

Section B. Fore-wing without cross-fascia or terminal line.

Porphyrinia afghana sp. n. (Pl. II Figs. 17—19)

The male genitalia suggest a close relationship to *albivestalis* HAMPS. of Palestine; in facies the new form differs in being not pure white and constantly lacking the cell-spot of HAMPSON's species.

Palp. feet, and collar, pale brown.

Thorax and abdomen, white.

Antenna, ♂ with long cilia, ♀ with short cilia.

Tongue, very short.

Hind-wing neuration, normal Porphyrinia.

Fore-wing, mixed yellow and pure white; these two colours vary individually in their respective positions on the wing. Under magnification a few irregularly scattered black scales may be seen but no cell-spot. Fringe, concolorous or slightly more brownish. Underside, darker brown, especially at costa-base.

Span: 17—22 mm.

Male genitalia (text figure 24) are characterised by the aedeagus having its outer dorsal wall armed externally with about thirty fine spines arranged in diagonal rows, fairly well-spaced; the vesica lacks all cornuti. The harpe also has a characteristic form, the upper component being more diagonal and finger-like than in most other *Porphyrinia* species. A Jordanian example of *albivestalis* HAMPS. possesses these characters and if an examination of both sexes of Hampson's types shews agreement with *afghana* it will be permissible to consider the latter a race of HAMPSON's. The female genitalia (text figure 26) are characterised by a narrow transverse band of internal spinules high up, i. e. caudal on the bursa copulatrix; in WM. 1072 (para-type ♀) a fainter more central band is also present, which renders its position slightly doubtful, but I prefer to class it here than under the following species, on account of its facies.

♂ holo-type, and ♀ allo-type, (Prep. WM. 19), both: Sarobi, 1100 m., 3. VII. 56 A. (coll. M.)

2 ♂♀ (Prep. 1072) para-types, same data, in coll. m.

1 ♂, (Prep. WM. 99L) para-type, East Afghanistan, Kabul-R., Tang-i-Gharuh, 1600 m., K. (coll. M.)

1 ♂ para-type, (Prep. WM. 99 R), Sarobi, 1100 m., 28. VI. 56, A. (coll. M.)

Porphyrinia straminea STGR. (Plate I Figs. 15, 21)

1 ♂, (Prep. WM. 90) Herat, 970 m., 15. V. 56, A.

2 ♀♀, (Preps. WM. 90 & WM. 100 L.), Herat, 970 m., 5. V. 56, A.

1 ♀, (Prep. WM. 100 R.) East (O.) Afghanistan, Gulbahar-Sarobi road, *Artemisia*-steppe, 1600 m., 27. VI. 56, A.

1 ♀, (Prep. 1045), NURISTAN, Bashgul-valley, 1150 m., 12. V. 53, K.

[1 ♀, (Prep. 1039, BAHRAIN I., J. Dokhan desert, 19. XI. 59, EPW.)

1 ♂, (Prep. WB. 3, TURKEY, Hadjin, genitalia only of one of STAUDINGER's types. Fig. 11)

1 ♂, (Prep. 289) CYPRUS, Kyrenia, *Cistus*-maquis at sea-level, 16. V. 47, EPW. NEW record for Cyprus.]

The dull straw colour of the forewing, (never, as in the following species, whitened on the costa, and apparently varying seasonally hardly at all in colour or size) characterise this species which is widespread and euryoecous, but not common, nor a migrant, as far as can be guessed. In addition, black scales are sometimes irregularly scattered over the fore-wing, sometimes concentrated to form a cell-spot, and sometimes forming a series of submarginal intraneural black dashes which may lead it to be confused with certain forms of the following species. The underside is pale, with the cell slightly infuscated. Such are the superficial characters of the species of which I separated the examples out on structural grounds, as follows: tongue, very short; hind-wing neuration, typical *Porphyrinia*; uncus, cygnated, unusually well-developed and longer and thicker than normal; vesica of aedeagus with three or four minute cornuti arranged on two adjacent chitinstrips (text figures 11 & 21). Slight genitialic differences in the Herat ♂ are probably of not more than subspecific value. Bursa copulatrix, with a wide band of internal spines extending roughly from near the top (caudal-end) to near the centre; the very short anterior apophyses also characterise the ♀. (Text fig. 27)

Porphyrinia conistrota HAMPS. (Plate II Figs. 16, 20, 22, 23)
7 ♂, (Prep. WM. 24), Herat, 970 m., 5—15. V. 56, A.
12 ex., (Preps. WM. 29, WM. 54), Gulbahar, 1700 m., 24. V.—25. VI & 25. III. 56, A.
3 ♂, (Preps. WM. 96, WM. 98, WM. 25), Sarobi, 1100 m., 3. VII. 56, A.
1 ♂, Bazarak, 2200 m., Panchir-valley, 27. VI. 52, K.
3 ex., Sarobi, 1100 m., 18.—26. V. 57, W.
2 ♂♂, 1 ♀, (Prep. WM. 94), S.-W. AFGHANISTAN, Helmand R., 500 m., Darweshan desert, 18. V. 57, E.
[6 ex., (Prep. WM. 92), S. IRAN: Tiz near Chahbar, 25. III. 54, R.; Djiroft, Anbarabad, 1.—18. V. 56, R.; Chahbar coast, 21.—24. III. 54, R.
1 ♂, (Prep. 417) IRAN, Mt. Alvand, 7000 ft, 20. VIII. 38, EPW.
1 ♂, (Prep. 419) IRAN, Mt. Alvand, 7000 ft., 2. VI. 38, EPW.
1 ♂, (Prep. 480) IRAN, Fars, nr. Shiraz, banks of marsh stream, 6000 ft. 4. VI. 50, EPW.]

This species which is common in the mountains of Iran and Afghanistan and seems also to reach sea-level in the south, varies as described for *leucanides* in SEITZ III. It is doubtless the species so-called by WARREN. However, Dr. ALBERTI's drawings of the male genitalia of *leucanides* STGR. type from Issyk-Kul, accompanied by a written description of the characters diffentiating it from my drawing of Prep WM. 29, shew that WARREN was wrong. I have compared the type of HAMPSON's species (from Quetta) and find it agrees perfectly with some of the above Iranian forms. STAUDINGER's type was a grey, not yellow form, and his name seems to apply to a Central Asian species not reaching Afghanistan or Iran on the west.

The variation, as remarked by WARREN is very remarkable; it is not entirely seasonal, as two small white ♂♂ taken at Sarobi on 3. VII. were taken together with a larger browner ♂; similar large brown forms were taken at Gulbahar in VIII. In some pale straw forms there is a series of black submarginal intraneural marks. The ground colour is frequently sandy brown or dusty grey with whiter costa; infuscation of the fore-wing cell and between the nervures sometimes produces a veined or "Wainscot" effect.

Structurally the species can be recognised in the male by the short thick curved uncus with pointed tip, and aedeagus whose vesica carries a compact field of small blunt cornuti arranged in three or four rows varying individually in number from 11 to 20 (see text figure 22). This distinguishes it from *leucanides* in which the vesica carries two separate fields of darker, pointed small cornuti, the larger field composed of over thirty, and the smaller of four cornuti, (see text figure 23, which may not be quite correctly to scale as I have not seen the preparation from which the drawing which I copied was made). Structural distinctions in the female are the great comparative length of the anterior apophyses, the less sclerotised ostium and the quite clear spineless bursa (see text fig. 28). A structural character of both sexes is their tonguelessness.

Hiccodes dosaroides MOORE
1 ex., Sarobi, 1100 m., 28. VI. 56, A.

Chionoxantha margarita BRANDT
1 ♂ (Prep. WM. 51), Arghandab, N. of Kandahar, 23. V. 57, E.

Acontia lucida HUFN.
4 ex., NURISTAN, 1 ex. Asmar, 900 m., 3. IV. 53, K.; 2 ex., Bash-gul Valley, 1100 m. 6. IV. 53, K.; & 1 ex., the same, 22. IV. 53, K.
2 ♂♂, Kabul, 1800 m, 5.—12. VI. 56, J. DELERÉ.
1 ♂, 1 ♀, Herat, 970 m, 15.—25. IV, 56, A.
3 ♂♂, Polichomri, 700 m, 28. V. 56 (davon 1 ♂ f. albicollis F., 1 ♂ f. insolatrix Hb.), A.
1 ♀, Gulbahar, 1700 m, 18. V. 56, (f. lugens Alph.), A.
1 ♂, Badakshan, Faizabad, 1200 m, 1. VII, 57 (f. albicollis F.), E.
1 ♂, 2 ♀♀, Lashkar-Gah (Dasht-Ebene) 500 m, 14. V. 57, E.
1 ♂, Chah-i-anjeer (Dasht-Ebene) 500 m, 18. V. 57 (f. albicollis F.) E.
1 ♀, Darweshan (Registan-Wüste) 500 m, 18. V. 57 E.

Sub-family: NYCTEOLINAE

Nycteola asiatica KRUL
1 ♀, (Prep. 956) Paghman Mts., 2400 m., 2. VII. 52, K.

Bryophilopsis roederi STADF.
5 ex., Nuristan, Bashgul valley, IV. & V. 53, K.

Earias insulana BOISD.
9 ex., K.
1 ♂ (Prep. WM. 7), Arghandab, N. of Kandahar, 23. V. 57, E.

All these forms are small, and vary from green to straw in coloration. The forms feeding on cotton and on oasis plants seem to be of normal size, whereas the summer generation flying in wild arid places, and with unknown foodplant, are much smaller approaching *chlorophyllana* STGR in size. This phenomenon which I have myself observed in Iran and Iraq, is confirmed by the above Afghan material and also by Mons. Charles RUNGS observations (i. l.) from North-west Africa.

The male genitalia (Prep. 933) (Text figure 32) shew a proportionately thinner pollex than those of *chlorophyllana* STGR (Prep. 880) (Text figure 33) (P = pollex.)

Earias pudicana STGR.
21 ex., 19 from Sarobi
1 from Gulbahar
1 from Pul-i-chomri

Prep. WM. 26, made from one of these, has been compared with a drawing of STAUDINGER's type (Text Fig. 29) kindly sent by Dr. ALBERTI, and confirms the identification. The species can be readily recognised by its purple forewing fringe and plain white hind-wing.

Earias amseli sp. n. (Pl. IV figs. 37, 38)

A new species close to *irakana* WILTS., but larger; in the browner forms of the latter the median area does not markedly widen towards the hind-margin of the fore-wing, as in *amseli*; no green form corresponding to the summer form of *irakana* has been taken of *amseli* but may well be discovered later. In *irakana* no form has the clear yellow coloration of one of the *amseli* forms.

Antenna, ciliate in the ♂, smooth in the ♀; chestnut-brown in the earlier example, pale yellow, banded with brown in the later example.

Palp, chestnut-brown in the earlier example; yellow, intermixed with brown, in the later example.

Head, feet and thorax: chestnut-brown in the earlier example; pale yellow in the later example.

Abdomen, dirty whitish.

Forewing; in the earlier example (♀), chestnut-brown, tinged paler orange basad. Median area, faintly outlined, and partly filled in, by purplish-grey scales, most thickly so shaded near the hind-margin. Cell-spot, a purple-grey dot, faint. Submarginal line, grey, irregularly stepped, obsolete. In the later example (♂), lemon-yellow, with purple-brown fringe and central shade; the latter however only occupies the hind third of the median area. In both forms, the ante- and post-median fasciae begin on the costa close together, diverge in opposite, circular, courses around the cell-spot, and approach one another before proceeding, with straight but again divergent courses, to the hind-margin.

Underside of fore-wing, similar to upper-side but less brightly coloured and with median area not darkened.

Hind-wing, pale dirty white, transparent.

The male genitalia (Prep. WM. 42) are figured, together with those of relatives, in text figures 29—34; in the male, the pollex of *amseli* is shorter than in *irakana* (Prep. 971).

Span: 22 mm.

Holo-type, ♂, Afghanistan, Herat, 15. V. 56, A., in coll. M.

Allo-type, ♀, ditto, 15. IV. 56, A.

The darker colouring of the ♀ is, I think, more probably seasonal than sexual. See "The Lepidoptera of Iraq" (1957) for coloured plate shewing three colour-forms of the close relative *E. irakana* mea. *E. amseli* may well have an analogous series of colour-forms of seasonal incidence.

Sub-family: Euteliinae

Eutelia adulatrix Hubn.

1 ♂, Polichomri, 700 m, 28. V. 56, A

1 ♀, Sarobi, 1100 m, 16. IV. 57, W

2 ex., 1 from Nuristan, Bashgul-valley, 1100 m., 9. IV. 53, K., and 1 from E. Afghanistan, Tang-i-Gharuh, Kabul-River, 21. VIII. 52, K.

Sub-family: Plusiinae

Trichoplusia ni Hubn.

A long series from Bashgul-valley, Nuristan, K.

Kabul, 1800 m, 6. VI. 56 (1 ♂) A.; 15. VI. 57 (1 ♀), E.

Herat, 970 m, 15. IV.—15. V. 56 (9 ♂♂ 7 ♀♀), A.

Polichomri, 700 m, 5. VI. 56 (1 ♂), A.

