Tortricidae (Lepidoptera) from Kashmir and Ladakh

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Abstract. Tortricidae collected in Kashmir and Ladakh are listed. Two genera (Epelebodina gen.n., Eppihus gen.n.) and 16 species (Archips cantinus sp.n., A. naltarica sp.n., Choristoneura colyma sp.n., Lumaria lotusnica sp.n., Meridemis subbathymorpha sp.n., Pandemis thomasi sp.n., Neocalyptis ladakhana sp.n., N. chlansignum sp.n., Epelebodina concolorata sp.n., Eppihus hippeus sp.n., Lepteuicosma srinagara sp.n., L. charassuncus sp.n., Pelochrista frustata sp.n., P. teleopa sp.n., Epiblema lasiovalva sp.n., E. lochmoda sp.n.) are described as new. Eucosma aethopa DIAKONOFF, 1984 is transferred to Lepteuicosma.

Key words: Insecta, Lepidoptera, Tortricidae, Kashmir, Ladakh, new taxa, list.

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I. INTRODUCTION

Material. The discussed collection was gathered by Dr. Werner THOMAS during his two trips to India and especially to Jammu and Kashmir in 1987 and 1988. It consists of 48 species taken in Kashmir and Ladakh.

The material was collected in 10 localities listed below at the altitudes of 1700-3100 m. The moths were attracted on light.

List of collecting localities
Bandipur, 2200 m, Kashmir
Daksum, 2300 m, Kashmir
Drass, 3000 m, Kashmir
Gund, ca 2200 m, Kashmir
Kharbu, ca 2800 m, Ladakh
Khardung La, 4500 m, Ladakh
Lotsun, 3000 m, Ladakh
Srinagar, 1700 m, Kashmir
Sonamarg, 2700, 2900 m, Kashmir
Tangol, 3100 m, Kashmir
Tortricidae of the NW part of Himalaya for which we can use the traditional name of Jammu and Kashmir (the administrative unit; in the labels by W. THOMAS abbreviated for J&K) are very little known. Altogether 64 species were known from the entire area to this date. The data concerning the species described or recorded are mainly from Kashmir chiefly by E. MEYRICK. Then DIKONOFF (1971) described a few further species from NW Karakoram which we can incorporate as belonging to same unit. List of those species is as follows.

List of species described hitherto from Jammu and Kashmir by John W. BROWN, Washington, D.C.

The genera and species are arranged alphabetically; their tribes and location of types are added. Abbreviations:

NHML – Natural History Museum London; TL – type locality; ZSM – Zoologische Sammlung der Bayerischen Staates, Munich.


Phalonidia thermoconis (MEYRICK, 1925) (Phalonia), Exotic Microlepid., 3: 139. TL: India (Kashmir, Srinagar). Lectotype: NHML. Cochylini (junior syn. of P. contractana (ZELLER, 1847)).


Kashmir and Ladakh have been usually included in the Oriental region (eg. KOSTROWICKI 1969 after his earlier works placed them in the Kashmir-Punjab Province/?/Region?), MANI (1962) at the borders of his zoogeographic regions: Turkmenian, Mediterranean and Oriental, Heppner (1991) at the Hindu Kush, Pamir-Than-Shan and Himalayan Highlands. SHIELDS (1981) and MANI suggest that NW Himalaya and Alai-Pamirs constitute a separate biogeographic subunit of the Turkmenian region. Based on Rhopalocera KOSTROWICKI (1969) treated Kashmir and Ladakh species as belonging to the Holarctic element. VIS & COENE (1987) found that this element constitutes as much as 50% of the Rhopalocera of the studied area. In this number there are 60% Central Asian and East Palaearctic species of the Palaearctic origin and 15% of tropical origin. They also concluded that the affinity with Palaearctic is ca 40% and that in Ladakh the Palaearctic elements are more abundant than in Kashmir and the that the tropical elements decrease. They also found a difference between lower parts of the area studied (Kashmir) and more elevated ones (Ladakh).