Sarobi, 1100 m, 28. V.—17. VI. 56 (3 ♂♂), A.
28. V.—17. VI. 57 (2 ♂♂), E.

Gulbahar, 1700 m, 26. VI.—VII. 56 (3 ♀♀), A.
18. V.—23. IX. 57 (2 ♂♂ 4 ♀♀), J. R.

Kandahar, 950 m, 10. V. 57 (1 ♀), E.

Fluß Arghandab (30 km nördl. Kandahar), 1150 m, 23.—24. V. 57, E.

Darweshan (Registan-Wüste) 500 m, 18. V. 57 (3 ♀♀), E.

Autographa gamma L.

A variable series from Jalalabad, 900 m., 30. III. 53, K., Kabul and (many ex.) from Nuristan, Bashgul-valley, K.

1 ♂, Khinsh-e-Andarab, 3500—4000 m, 17. VII. 57, E.

Autographa nigrisigna Walker

2 ♀, Sarobi, 1100 m., 7. VI. 57 & 11. IX. 57, E.

1 ♂, Gulbahar, 1700 m, 18. V. 58, J. R.

Autographa confusa HAW.
4 ex., Nuristan, 1200 m., Bashgul-valley, 9. & 22. IV. 53, K.
1 ♀, Polichomri, 700 m, 28. V. 56, A.
1 ♂, Sarobi, 1100 m, 17. 4. 57, E.

Autographa v-aureum khinjana subsp. n. (Pl. III Fig. 24)
Smaller than typical *v-aureum* HUBN. (= *pulchrina* HAW.) and paler, lacking the purplish colour of that form. The fore-wing is predominantly olive-grey, infused locally with yellow-brown at the apex and elsewhere. In all four examples the white metallic dot is separate from the white metallic V-mark. The forewing also lacks the subterminal brown shades of the typical form; this renders the blackish, angular submarginal line more contrasted with the marginal area. The male genitalia agree with those of *v-aureum*.

Holo-type. ♀, and allo-type, ♂, (Prep. 921): E. AFGHANISTAN, Badakhshan, Khinjan-valley, Ferusch-Tagan, 1900 m., 25. IX. 53, K. (in coll. K.) Para-type, ♂, same data as holo-type, (in coll. mea.)
Para-type, ♀, Badakhshan, Kokscha-valley, Firgamu, 2300 m., 20. VII. 53. K. (in coll. K.)

Plusia orichalcea F.
A long series, Nuristan, Bashgul-valley, 1150 m., 4. IV.—19. V. 53, K.
Sarobi, 1100 m, 6. V. 57 (3 ♂♂ 7 ♀♀) E., 11. IX. 57 (2 ♂♂) E.
Herat, 970 m, 25. IV.—5. V. 56 (2 ♂♂ 1 ♀) A.
Kabul, 1800 m, 13. V. 56 (1 ♀) A.; 6. V. 57 (1 ♂) E.
Gulbahar, 1700 m, 29. V. 56 (1 ♀) A.; 19. III.—13. V. 57 (5 ♂♂) E.; 5. III.—4. V. 58 (1 ♂ 1 ♀) J. R.

Plusia inconspicua GRAES.
A long series, Badakhshan, Sarekanda, 4100 m., 1. VIII. 53, K. These agreed perfectly with an example in the British Museum from Issik-Kul.

Plusia daubei BOISD.
Nuristan, Bashgul-valley, 20. IV. & 3. V. 53, 1200 m., K.

Plusia exquisita ab. exquisitella STRAND 1 ex., Sarobi, W.

Caloplusia hochenwartii HOCH.
4 ex., Badakhshan, Anjuman-pass, 4200 m., 12. VIII. 52, K.

Syngrapha circumflexa L.
3 ♂♂, 6 ♀♀, Herat 15. IV.—15. V. 1956, A.
1 ♀, Gulbahar 13. V. 1957, leg. Jutta RÖHRE.

Sub-family: Catocalinae.
Mormonia neonympha ESP.
N. E. Afghanistan, Badakhshan, 4 ex., Senna, 1800 m., 16. VII. 53, K. and 1 ex., Sarekanda, 4200 m., 31. VII. 53.
These are normal, agreeing with Iranian & Iraqian forms.
Badakshan, Ushnogan Aibok, 3100 m, 1. VIII. 56 (1 ♂), H. HENTSCH leg.
Barak, 1600 m, 10.—30. VII. 57 (4 ♂♂ 2 ♀♀), E.
Gulbahar, 1700 m, 28. VI. 58 (1 ♂), J. R.

Catocala puerpera GIORN.
E. Afghanistan, 1 ex. Ghorband-valley, 1900 m., 26. VIII. 52, K.
1 ex., Ejan, Salang-valley, 2050 m., 11. X. 52, K.
1 ex., near Kabul, 1740 m., 21. IX. 52, K. & 1 ex., 19. VII. 56, A.
Sarobi, 1 ex., 28. VI. 56, A.
These agree with other Middle East forms.

Catocala afghana SWINH.
1 ex., Sarobi, 7. VI. 57, E. ♀, Span: 90 mm.
1 ex., Gulbahar, 15. VI. 56, A. ♂, (Prep. WM. 44) Span: 76 mm.
In text fig. 35 I illustrate the male genitalia of this form, and, for comparison, in text fig. 36 those of the "*elocata* ESP." form from the Lebanon. Agenjo has recently published (in Eos, *35*, 1959, Pl. 8 fig. 7) those of the Spanish "*elocata* ESP." form, and his drawing shews symmetrically sclerotised valve-tips whereas both the more Eastern forms, though slightly different from one another, have right valve-tip less sclerotised than left. It will be necessary to examine typical *elocata* ESP. from South Germany, and also those of other Central Asian forms such as *locata* STGR and *deducta* EV. before a final verdict on this group or "super-species" can be given. If all these forms prove to be, as appears possible, allopatric representatives of each other, it may be better to consider them subspecies of one species. *Catocala deducta* EV. is smaller and paler grey than either the Lebanon or the Afghan form here illustrated. *C. locata* STGR., on the other hand, has orange hind-wings.

Ephesia nymphaea ESP. subsp. *kashmirica* WARREN.
2. ex., Sarobi, 16 & 17. VII. 57, E.; 1 ex., Gulbahar, 15. VIII. 56, A. and 2.—29. VIII. 57, J. R.
Probably a synonym of WARREN's name is subsp. *kabuli* O. B. HAAS described from a single ♂ in Horae Macr. R. Pal. 27, p. 90, Pl. 11 fig. 8 in 1927, but I have not established this synonymy as certain.

Ephesia sp.
A very rubbed ♂ (Prep. 979), taken at Qulatak on 19. X. 52, K., seems to be a distinct species from any known to me, but until further material, in a better state, is available, should not be described.

Dysgonia torrida GN (= *albivitta* GN.)
2 ex., Sarobi, init. VI. 57 & 19. VIII. 57, E.
1 ex., Nuristan, Bashgul-valley, 7. V. 53, Prep. 1029, K.

Prodotis stolida F.
Nuristan, 7 ex., 6 from Bashgul-valley, 7. V. 53, 1200 m., K. (prep. 1003) and 1 ex. Kutiau, 2. V. 53, K.

Alamis umbrina GN.
A long series, Nuristan, Bashgul-valley, IV. 53, K (Prep. 916).

Pericyma squalens LED.
2 ex., Pol-i-chomri, 28. V. 56, A.
Males of this species are often misidentified as the following species owing to the pallour and obscurity of the markings. The genitalia always enable any doubts, due to these causes, to be resolved.

Pericyma albidentaria FREYER.
12 ♂♂, 10 ♀♀, Herat, 15. IV.—5. V. 56, A. (Prep. WM. 17 R.) A.
1 ex., Pol-i-chomri, 28. V. 56, A. (Prep. WM. 17 L.)
1 ex., Sarobi, 3. VII. 56, A.; 1 ♂, 1 ♀ 16.—17. VI. 57, E.
3 ♂♂, 11 ♀♀, Gulbahar, 1700 m, 29. V.—25. VI. and 15.—28. VIII. 56, A; 2 ♂♂, 6 ♀♀ 28. V.—14. VIII 57, J. R.; 29. IX. 57 and 4. V. 58, 1 ♂♀, J. R.
1 ♀, Badakshan, Formunach, 1500 m, 21. VII. 56, H. HENTSCH
In one of these examples the post-median fascia has an abnormally dark and heavy black distal edge, but the genitalia indicate it is conspecific with the others.

Cortyta vetusta WALKER
2 ex., Darweshan, Registan desert, 500 m., 18. V. 57, E.

The genus Drasteria (= Syneda, Leucanitis, Aleucanitis.)

Despite the excellent revision by Oscar JOHN of this genus, under the name of *Leucanitis* GUEN. (JOHN. O., 1910, Horae Soc. Ent. Ross *39.*), both Warren-Seitz and Draudt-Seitz followed the unnatural Hampsonian dichotomy into two genera and indeed two sub-families on the grounds of the presence in some species, and the absence in others, of tibial spines. The natural affinity of all the species hitherto classed under *Leucanitis* and *Syneda (= Aleucanitis)* is at once apparent from their general facies and habits and is confirmed by their genitalia. Oscar JOHN pointed out that the genus was characterised by the presence near the base of the valves of a pair of ticklers, which he called the Conus and Processus basalis valvae. Doubtless his revision appeared after WARREN's manuscript had gone to press, but there was time for it to be considered before the revision by DRAUDT, and it is unfortunate that SEITZ Vol. 3 Supplement, which introduced the latest taxonomic improvements in the Noctuidae Trifinae, namely in the genera *Euxoa*, *Rhacia* and *Athetis*, contented itself merely with substituting the name *Syneda* for *Aleucanitis*, but left it remote from *Leucanitis*.

Even before reading JOHN's revision, I expressed, in my work on the Lepidoptera of Egypt (1948, Bull. Soc. Ent. Fouad Ier, *33*, Cairo.) my rejection of this dichotomy, and brought *Syneda* into a position adjacent to *Leucanitis*, uniting the sub-families *Catocalinae* and *Noctuinae*, as MCDUNNOUGH had done in his North-American check-list.

[Later, when I read JOHN's work, I realised that the Egyptian desert *Leucanitis* species, which I had, with some reserves and following ANDRES-SEITZ, called *picta radapicta* STGR., and which appeared in the coloured plate of my work, was not that species at all but *Leucanitis herzi* ALPH. subsp. *angustifasciata* AMSEL 1935, of which JOHN gave a photograph of an example from Palestine, without designating the race with a separate name, and the male genitalia of which, as illustrated by him are clearly identical with those shewn by me for "*radapicta*". Readers are therefore requested to correct on pp. 277 & 296 (Pl. I fig. 14) of my work on Egypt *L. picta radapicta* to read *Drasteria herzi* ALPH. subsp. *angustifasciata* Amsel. The substitution of *Drasteria* for *Leucanitis* is, of course, necessary since[2] BERIO in 1957 (Ulteriori modifiche e cambiamenti nella nomenclatura dei generi di Noctuidae del Globo, Mem. della Soc. Ent. It. *26*, p. 13) shewed that *Drasteria*, with genotype *graphica* HUBN., a non-Palearctic species, had priority.]

In view of the very full illustrations in JOHN's work, I need not here reproduce drawings of the genitalia of the interesting *Drasteria* forms from Afghanistan, the study of which proved difficult until the kind loan to me of a copy of JOHN's invaluable revision by the Zoologische Staatssammlung des Bayerischen Staates. All thanks to Herrn Dr. W. FORSTER and Herrn L. SHELJUZHKO in this connection.

Drasteria flexuosa MEN.
38 ♂♂, 50 ♀♀, Gulbahar, 1700 m, 4. V.—2. IX. 56, A.
2 ex., Arghandab,
1 ex., Paghman Mts. 2300 m., 25. VI. 52, (Prep. 926), K.
2 ex., Nuristan, Bashgul-valley, 8. V. 53, K.
1 ♂, 6 ♀♀, Sarobi, 1100 m, 28. VI.—3. VII. 56, A.
1 ♂, Kabul, 1800 m, 13. V. 56, A.
1 ♀, Polichomri, 700 m, 28. V. 56, A.
1 ♂, Strasse Gulbahar-Sarobi, 1600 m, 27. VI. 56, A.
1 ♀, Balkh, 400 m, 24. V. 56, A.
1 ♂, 1 ♀, Badakhshan, Faizabad, 1200 m, 1.—3. VI. 57, E.
11 ♂♂, 18 ♀♀, Herat, 970 m, 15. IV.—15. V. 56, A.

The Arghandab example is paler in ground colour than the other. The Paghman example has a wider median fascia than is usual, but this is very variable; I have seen an example

(2) I have not myself examined the genitalia or a figure of the genitalia of *graphica* and do not know whether BERIO did so before declaring that *Drasteria graphica* was the geno-type of this genus. If it should prove not to possess the genitalic criteria of Oscar JOHN, a correction may be necessary after all. Nor have I looked into the characteristics of *Synedoida* H. EDW. which may also be synonymous, despite McDUNNOUGH'S opinion, that it is distinct from SYNEDA.

from S. Iran with the same central band much narrower than usual. This species can always be distinguished from the following by the strongly marked infuscation of the discocellular and usually of the median nervure also on the hind-wing, and by the more arched costa of the fore-wing, giving it a broader, more rounded wing-shape. The genitalia always confirm verdicts based on these characters.

Drasteria sinuosa STGR.

1 ex., Darweshan, Registan desert, 18. V. 57, E. (Prep. WM. 4)

10 ♂♂, 9 ♀♀, 5 & 15. V. 56, Herat, 970 m., A.

1 ♂, 3 ♀♀, Gulbahar, 1700 m, 20. V.—18. VI. 56, A.

The Darweshan form is paler, with a somewhat bleached median area on the fore-wing, and the submarginal area distinctly paler than the area between it and the median area; the three Herat forms have the fore-wing more uniformly chocolate-brown, except for the median area which is paler to a variable degree.

Drasteria cailino medialba subsp. n. (Pl. III figs. 32, 33)

The median band and the half band adjacent to the reniform stigma of the forewing are, in the typical form, rosy brown and yellow brown respectively, and are paler than the adjacent areas but not than the marginal area, which is a pale blue grey, shaded darker grey terminad; similar forms occur from Southern France eastwards into Iran; but this new race from parts of Afghanistan has this band and half band, and the reniform stigma, strongly bleached whitish, so that they are the palest area of the fore-wing. The hind-wing has a broader black marginal band, and even the white parts are more heavily infuscated. On the under-side of both wings the black suffusion is extended into wider bands, contrasting strongly with the whitish basal and median area and half-band.

The genitalia agree in both sexes with those of the typical form.

The descriptions of *clarior* DRAUDT and *baigakumensis* JOHN do not fit this new race, which, it may be added, is frequently smaller than other forms, particularly in the male sex.

Holo-type, ♂, Prep. 924, Tang-i-Gharuh, Kabul River, 1600 m., 21. VIII. 52, K, in coll. K.

Para-type, ♀, similar data, same Prep. no., in coll. mea.

3 ex., (2 ♂, Prep. WM. 6; & 1 ♀) Hindu-kush, Do—ab, 4. VI. 56, A.*

In Herat and Badakhshan a different form of this species occurs which at present cannot be definitely named, though fairly well preserved; in Nuristan a rubbed female has been taken about which even less can be said. The details are:

1 ♀, Herat, Prep. WM. 69, 25. IV. 56, A. This may be f. *obscura* STGR.; the median band is brown-obscured, and a rosy brown suffusion covers most of the fore-wing to the exclusion of other tints.

1 ♀, Prep. WM. 71, Badakhshan, Khinsh-i-Andarab, 3500—4000 m., E. This form has well-marked fore-wing and dull smoky hind-wing, and somewhat resembles fig. 1b, Pl. XVII of JOHN's 1910 revision, which he calls *cailino* without giving a special name.

1 ♀, Nuristan, Bashgul-valley, Achmede-Dewane, 2700 m., 28. VII. 52, K. Nearly all the scales have disappeared from this specimen.

Drasteria saisani STGR. subsp. *clara* STGR.

10 ex., Nuristan, 9 being from Bashgul-valley, 1100 m., 20. IV. 53, K. (Prep. 931) and 1 ex. from Kutiau, 1450 m., 2. V. 53, K.

These are a uniform series and well match the figure of f. *clara* STGR. from Sumbar, Transcaspia, in JOHN's Plate XVII fig. 6b. They are not the clearest or palest form occurring in Afghanistan, however. JOHN's 1910 revision did not figure the typical form of this species. The fore-wing is of a dark inky blue and black coloration, with a contrasting whitish band

(*) Außerdem noch 8 ♂♂ aus Doab und 1 ♂♀ aus Gulbahar, 1700 m, 15. VI. 56, A., die WILTSHIRE bei der Abfassung der Beschreibung nicht vorlagen, da sie sich in der Zoolog. Staatssammlung/München befanden.

and half band, both partly clouded with fuscous; the white basal half of the hind-wing is also considerably infuscated. Paying attention to the meaning of names, one would prefer to apply the name *clara* to the following:

6 ♂♂, 2 ♀♀, (Prep. WM. 39) Hindu-kush, Do—ab, 1400 m., 4. VI. 56, A.

[Also 1 ♂, Prep. 929, IRAN, Elburz Mts., Derband nr. Tehran, 2000 m., 17. VI. 39, W. (in coll. mea). This example I erroneously recorded as *herzi* and readers of my paper on Iran (3) should correct that name to read *saisani* STGR.]

In these the median band and half band of the fore-wing are more bleached, and the white areas of the hind-wing clearer. Note: STAUDINGER's *clara* was described from MARDIN, and perhaps the slightly darker forms from Transcaspia and Nuristan should not be called, as JOHN did, *clara*. I leave this question open.

Drasteria caucasica KOLL.

18 ex., from N. Afghanistan, falling into two colour races: (a) with light brown fore-wing (b) with grey fore-wing. Of the former there are 12 well-marked examples, and also one of the obscure dimorphic female form resembling the figure of *hyblaeoides* MOORE in SEITZ Vol. III. JOHN has pointed out that both *caucasica* KOLL. and *hyblaeoides* MOORE have parallel dimorphism and may be distinguished from one another by the tibial armature. Since none of the Afghan specimens examined by me have spined mid-tibiae I consider all of them *caucasica*, following Oscar JOHN. The details are:

(a) 5 ♂, 2 ♀, Herat, 970 m., Prep. WM. 73, 15. IV.—5. V. 56, A.; 1 ♂, 4 ♀, Balkh, 400 m., 24. V. 56, A.; 1 ♀, Sarobi, 1100 m., 3. VII. 56, A.; 1 ♀, obscure form, Pul-i-chomri, Prep. WM. 76, 700 m., 28. V. 56, A.

(b) 4 ex., Prep. WM. 67, Badakhshan, Barak, 1600 m., 6. VII. 57, E.*

Anomis sabulifera GUEN.

1 ♀, Gulbahar, 1700 m., 25. VIII. 56, A.; 22. VIII. 57, 1 ♂, J. R.

Plecoptera reflexa GUEN.

1 ♂, Prep. WM. 33, East Afghanistan, Sarobi, 1100 m., 3. VII. 56, A.

Lygephila craccae SCHIFF. (? subsp)

1 ♂, Prep. 907, Paghman Mts., 8. VII. 53, K.

Acantholipes regularis HUBN. (Pl. III fig. 31)

1 ex., Sarobi, 1100 m., 3. VII. 56, A.

Acantholipes regulatrix sp. n. (Pl. III figs. 29, 30)

This interesting new species differs from the fore-going in that the light orange post-median band begins at the fore-wing apex, whereas in *regularis* it begins on the *costa* two or three millimetres from the apex; it differs from the following species in the under-side markings being more monotonous; both *circumdata* WALKER and *affinis* BUTLER, which are conspecific, have whitish undersides with bold black apical spot on fore-wing, and only slightly less bold apical shade on hind-wing. The genitalia of these three species are shewn in text figures 37—39, and the Plate shews the general differences in upper-side facies besides those already mentioned. The new species thus has the underside of *regularis*, and an upper-side approaching the less variegated forms of *circumdata* WALKER, but without the latter's large sub-apical black spot.

Male genitalia: the upper lobe of the valve is shorter in the new species than in either *circumdata* or *regularis*; the lower lobe of the valve is developed into a long narrow arm similar to that of *circumdata*, not thickened towards its end as in *regularis*.

(3) 1945. „Seventy new records of lepidoptera from Iran" Ent. Rec. 57 p. 83.)

*) Außerdem 1♂,3 ♀♀ aus Gulbahar, 1700 m, 11. IX. 56 und 24. VIII. 57, R., die WILTSHIRE nicht vorlagen, da sie in der Zoolog. Staatssammlung München sich befanden. Ihre Zugehörigkeit zu den Formen a oder b muß daher offenbleiben.

Holo-type, ♂, Prep. WM. 58, Sarobi, 1100 m., 28. VI. 56, A.
[Allo-type, ♀, S. W. IRAN, Khuzistan, Shush, 19.—24. III. 56, RICHTER and SCHAUFFELE, in coll. Mus. Stuttgart.]

Acantholipes circumdata WALKER subsp. *affinis* BUTL. (Pl. II fig. 28)
2 ex., South-west Afghanistan, 1 from Darweshan, Registan desert, 500 m., 10. V. 57, E., and 1 from Kandahar, 10. V. 57, E.

Anumeta eberti sp. n. (Pl. III Fig. 35)
A striking, large and handsome species, the largest of the genus. Similar to *spilota* ERSCH. and *henckei* STGR. but much larger and with the post-median fascia angled below nervure 2 of the forewing. It is darker brown than *major* ROTHS., which approaches it closest in size, and lacks the dark basal streak along the median nervure of that species.
Palp, pale buff above, deep blackish brown on the side.
Head, with buff and brown scales mixed.
Antenna, ciliate in the male, the ciliation being only about $^1/_4$ of the breadth of the shaft; simple in the female.
Thorax, purplish brown, mixed with whit ish. Fore-wing, sepia brown, darkened over most of the wing, but paler outside the postmedian fascia, and with a suffuse white basal spot, between the median nervure and the hind-margin; powdered with white along the nervures. The costa has seven brown spots; from the first of these the basal fascia proceeds; it is incomplete and not well marked; from the third, proceeds the ante-median fascia, which is dark-brown and zig-zag; from the fourth, a suffuse brown median shade passes through the reniform stigma and may be vaguely defined or clear and zig-zagging roughly parallel to the post-median fascia; from the fifth proceeds the well marked, deep brown, post-median fascia, curved ouwards over the radial nervures and inwards below the cell, then angled outwards between nervures 1 & 2, angled inwards on nervure 1, and reaching the hind margin at an acute angle outwards; from the sixth a vague submarginal shade proceeds, which is wavy and has a whitish outer border between nervure 7 and the tornus; the seventh is a small black apical spot, below which is the paler brown marginal area bordered with a series of black terminal wedges between the nervures; these are joined by a wavy grey line which is separated from the wavy grey termen by a whitish intermediate terminal line. Fringe, pale brown, chequered with darker.
Hind-wing, white, with three suffuse brown bands, more extensive and united in the female; an irregularly round, deep black sub-marginal spot is separated from the wavy brown termen by a narrow white area but not so from the brown median band; on that side the spot has a wavy, paler brown proximal border between it and the band. The fringes are brown near the black spot.
Underside, fore-wing, bleached white with a slight sepia apical suffusion and slightly sepia-tinged fringes and termen. Occasionally a few sepia scales represent the submarginal shade between nervures 2 & 4; hind-wing, similarly bleached, occasionally with a wide ante-median and narrow median band defined by sepia-brown powdering, and usually with slight sepia powdering near the costa and in the anal angle particularly at the beginning and end of the submarginal band, in which the characteristic black spot stands out boldly black but not sharply defined. Termen, as on fore-wing, fringes less brown.
Span: 39—46 mm.
Male genitalia, shewn in text figure 40 (Prep. WM. 50): the uncus is, as in the other species of the genus, stout, with a fine down-turned tip; it is not of uniform thickness from its base to the end of the thickened portion, as in *major* ROTHS., but is thickened gradually and uniformly from its base towards the tip in a club-like manner, being thickest just before the pointed tip, which projects from the middle of the blunt end; the valve also differs from that of *major*, in not being of uniform thickness from its base to near the tip, but has a basal neck and is thickest shortly after this narrowest point; both its costal and ventral surfaces are rather soft and studded with setae, those on the costa being larger; the valve-tip is bluntly rounded and covered with hairs which however do not issue from large setae. The long, cylindrical aedeagus contains a boomerang-shaped sclerotised plate, one end of which is curled over; the vesica is streakily sclerotised anterior to this.

Holo-type ♂, allo-type ♀, and 2 ♂ and 1 ♀ para-types, South-west Afghanistan, Darweshan, 500 m., Registan desert, 17.—18. V. 57, E., (in coll. Zoolog. Samml. Muenchen.); one para-type, same data, in coll. m.

Anumeta cestina STGR.
1 ♀, South-west Afghanistan, Darweshan, 500 m., Registan desert, 18. V. 57, E.

Anumeta spilota ERSCH.
2 ♀♀, same data as preceding species.

Armada panaceorum MEN.
19 ♂♂, 8 ♀♀, Herat, 970 m, 25. IV.—15. V. 56, A.
1 ♂, Darweshan (Registan-Wüste), 500 m, 18. V. 57, E.

Armada leuconephra luxurians subsp. n. (Pl. II Fig. 14)
Larger than the typical race of Fars, S. W. Iran; in markings approximates to ab. *fuscobasalis* BRANDT thereof, but the reniform stigma is not white.
Holo-type and para-type: 2 ♀♀, Nuristan, Bashgul-valley, 1200 m., 20. IV. 53, K. (in coll. K.).

Raparna (?) *leda* H.-S.
1 ♀, NURISTAN, Bashgul-valley, 1100 m., 6. IV. 53, K.
Resembles a smaller *leda* H.-S. (placed under *Antarchea* in the British Museum); also not far from *Raparna erubescens* B.-H. but duller tinted than the form of that which I have from Arabia and with a more distinctly marked fore-wing. The third joint of the palp being long and fine, this Afghan female would seem, according to the diganosis of WARREN-SEITZ, to be indeed a *Raparna*.