VIS & COENE (1987) after MANI (1962) shortly discuss also the geographical situation and climatic condition. Ladakh is situated in dry area beyond range of the monsoon and has a scarce vegetation. The stands in Kashmir are warmer and more humid, despite, in this part of Himalaya the streams and rivers (as far as to Sutlej River) are scarce. Thus Ladakh may be considered as having stronger affinity with the Palaearctic Central Asia. It was supposed that the specific biotic conditions at the borders of zoogeographic regions caused a development of numerous endemic taxa which according to MANI (1962) reached Insecta 60% and 45% in Lepidoptera. The present study confirms those data as as much as 53% of Tortricidae are endemic in Jammu and Kashmir.

Based on the studied collection and the earlier sources (cf. the above list) any comparison of the Tortricidae fauna is impossible. There are, however, some interesting data discussed as follows.

Cnephasiini, a basically Palaearctic tribe is represented in Kashmir by two species, both belonging to the sedana-group (see the faunistic chapter). In the Oriental region the members of this tribe are found in Yunnan (two species, one being transpalaearctic, the other endemic). In the more northern and western territories of Asia Cnephasiini are rather abundant in species. Some genera as Eucosma HÜBNER, [1823] and Epiblema HÜBNER, [1825]1816 are bound with the Holarctic region. For the first time, two Palaearctic species, Eucosma tetraplana (MÖSCHLER, 1866) and E. contermi ana (Guenée, 1845) are recorded from the Oriental region. Another eucosmine moth, Epinotia thapsiana (ZELLER, 1847) discovered in this area is Transpalaearctic and Matsumuraeses capax RAZOWSKI & YASUDA, 1975 is Central-East Palaearctic in distribution. Of Cochylini the following Palaearctic species are recorded in the studied area (Cochylimorpha jaculana (S nellen, 1883), C. halophiliana (CHRISTOPH, 1872), Aethes pardaliana (KENNEL, 1899) which occur in central or east-
ern parts of that region. *A. afghana* RAZOWSKI, 1983, *Choristoneura propensa* RAZOWSKI, 1992, *Neocalyptis nuristana* (RAZOWSKI, 1967) were known to date from Afghanistan and certainly are widely distributed in this area. One archipini species, *Clepsis rurinana* (LINNAEUS, 1758) is Transpalaearctic-Oriental. Other species are Oriental, occurring in various tropical parts of this region. The majority of species (34, cf. lists of species) are at present regarded as endemic in NW Himalaya but we know very little about their real distribution. It could be supposed that they also occur at least in E Afghanistan and N Pakistan. Based on the discussed material (two species, viz., *Cochylis indica* RAZOWSKI and *Clepsis rurinana* (LINNAEUS, 1758) as excluded as being Palaearctic-Oriental) I found that in Jammu & Kashmir there are 34 endemic species what makes 53% of its known fauna. The Palaearctic and Oriental elements are represented each by 14 and 13 species (22% and 20%); two Palaearctic-Oriental species constitute 3%.

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Abbreviations

FAUNISTICS

**Tortricini**

*Acleris comariana* (LIENIG & ZELLER, 1846)
Vicinity of Lotsun, 3000 m, 25 VII 1987 – 1 spn. Known from Holarctic region, also introduced to New Zealand.

*Acleris orphnocycla* (MEYRICK, 1937).
Bandipur, 2200 m, 5 VII 1987 – 1 spn. Described from N Yunnan, China but known also from India: Punjab, Upper Pradesh and also Kumaon.

**Cochylini**

*Cochylimorpha jaculana* (SNELLEN, 1883)
Vicinity of Gund, ca 2200 m 1 spn, 14 VIII 1988.
To this date known from the Palaearctic region: Mongolia, Russia: S Siberia, Amur-Zeya, Pria-mure, S Primorsk, China: Manchuria, Kuanhsien; Korea; Japan: Hokkaido, Honshyu. From the Oriental region recorded from Yunnan, China.

*Cochylimorpha halophilana* (CHRISTOPHI, 1872)
Vicinity of Kharbu, ca 2800 m, 10 specimens, 11 VIII 1988. Known from Palaearctic region. Recently three subspecies are distinguished (cf. RAZOWSKI 2002) and the species requires a revision. Externally the Kashmir examples resemble the nomino-typical subspecies.