Rhynchina abducalis WALK. *f. curviferalis* WALK.
1 ex., NURISTAN, Bashgul-valley, Mangul, 1250 m., 18. VII. 52, K.

Rhynchodontodes revolutalis Z. (= *eremialis* WALK., *syriacalis* STGR., *centralis* STGR., syn. nov. nec *ravalis* HUBN sp. b.) (Pl. III figs. 42, 43)
17 ♂♂, 25 ♀♀, Herat, 970 m., 15. IV.—9. V. 56, A. (Prep. WM.5)
3 ex., Balkh, 400 m., 24. V. 56, A. (Prep. WM. 38)
3 ex., Gulbahar, 1700 m., 21. & 24. V. 56, A.,
10 ex., Sarobi 1100 m., VI.—VII. 56, A.
1 ex., Pul-i-chomri, 700 m., 5. VI. 56, A.
1 ex., Badakhshahan, Faizabad, Kokscha Valley, 1450 m., 7. VIII. 53, K.
1 ex., Kabul-River, Tang-i-Gharuh, 1600 m., 21. VIII. 52, K.

This widespread Anatolian-Iranian or East Eremic species, of which the earliest description wrongly gave its habitat as South Africa, is shewn by its genitalia to be distinct from *ravalis* HUBN. of which I have seen specimens from the Balkans to N. Iraq but not further east. Dr. ALBERTI's drawings of the male genitalia of the types of *syriacalis* STGR. and *centralis* STGR. shew that they are identical; it may still be permissible to use these names as aberrational names and even to apply them to some Afghan forms, but the species varies so greatly everywhere in its range that I doubt whether they can be used for subspecies, or whether any races can really be distinguished. The 26 Afghan examples shew extraordinary variability in size and especially coloration. The earliest Herat example (15. IV.) is the smallest in size and rather obscure and dark, but most of the others from Herat (IV.—V.) are larger and variable in colour; one of them is dark grey except for a pale orange suffusion between the fore-wing-base and the lower median area; another is paler grey, otherwise similar; others from Herat in May are more monotonous and pale grey-brown. All the forms from the other localities are small arid forms and doubtless are gen. II or gen. III; they are distinguished, when in good condition by the strikingly white forewing termen.

In most of them the fore-wing is very scantily marked; the Balkh forms are whitish-buff, the Gulbahar and Sarobi forms more grey. I have taken small grey forms with white fore-wing termen similar to these in the autumn at Dalaki, a low eremic locality in Fars, S.W.Iran. The genitalia of these are all identical; they are illustrated, with those of other related forms occuring in S. Europe or the Middle East in text figures 41—51.

Rhynchodontodes amseli sp. n. (Pl. IV fig. 41)

Larger than either *antiqualis*, *ravalis* or *revolutalis*, with straighter costa and more pointed fore-wing; the fore-wing is more infuscated than that of *revolutalis*. The submarginal line of the fore-wing has a proximal series of 2—4 black arrowhead-marks, as in *antiqualis*, except that only the first two of these are well developed and the series of such marks does not extend to so near the tornus as it does in *antiqualis;* such marks are quite lacking in *revolutalis*. The post-median fascia is curved, as in *revolutalis*, not sharply angled round the cell as in *antiqualis*. On both wings the fringes are brown, concolorous, whereas in *antiqualis* and *revolutalis* they are paler and greyer or whiter than the rest of the wing.

Genitalia: (see figs. 43 & 50). The male genitalia shew relationship to *revolutalis* and *ravalis;* all three have a long unilateral appendage, a slender probe with serrate tip, attached to the caecum penis and projecting far beyond the end of the aedeagus: ***amseli*** differs in the harpe-form, if the sclerotised process of the valves can rightly be called a harpe (its position is not that of the normal harpe); in *revolutalis* this process is anvil- shaped, in *ravalis* and *ravulalis* (the latter is probably conspecific with the former) is spoon-like; in *amseli* less heavily sclerotised, more oval and blunt. In the female, both *revolutalis* and *amseli* have a bristly or scobinate development of the eighth ventrite; in *revolutalis* this is more formless, in *amseli* it is distinctly trident-formed or perhaps might recall the heraldic fleur-de-lys. The ostium of *amseli* also differs, being like a lip, that of *revolutalis* being merely linear, though similarly curved proximad at either end.

Span: 21—26 mm. (All of the types, except one, are 25—26 mm.)

Holo-types, ♂& ♀ (in coll. M.) and two para-types, ♀,: HERAT, 970 m., 25. IV.—6. V. 56, A. (Prep. WM. 31)

Para-type, ♀, Sarobi. 1100 m., 3. VII. 56, A.

Para-type, ♀, (Prep. 1052): NURISTAN, Bashgul-valley, 1100 m., 6. V. 53, K. (coll. K.)

[In text figs. 41—48 I am illustrating the valve form and aedeagus of this new species, of the dry autumnal *revolutalis* form, of a male *ravalis*-form from N. Iraq, and of the Stgr. types of *syriacalis*, *centralis* and *ravulalis*. I am indebted to Dr. B. Alberti for drawings of these last three, and of *mardinalis* Stgr., which I have copied without seeing the actual preparations which he made. My copies are on a slightly smaller scale than the others, and, as they were made without the microscopic prepations to hand, I cannot guarantee the minute differences. There seems however no reason to doubt the conspecificity of the forms *syriacalis*, *centralis* and *revolutalis*. Of the latter I have many preparations. The aedeagus and valve of *antiqualis* and *mardinalis* are also shewn; these two are very close to one another and belong to a different group of this genus, lacking oedeagus-probe. The female genitalia of *amseli* and *revolutalis* are shewn in text figs. 50 & 49 and, for comparison, that of a Balkan female of *ravalis* Hubn. (Fig. 51). I have not been able to compare the genitalia of the same sex of the Balkan and N. Iraqi *ravalis* forms. If the Balkan male should prove different from the Iraqui it will be necessary to consider the latter to be *ravulalis* Stgr. b. sp., and not *ravalis* Hubn., but if they agree *ravulalis* would appear to be no more than a form of *ravalis*. This point must be left in doubt for the present.]

Hypena klapperichi sp. n. (Pl. IV fig. 44)

A new species very close to *obsitalis* Hubn., perhaps only a subspecies thereof; it has a narrower fore-wing, less pointed at the apex, and a paler grey coloration.

Antenna (♀): serrate-ciliate.

Fore-wing, basal half, dirty brown as far as the postmedian fascia, containing two black spots to represent the reniform stigma, the upper being more constantly conspicuous than the lower; the brown area only actually reaches the post-median fascia on the median nervure, where it juts out in a right-angled projection; nearer the costa a pale grey area separates

the brown area from the fascia and near the hind-margin the brown area is less distinctly limited and extends in a suffuse brown cloud towards the submarginal line which is indicated in white The post-median fascia is very fine, black and interrupted, and difficult to distinguish from the other vague wavy dark grey cross-lines on the pale area. The apical area is more brown-suffused and contains three or four black dashes. Termen, black, interrupted. Fringe, pale grey-brown, darker basad. Hind-wing, dull-brown, the discocellular being infuscated to form a crescent; nervures, darker brown terminad. Termen, darker brown, with a pale distal edging. Fringe, as on fore-wing.

Under-side, fore-wing, pale brown-grey, with darker veins, but brown-suffused near the costa which however has paler marks along it marking the nervures. Stigmata and fasciae, not indicated. Hind-wing, dirty grey, darker terminad, with discocellular crescents clear.

Span: 29—30 mm.

The female genitalia are shewn in fig. 52.

Holo-type and para-type, ♀♀, (Prep. 1053), Nuristan, Bashgul-valley, 1200 m., 20. IV. & 4. IV 53, K. (in coll. K.)

ANTHROCEROIDEA (ZYGAENOIDEA)

Family: LIMACODIDAE

Altha nivea WALKER

4 ex., NURISTAN, Bashgul-valley, 1200 m., 7. V. 53, K.

Thosea cana WALKER f. *tripartita* MOORE

1 ex., NURISTAN, Kutiau, 1650 m., 14. VI. 53, K.

several ex., Bashgul-valley, 1150 m., 19. V. 53, K.

Family: GEOMETRIDAE

An annotated list of these will appear in a following article; four new species, of which the descriptions have long since been ready, are however published hereunder.

Sub-family: BAPTINAE

Heterobapta ejana sp. n. (Pl. IV Figs. 47, 48)

This interesting discovery, the second known species in a genus which I described in 1943 from S. W. Iran, has very similar appearance and structure, and also similar autumnal univoltine phenology to that of the genotype, *plumellata* mea. (1) It may be distinguished from that species by the lighter-marked forewing cell-spot and by the genitalia. It happens to resemble *Bapta craspedochrea* WEHRLI, as illustrated in SEITZ IV Suppt. Plate 22 i, a Chinese species with a smooth frons and summer flight-season.

Frontal prominence, a papillate dome, or cone.

♂ antenna, serrate-ciliate; ♀ antenna, ciliate, with shorter ciliations.

Tongue, present; palp. very small.

Forewing of ♂, more pointed and longer, also paler than of ♀; colouring and markings, as in *plumellata*, dull and sooty, but cellspot smaller, fainter, and post-median fascia less denticulate. The hind-wing has the post-median fascia more smoothly parallel to the outer margin, but is otherwise much as in *plumellata*.

In the male genitalia, shewn in text figure 53, the aedaegus and valves are very similar to those of *plumellata*, but the uncus is larger.

Span: 22—27 mm.

Holo-type, ♂ (prep. 938), and allo-type, ♀, East (O.) Afghanistan, Hindu-kush, Salang-valley, Ejan, 2000 m. 11. X. 52, leg. KLAPPERICH, (in coll. KLAPPERICH.)

(1) *H. plumellata* was briefly described and well illustrated in Journ. Bombay Nat. Hist. Soc. Dec. 1943; its structure was described in detail, with a drawing of the male genitalia, by W.T.M. Forbes in my 5th article in this series, in Proc. R. Ent. Soc. Lond. (B) *15*, Pts. 9—10. Oct. 1946. (See also WEHRLI in SEITZ IV Supplement. pp. 704—5. I prefer however to retain *Prometopidia* as a good genus.)

Prometopidia arenosa sp. n. (Pl. IV Fig. 45)

This new species is at once distinguishable from *P. conisaria* HAMPS. (Fig. 46), with which it flies in Nuristan, by its broader wings, fewer fainter fasciae, and pale sandy almost pink colouring.

Frons, a brown naked blunt cone. Vertex, whitish.

Antenna (♀), minutely setose.

Thorax, with sandy white and grey-brown scales mixed.

Abdomen, with concolorous (sandy-brown) floricomus (♀), bifurcate ventrally, not black-scaled as in *conisaria*.

Fore-wing, pale sandy brown sparsely speckled with sooty scales. Basal and ante-median fasciae, lacking. Cell-spot, a distinct blackish oval. Post-median fascia, darker, faint, denticulate, with a pale outer edging, beginning nearer the apex than its termination lies from the tornus. Termen, marked with a series of black, inter-neural spots. Fringes, concolorous.

Hind-wing, similar, but with cell-spot less conspicous, post-median fascia less denticulate, straight, rather faint.

Under-side, duller, with cell-spots equally distinct on both wings, and post-median fascia clearer on hind-wing.

Span: 27 mm.

Holo-type, ♀: Afghanistan, Nuristan, Bashgul-valley, 1500 m., 26. IV. 53, leg. KLAPPERICH. (in coll. KLAPPERICH.)

Sub-family: ENNOMINAE.

Scodiomima afghana sp. n. (Pl. III fig. 27)

The second-known species of this genus, of which the genotype, *crocallaria* STGR., is known from Khorasan and Transcaspia (see WEHRLI, SEITZ IV Supplement p. 657.). It may be distinguished from it by its narrower wings, stronger markings, straighter course of the post-median fascia near the forewing costa, and by the apparently different hind-wing neuration; I have not examined a typical *crocallaria*, and rely on Prout's remarks on the neuration. Hind-wing nervures 6 & 7 are shortly stalked in *crocallaria*, but free or connate from corner of cell in *afghana*. The male genitalia, illustrated in text figure 54, differ from those of the closely related genus *Crocallis* exactly as stated by Wehrli, l. c., in his generic diagnosis.

Palp, with long brown hairs projecting below from second joint. Tongue, absent. Frons, smooth, slightly domed.

Antenna (♂), bipectinate.

Thorax, abdomen and forewing, varying from whitish buff to yellow brown. Forewing, sometimes irregularly marbled with brown freckling, or with median area darker yellow-brown. The two fasciae are invariably, and the cell-spot almost invariably, brown-defined. The ante-median fascia is much as in *crocallaria* (SEITZ IV, Pl. 24d.) but hardly reaches the hind-margin. The cell-spot is nearer to the post-median fascia, which is more parallel to the outer margin at first, i. e. is not incurved towards the costa, and is more inward-bent below the cell than in *crocallaria*; it varies in thickness, smoothness and definition. Fringes, concolorous,.

Hind-wing, paler, more faintly marked than fore-wing, with cell-spot and post-median fascia obsolete and antemedian fascia lacking; fringes, sometimes browner than rest of hind-wing.

Under-side, as upper-side, but more faintly marked and with duller colouring.

Span: 26—34 mm.

Holo-type, ♂, and six para-types, ♂♂,: East (O.) Afghanistan, Paghman Mts., 3000 m., 28. VIII. 59, leg. KLAPPERICH (in coll. WILTSHIRE and KLAPPERICH.)

Crocallis klapperichi sp. n. (Pl. III Fig. 26)

The very different colouring and appearance surely rule out the possibility that these two females are the same species as the foregoing, which the similarity of headparts, etc., and the fact that only ♂♂ of *afghana*, only ♀♀ of *klapperichi* were taken, might otherwise indicate.

Antenna (♀), slightly serrate-ciliate.

Thorax and abdomen with long grey-brown hairs, slightly lilac-tinged. Fore-wing, pale grey brown, slightly lilac or mauve-tinged. Outer margin, not indented below apex. Ante-median line, dark brown, angular, proceeding at first from the costa straight towards the tornus, but indented below the median nervure, out-curved and indented again on nervure 1; both it and the post-median fasciae are darker-brown where they reach the hind-margin; cell-spot, at right angles to costa, deep brown, thick, linear; post-median fascia, deep brown, inward-angled at nervures 2, 3, and 6, which are darkened where they meet it; this fascia leaves the costa at an oblique angle but meets the hind-margin at right-angles; the median field is darker than the rest of the forewing, especially close to the two fasciae and the costa. Fringes, concolorous.

Hind-wing, cell-spot and ante-median fascia, obsolete, post-median fascia more distinct. Fringes, darker than marginal field.

Under-side, coloured as upper-side, both wings with cell-spot and post-median fascia clearly defined in dark brown.

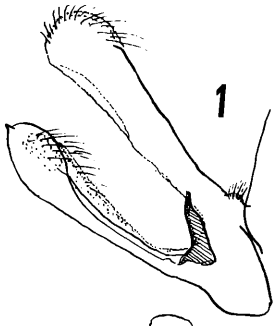
Span: 35—38 mm.

Holo-type, ♀: East (O.) Afghanistan, Paghman Mts., 3000 m., 28. VIII. 53, leg. KLAPPERICH (in coll. KLAPPERICH.)

Para-type, ♀: North-east (N.O.) Afghanistan, Badakhshan Mts., Sarekanda, 4200 m., 31. VII. 53, leg. KLAPPERICH (in coll. KLAPPERICH.)

CORRIGENDUM

After further research I have now modified my view of the relationship of *pallidula* H. S. and *griseola* ERSCH. and the appropriate neotype of the former. In conformity with details to be given in my next article the following corrections should be made: Explanation of drawings: Figs. 14 & 18: after „*pallidula* H. S." INSERT: „*khalifa* subsp. n."; Fig. 16, for „*griseola* ERSCH." READ: „*pallidula* H. S. f. *griseola* ERSCH.". Key to Plates: Fig. 10 for „*griseola* ERSCH." READ. „*pallidula* H. S. f. *griseola* ERSCH."; Fig. 12 after „*pallidula* H. S-" INSERT: *khalifa* subsp. n."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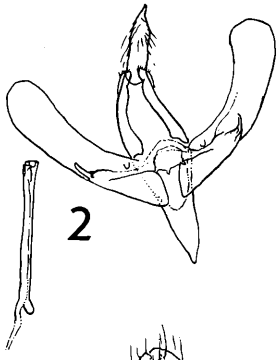
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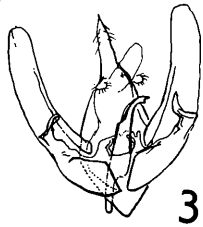
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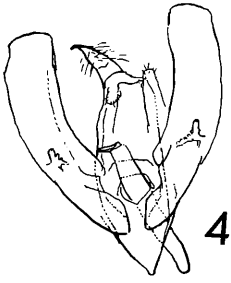
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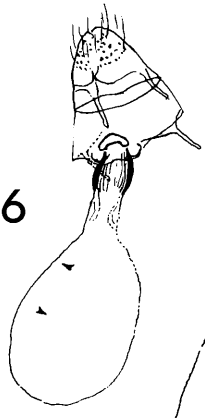
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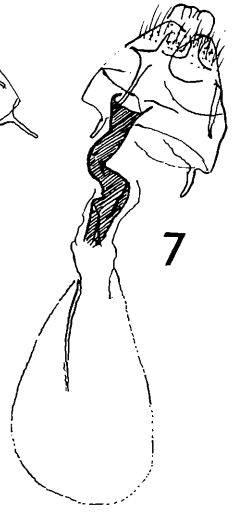
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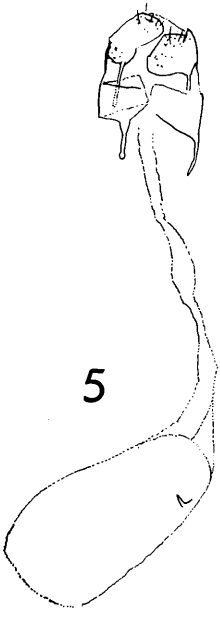
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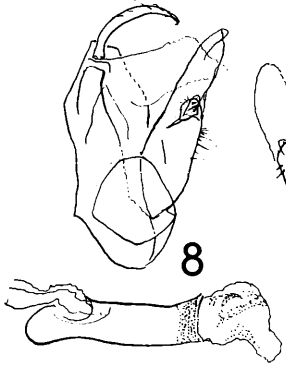
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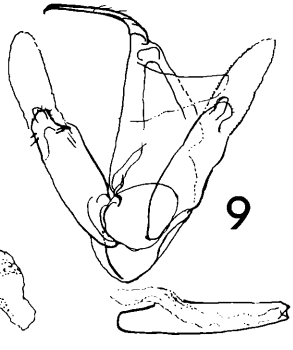
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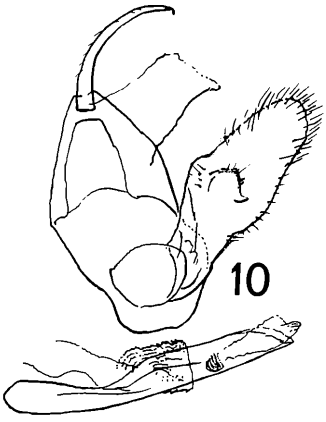
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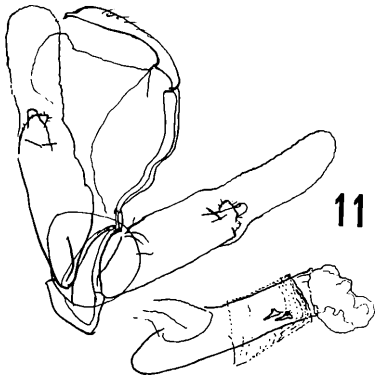
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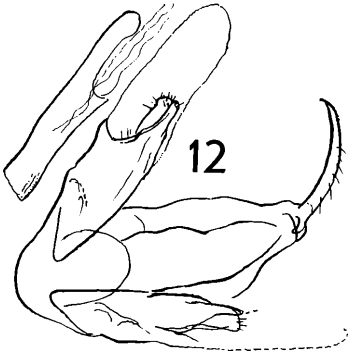
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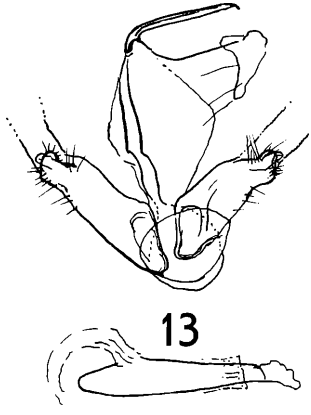
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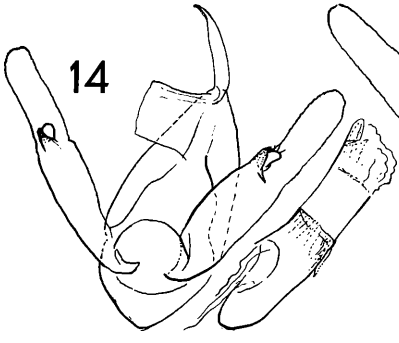
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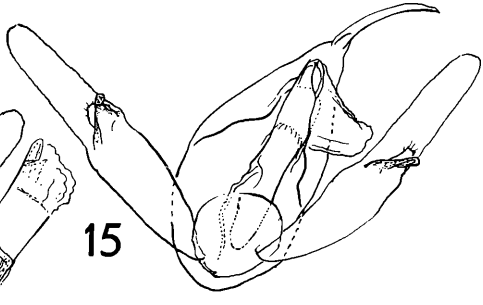
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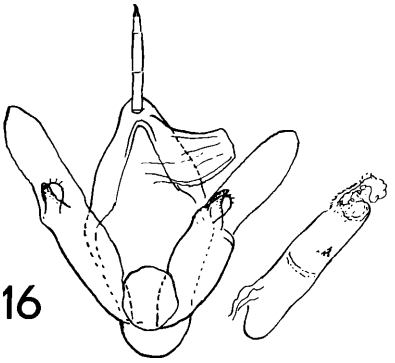

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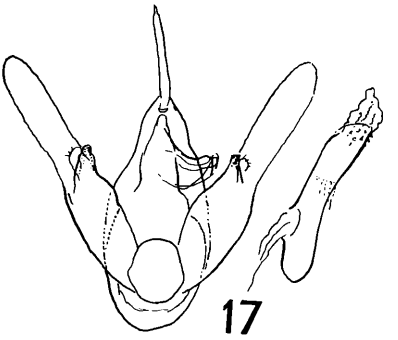

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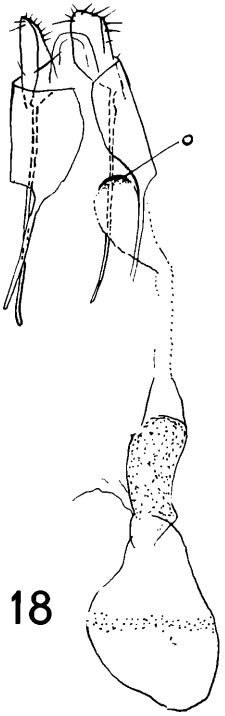

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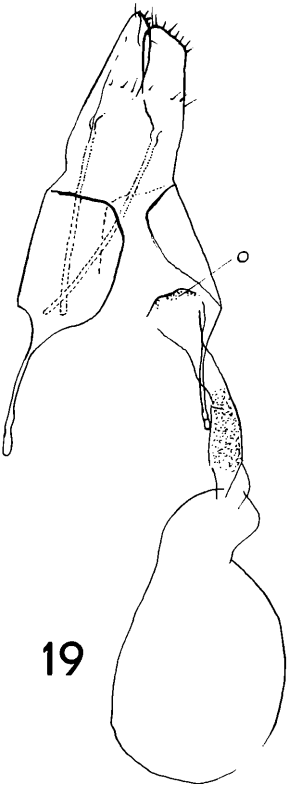

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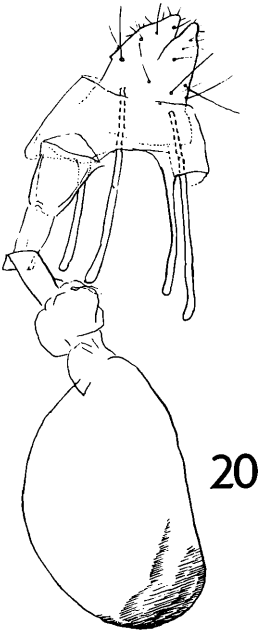

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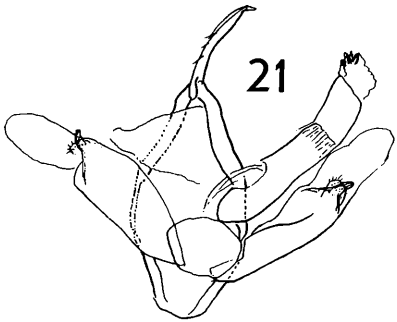
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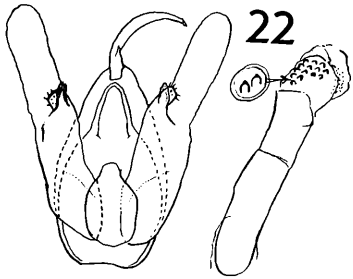
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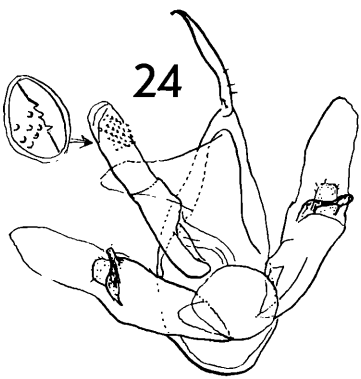
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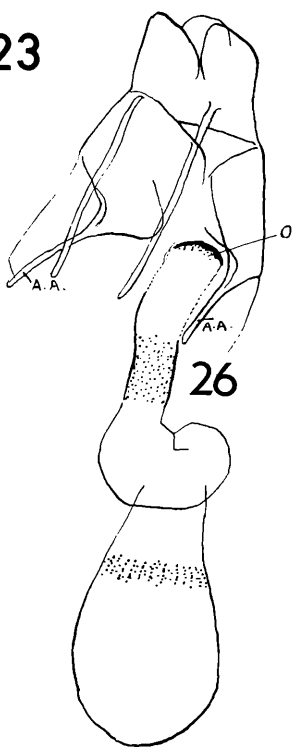
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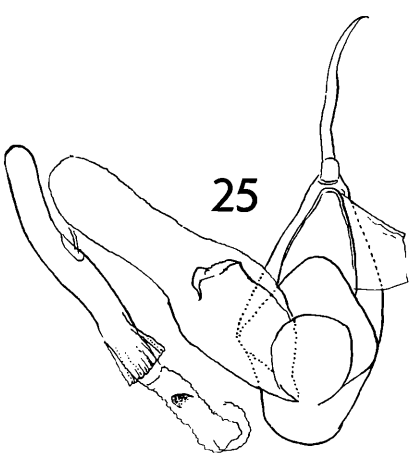
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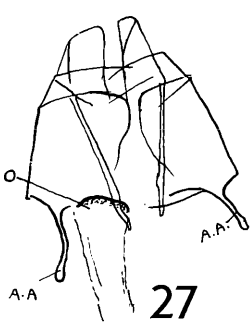

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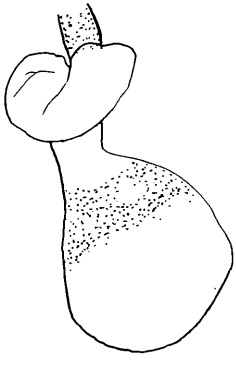

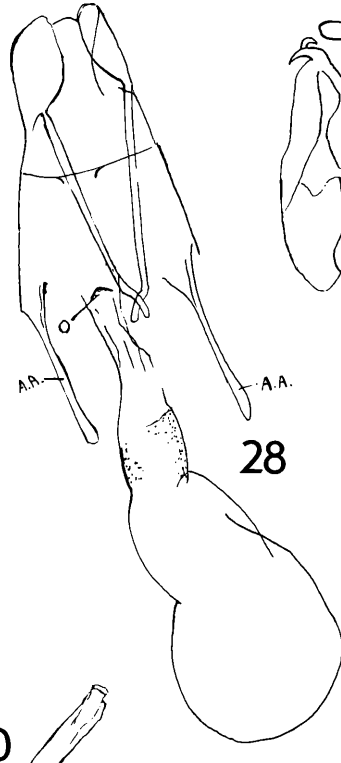

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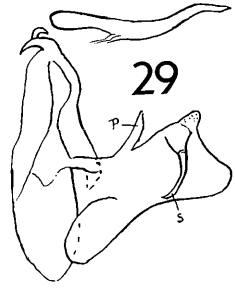

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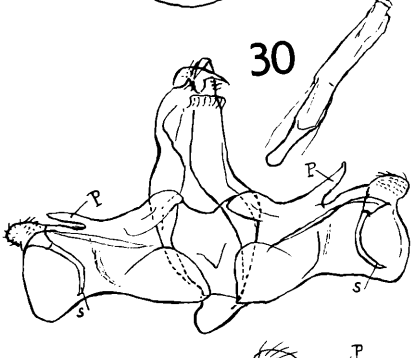

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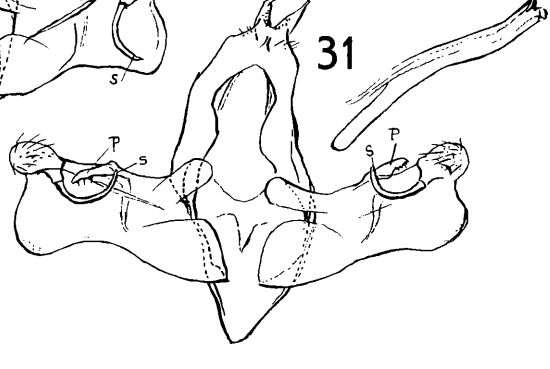

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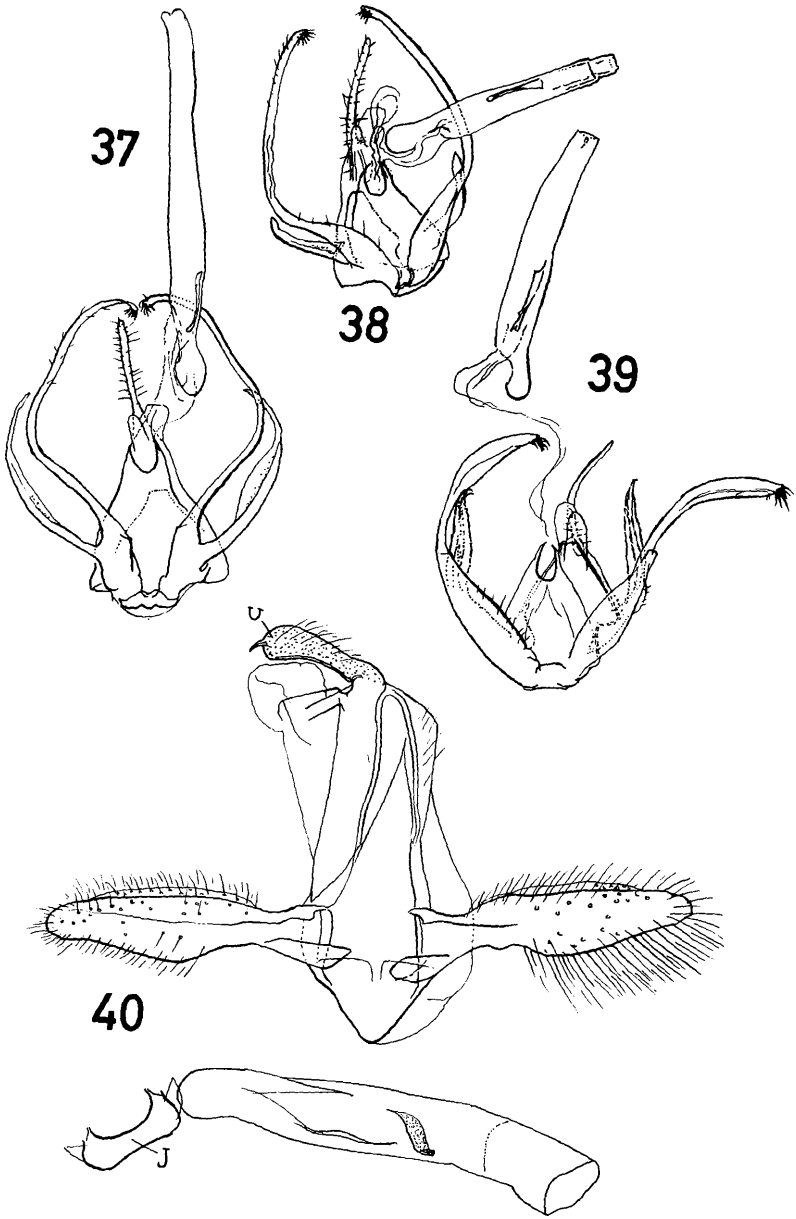
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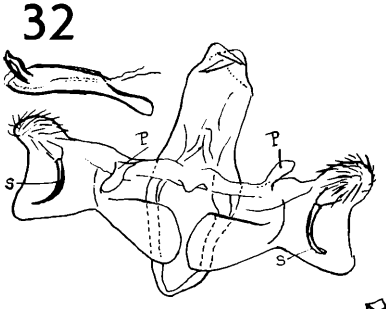
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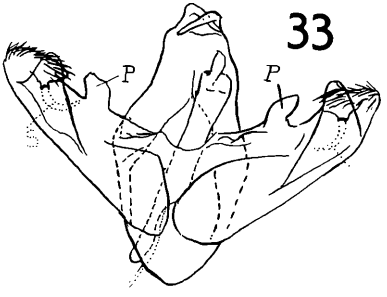
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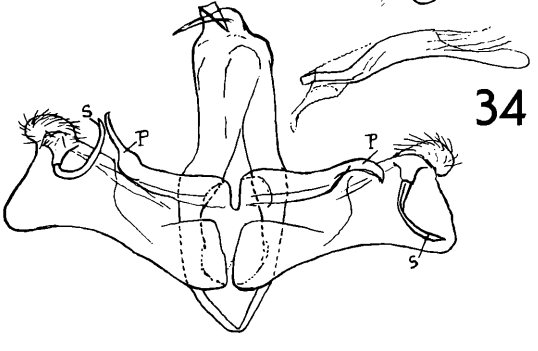
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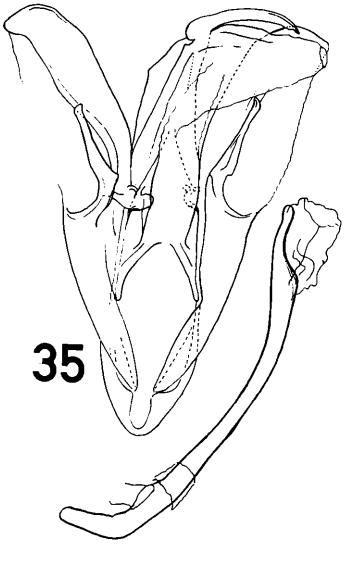
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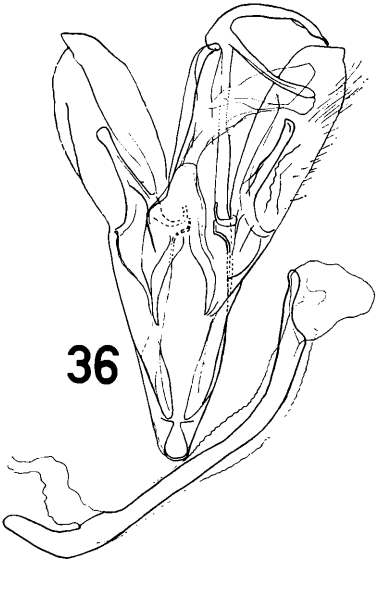
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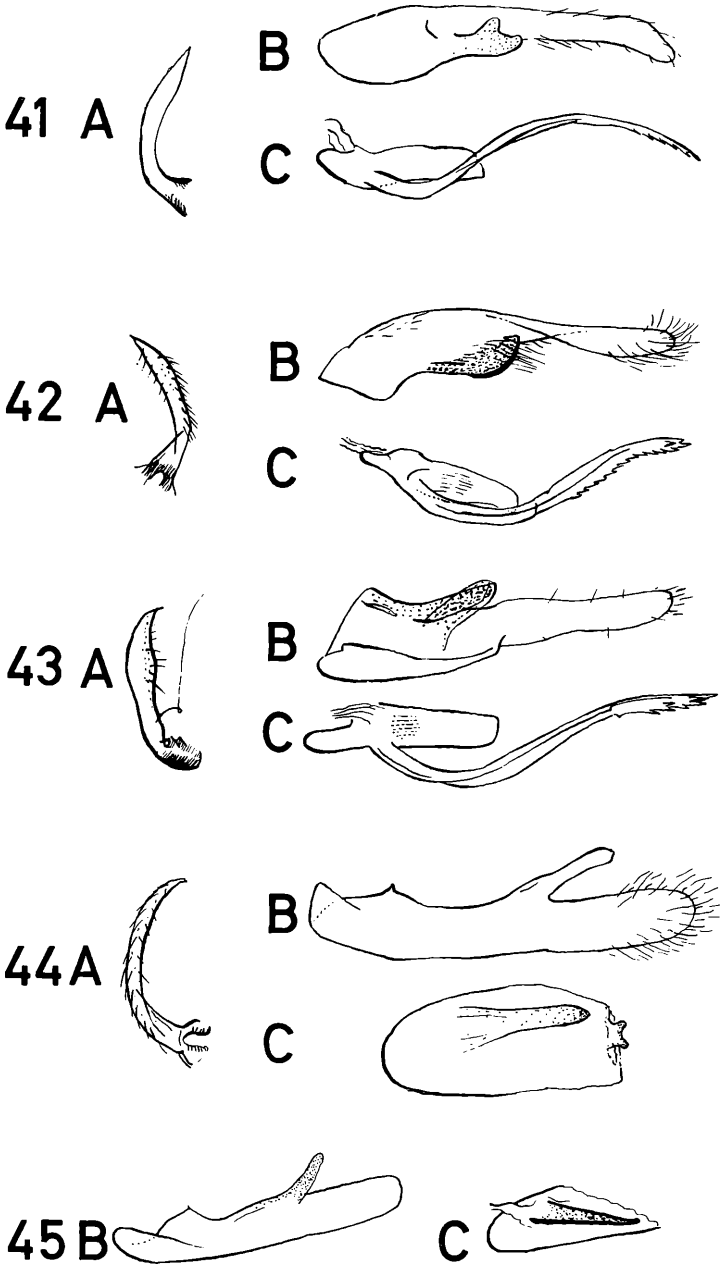
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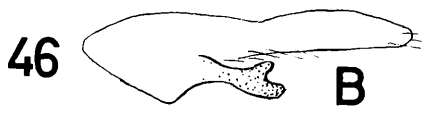
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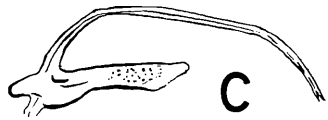
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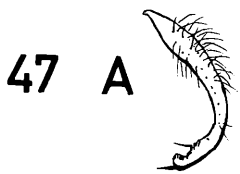
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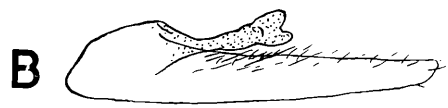
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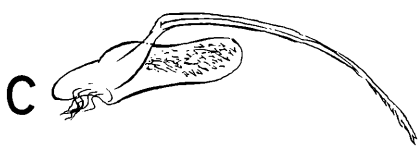
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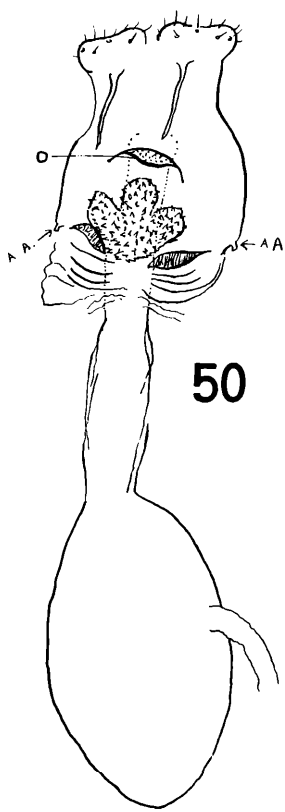
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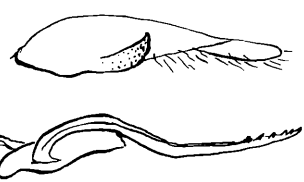
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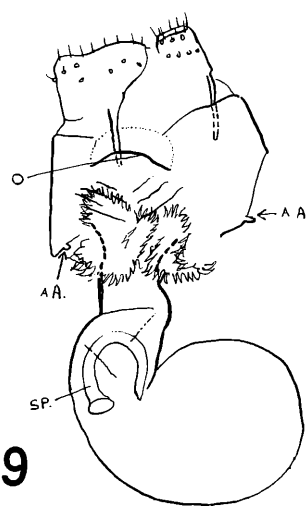
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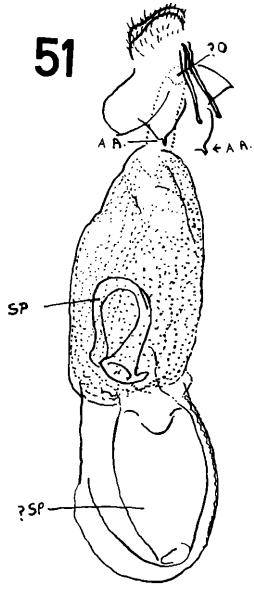
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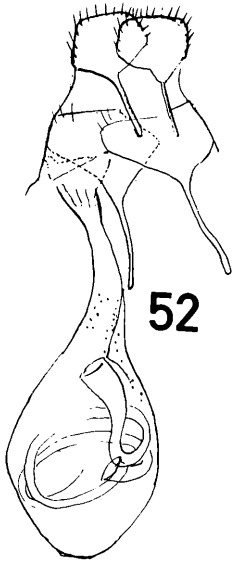
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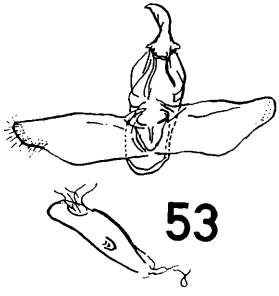
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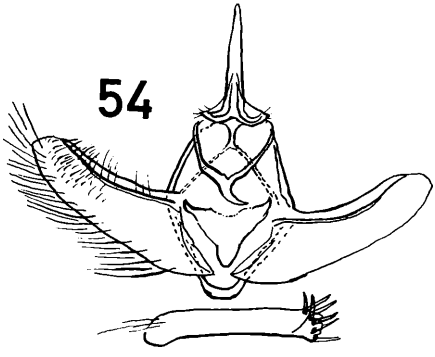
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EXPLANATION OF DRAWINGS, FIGS. I—54

WILTSHIRE: *Afghan Lepidoptera.*

Fig. 1. *Celama fraterna* Moore. ♂ genitalia; left valve only, in open ventral position. (Nuristan).
Fig. 2. *Roeselia togatulalis* Hubn. ♂ genitalia, ventral open position, with aedeagus separated. (Mainz).
Fig. 3. *Roeselia nanula* sp. n. ♂ genitalia, ventral open position. (TYPE. Nuristan).
Fig. 4. *Roeselia gigantula* Stgr. ♂ genitalia, ventral open position. (Iraq).
Fig. 5. *Roeselia togatulalis* Hubn. ♀ genitalia, ventral view. (Gonsenheim).
Fig. 6. *Roeselia nanula* sp. n. ♀ genitalia, ventral view. (TYPE. Nuristan).
Fig. 7. *Roeselia gigantula* Stgr. ♀ genitalia, ventral view. (Iraq).
Fig. 8. *Porphyrinia deserta* Stgr. ♂ genitalia, ventral open position with aedeagus separated; omitting left valve. (TYPE. Biskra).
Fig. 9. *Porphyrinia suppura* Stgr. ♂ genitalia, ventral open position (right valve closed), with aedeagus separated. (TYPE. Malatya.)
Fig. 10. *Porphyrinia suppuncta* Stgr. ♂ genitalia, ventral open position with aedeagus separated, omitting left valve. (TYPE. Mardin).
Fig. 11. *Porphyrinia straminea* Stgr. ♂ genitalia, ventral open position with aedeagus separated. (TYPE. Hadjin).
Fig. 12. *Porphyrinia uniformis* Stgr. ♂ genitalia, ventral closed position, with aedeagus separated. (TYPE. Schahrud).
Fig. 13. *Porphyrinia suppura* subsp. *lutosa* Stgr. ♂ genitalia, ventral open position, with aedeagus separated and valve-tips missing. (TYPE. Beirut).
Fig. 14. *Porphyrinia pallidula* H.-S. ♂ genitalia, ventral open position (right valve closed), with aedeagus separated. (Bahrain.)
Fig. 15. *Porphyrinia nuristana* sp. n. ♂ genitalia, ventral open position (left valve closed). (TYPE. Nuristan).
Fig. 16. *Porphyrinia griseola* Ersch. ♂ genitalia, ventral open position (right valve closed), with aedeagus separated. (Badakhshan.)
Fig. 17. *Porphyrinia striantula* sp. n. ♂ genitalia, ventral closed position, with aedeagus separated. (TYPE. Sarobi).
Fig. 18. *Porphyrinia pallidula* H-S. ♀ genitalia, ventral view. (Bahrain.) (O = Ostium).
Fig. 19. *Porphyrinia striantula* sp. n. ♀ genitalia, ventral view. (ALLO-TYPE. Sarobi). (O = Ostium).
Fig. 20. *Porphyrinia salangi* sp. n. ♀ genitalia, ventral view. (HOLO-TYPE. Afghanistan).
Fig. 21. *Porphyrinia straminea* Stgr. ♂ genitalia, open ventral position (left valve closed) with aedeagus half separated. (Herat).
Fig. 22. *Porphyrinia coniostrota* Hamps. ♂ genitalia, closed ventral position, with aedeagus separated. (Gulbahar).
Fig. 23. *Porphyrinia leucanides* Stgr. ♂ genitalia, aedeagus only. (TYPE. Issyk-kul).
Fig. 24. *Porphyrinia afghana* sp. n. ♂ genitalia, open ventral position (left valve closed), with aedeagus half separated. (TYPE. Sarobi).
Fig. 25. *Porphyrinia compuncta* Led. ♂ genitalia, closed ventral position, omitting right valve, with aedeagus separated (Bazarak.)
Figs. 26—28. *Porphyrinia* ♀ genitalia, ventral view: (O = Ostium; *AA* = anterior apophysis.); 26: *afghana* sp. n. (ALLO-TYPE. Sarobi). 27: *straminea* Stgr. (Nuristan). 28: *conistrota* Hamps. (S. Iran).
Figs. 29—34. *Earias* ♂ genitalia, ventral open position, with aedeagus separated except in 33; (left valve omitted in 29). (in 33 sickles have been broken and ventral corner of valve is folded upwards). (P = Pollex; S = sickle). 29: *pudicana* Stgr. (TYPE. Amur). 30: *irakana* Wilts. (TYPE. Iraq). 31: *amseli* sp. n. (TYPE. Herat). 32: *insulana* Boisd. (S. Iran). 33: *chlorophyllana* Stgr. (Iraq). 34: *clorana* L. (Damascus).
Fig. 35. *Catocala afghana* Swin. ♂ genitalia, ventral open position, with aedeagus separated. (Gulbahar).
Fig. 36. *Catocala elocata* Esp. ♂ genitalia, ventral open position, with aedeagus separated. (Lebanon).
Figs. 37—39. *Acantholipes* ♂ genitalia, ventral open position with aedeagus separated. 37: *circumdata* Walker f. *affinis* Butl. (S. Iran). 38: *regulatrix* sp. n. (TYPE. Sarobi). 39: *regularis* Hubn. (Iraq).
Fig. 40. *Anumeta eberti* sp. n. ♂ genitalia, ventral open position, with aedeagus separated. (J = Juxta, adhering to aedeagus) (para-TYPE). Registan desert. (U = Uncus).
Figs. 41—48. *Rhynchodontodes* ♂ genitalia characters: a = uncus, b = right valve, c = aedeagus. 41: *centralis* Stgr. (TYPE. Margelan). 42: *ravalis* Hubn. (N. Iraq). 43: *amseli* sp. n. (TYPE. Herat). 44: *anti-*

qualis Hbn. (Fiume). 45: *mardinalis* Stgr. (TYPE. Mardin). 46: *syriacalis* Stgr. (TYPE. Beirut). 47: *revolutalis* Z. (Dalaki). 48: *ravulalis* Stgr. (TYPE. Sarepta).

Figs. 49—51. *Rhynchodontodes* ♀ genitalia, ventral view: O = Ostium; SP = spermatophore; AA = anterior apophysis.). 49: *revolutalis* Z. (Iraq). 50: *amseli* sp. n. (ALLO-TYPE, Sarobi). 51: *ravalis* Hubn. (Balkans).

Fig. 52. *Hypena kalapperichi* sp. n. ♂ genitalia, ventral view. (TYPE. Nuristan).

Fig. 53. *Heterobapta ejana* sp. n. ♂ genitalia, ventral open view with aedeagus separated. (TYPE. Ejan).

Fig. 54. *Scodiomima afghana* sp. n. ♂ genitalia, ventral open viw, with aedeagus separated. (TYPE. Paghman Mts.).

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Plate II

(E. P. Wiltshire, Middle East Lepidoptera, XV)

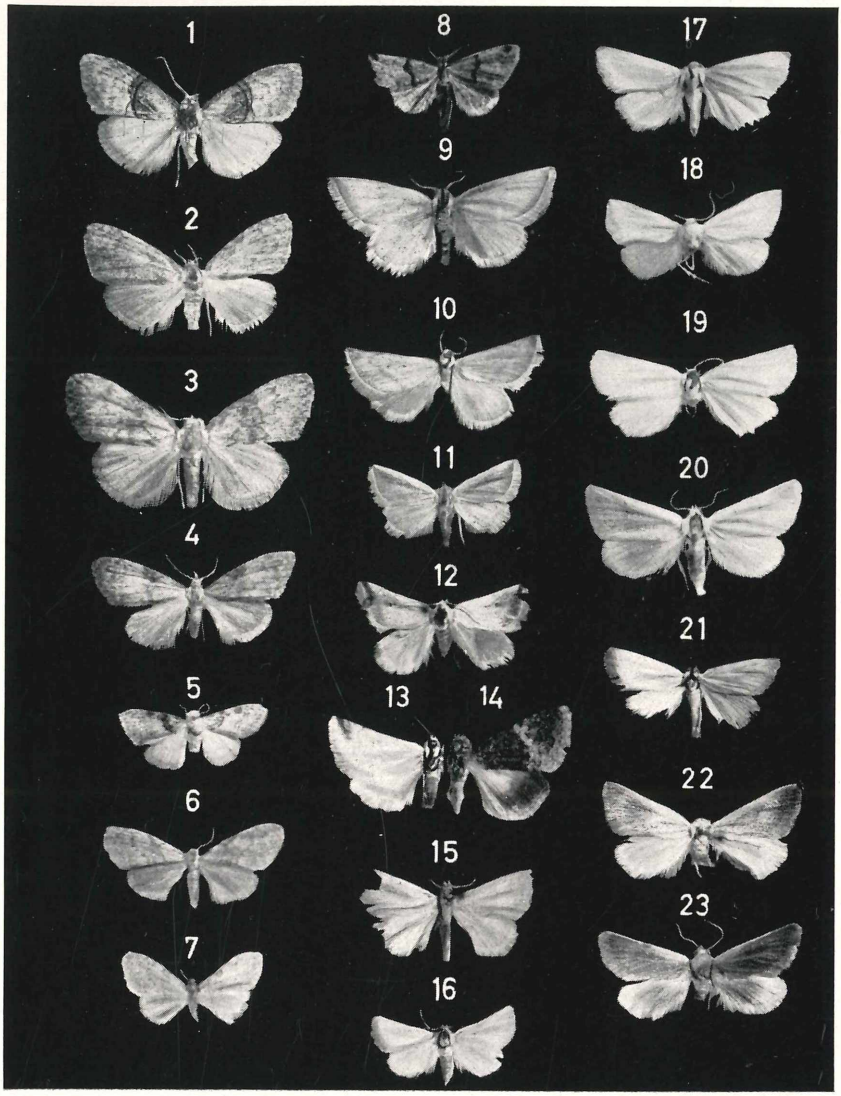


Plate III

(E. P. Wiltshire, Middle East Lepidoptera, XV)

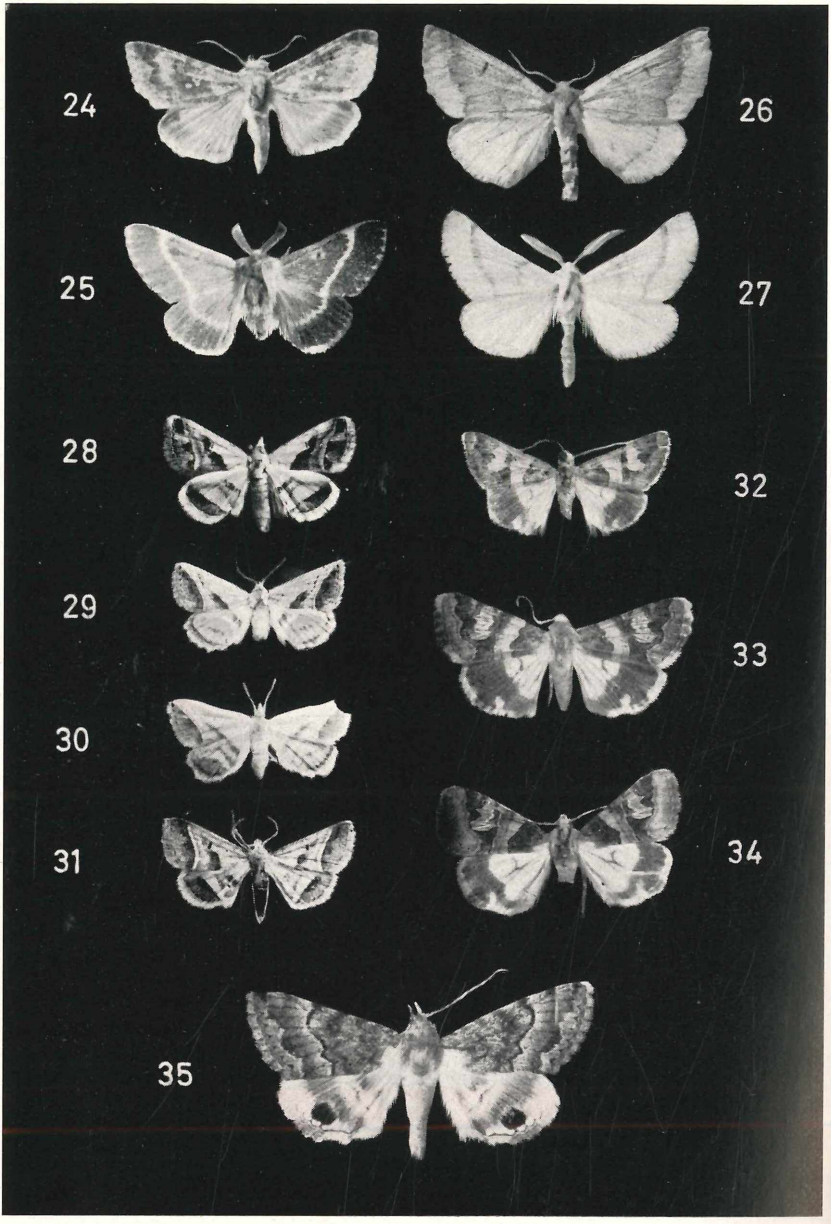
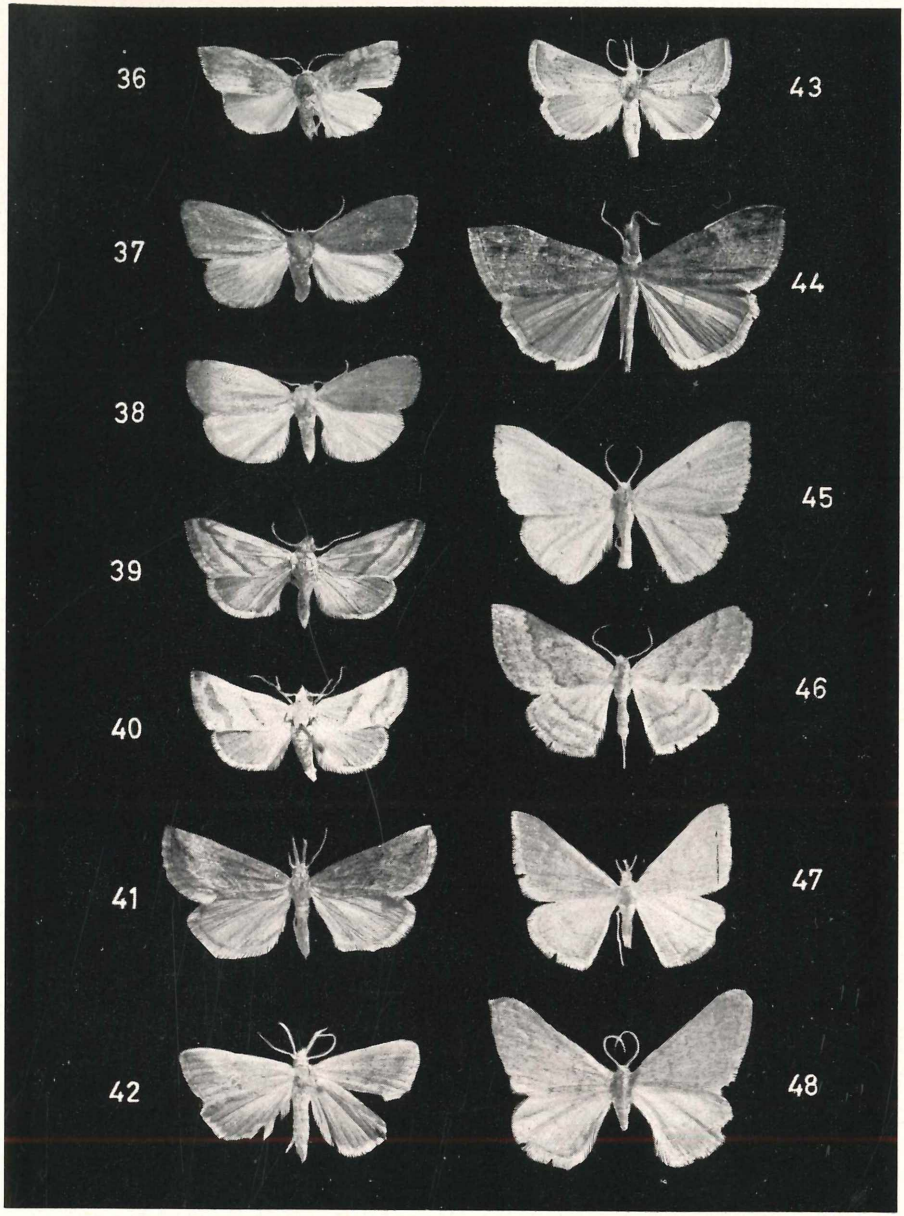


Plate IV

(E. P. Wiltshire, Middle East Lepidoptera, XV)



Key to plates II — IV

Fig. 1. *Roeselia togatulalis* Hubn. ♂ Prep. 976. (Germany).
Fig. 2. *Roeselia gigantula* Stgr. ♀ (N. Iraq).
Fig. 3. *Roeselia gigantula* Stgr. ♂ Prep. 922 (L) (N. Iraq).
Fig. 4. *Roeselia nanula* sp. n. ♀ para-type. (Nuristan).
Fig. 5. *Celama fraterna* Moore ♂ (Prep. 936) (Nuristan).
Fig. 6. *Roeselia nanula* sp. n. ♀ para-type (Prep. 923) (Nuristan).
Fig. 7. *Roeselia nanula* sp. n. ♂ para-type (Prep. 923 L) (Nuristan).
Fig. 8. *Porphyrinia salangi* sp. n. ♀ holo-type. (Prep. 1049) (Hindu-kush).
Fig. 9. *Porphyrinia nuristana* sp. n. ♂ holo-type. (Prep. 1009) (Nuristan).
Fig. 10. *Porphyrinia griseola* Ersch. ♂ (Prep. WM. 32) (Badakhshan).
Fig. 11. *Porphyrinia striantula* sp. n. Paratype. (Sarobi).
Fig. 12. *Porphyrinia pallidula* H. S. ♂ (Prep. 1022) (Bahrain).
Fig. 13. *Porphyrinia compuncta* Led. (Prep. 918) (Bazarak).
Fig. 14. *Armada leuconephra* Brdt. *luxurians* subsp. n. ♀ holo-type. (Nuristan).
Fig. 15. *Porphyrinia straminea* Stgr. ♂ prep. 1045) (Nuristan).
Fig. 16. *Porphyrinia conistrota* Hamps. ♂ (Prep. WM. 98) (Sarobi).
Fig. 17. *Porphyrinia afghana* sp. n. ♂ (Prep. WM. 99) para-type (Sarobi).
Fig. 18. *Porphyrinia afghana* sp. n. ♂ (Prep. WM. 19) holo-type (Sarobi).
Fig. 19. *Porphyrinia afghana* sp. n. ♀ (Prep. WM. 19) allo-type (Sarobi).
Fig. 20. *Porphyrinia conistrota* Hamps. (Registan desert).
Fig. 21. *Porphyrinia straminea* Stgr. ♂ (Prep. WM. 90) (Herat).
Fig. 22. *Porphyrinia conistrota* Hamps. ♂ (Prep. WM. 29) (Gulbahar).
Fig. 23. *Porphyrinia conistrota* Hamps. ♂ (Prep. WM. 25) (Sarobi).
Fig. 24. *Autographa v-aureum* Hubn. *khinjana* subsp. n. ♀ (holo-type) (Khinjan-valley).
Fig. 25. *Lemonia peilei* Roths, *klapperichi* subsp. n. ♂ holo-type. (Salangvalley).
Fig. 26. *Crocallis klapperichi* sp. n. ♀ (holo-type) (Paghman Mts.)
Fig. 27. *Scodiomima afghana* sp. n. ♂ (para-type) Paghman Mts.
Fig. 28. *Acantholipes circumdata* Walk. *f affinis* Butl. (S. Iran).
Fig. 29. *Acantholipes regulatrix* sp. n. ♂ (Holo-type) (Sarobi). (Prep. WM. 58).
Fig. 30. *Acantholipes regulatrix* sp. n. ♀ (Allo-type) (Khuzistan, Iran).
Fig. 31. *Acantholipes regularis* Hubn. (Sarobi).
Fig. 32. *Drasteria cailino* Lef. *medialba* subsp. n. ♂ holo-type (Prep. 924) (Kabul R.).
Fig. 33. *Drasteria cailino* Lef. *medialba* subsp. n. ♀ allo-type, ditto.
Fig. 34. *Drasteria cailino* Lef. ♂ topo-type, France (Prep. 1018).
Fig. 35. *Anumeta eberti* sp. n. ♂ holo-type. (Registan desert).
Fig. 36. *Earias irakana* Wilts. f. *vernalis* Wilts. para-type ♂. (Iraq).
Fig. 37. *Earias amseli* sp. n. allo-type ♀. (WM. 42) (Herat).
Fig. 38. *Earias amseli* sp. n. holo-type ♂. (WM. 42) (Herat).
*Fig. 39. *Aegle subflava* Ersch.
*Fig. 40. *Aegle margarita Brsn.* n. sp., Holo-type (Fluß Arghandab)
Fig. 41. *Rhynchodontodes amseli* sp. n. ♀ allo-type (Herat).
Fig. 42. *Rhynchodontodes revolutalis* Z. ♀ (gen. vern.) (S. Gran).
Fig. 43. *Rhynchodontodes revolutalis* Z. ♂ (gen. aest.) (Sarobi).
Fig. 44. *Hypena klapperichi* sp. n. holo-type ♂. (Prep. 1053) (Nuristan).
Fig. 45. *Prometopidia arenosa* sp. n. holo-type ♀. (Nuristan).
Fig. 46. *Prometopidia conisaria* Hamps. ♀. (Nuristan).
Figs. 47, 48. *Heterobapta ejana* sp. n. types (Prep. 928) (Hindu-kush).

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* Anmerkung des Herausgebers: Diese beiden Arten sind in der Arbeit *Boursin* auf p. 392 dieses Heftes behandelt.

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Zeitschrift/Journal: Beiträge zur naturkundlichen Forschung in Südwestdeutschland

Jahr/Year: 1960

Band/Volume: 19

Autor(en)/Author(s): Wiltshire Edward Parr

Artikel/Article: Ergebnisse der Deutschen Afghanistan-Expedition 1956 der Landessammlungen für Naturkunde Karlsruhe - Middle East Lepidoptera 337-371