*Cochylimorpha scoptes* (RAZOWSKI, 1984)
Eupoecilia dynodesma (DIAKONOFF, 1971)
Vicinity of Kharbu, 2800 m, 11 VIII 1988 – 1 spn. To this date known from Hunza, NW Karakoram only.

Aethes conomochla (MEYRICK, 1933)
Vicinity of Lotsun, 3000 m, 13 VII 1987 – 1 spn. Known only from Kashmir (described from Gulmarg).

Aethes afghana RAZOWSKI, 1983
Vicinity of Lotsun, 3000 m, 13 VII 1987 – 1 spn. Described from Afghanistan where probably widely distributed; known from vicinity of Kabul, Safed Koh, Paghman Mts where collected at the altitudes of 2200-2650 m.

Aethes pardaliana (KENNEL, 1899)
Vicinity of Sonamarg, 2900 m, 13 VIII 1988 – 1 spn and Tangol, 3100 m, 22-26 VII 1988 – 1 example. To date known from the Palearctic region: Turkestan, NE Iran, and E Afghanistan.

Cochylis indica RAZOWSKI, 1968
Vicinity of Sonamarg, 2900 m, 25 VII 1988 – 2 spns. Described from Khyra Gully, N India, then found in E Afghanistan at the altitudes of 2350-2700 m.

Cnephasiini

Cnephasia hunzorum DIAKONOFF, 1971
Sonamarg, 2700 m, 28 VII 1987 – 12 spns; vicinity of Sonamarg, 2900 m, 13 and 25 VII 1988 – 8 sps; vic. of Lotsun, 3000 m, 27 VII 1988 – 1 spn; Bandipur, 2200 m, 5 VII 1987 – 2 spns. Known from single male described from NW Karakoram (Hunza, Darakush, 3300 m). The Kashmir specimens are variable in colouration, all with distinct forewing markings. Female genitalia, unknown to this date (Fig. 19) as in other species of C. sedana (CONSTANT, 1884) affinity. Lateral parts of poststrial sterigma slender; colliculum large, weakly sclerotized before middle, otherwise membranous; signum long.

Archipini

Dicellitis nigritula MEYRICK, 1908
Vicinity of Lotsun, 3000 m, 23 VII 1987 – 1 spn. Known from India (N Croog) and Nepal (Katmandu Valley).

Archips cantinus sp.n. – see descriptions.

Archips pruneticolus (MEYRICK, 1935)
Srinagar, 1700 m, 15 VIII 1988 – 1 spn. Described from Tarnab, India.

Archips termias termias (MEYRICK, 1918)
Gund, 2200 m, 29 VII 1987 and vic. of Gund 2200 m, 14 VII 1988 – 2 spns.

Archips naltarica sp.n. – see descriptions. The species is described from Pakistan and, one specimen, from Kashmir.

Homona coffearia (NIETNER, 1861)
Sonamarg, 2700 m, 28 VII 1987 – 1 spn. Known from Sri Lanka, India (eg. Darjeeling, Assam), and Java.
Homona nakaoi YASUDA, 1969
Sonamarg, 2700 m, 28 VII 1987 – 1 spn. To this date known from Nepal only.

Choristoneura colyma sp.n. – see descriptions.

Choristoneura leptograpta (MEYRICK, 1924)
Sonamarg, 2700 m, 26 VII 1987 – 1 spn. Described and known to this date only from Kashmir (Gulmarg).

Choristoneura propensa RAZOWSKI, 1992
Srinagar, 1700 m, 8 VII 1987 – 1 spn. Described and known untill now only from Nuristan, Afghanistan from single male.

Lumaria lotsunica sp.n. – see descriptions.

Lumaria minuta (WALKER, 1863)
Gund, 2200 m, 29 VII 1987 – 2 spns. Known from India, Sri Lanka, Java and Bali.

Meridemis subbathymorpha sp.n. – see descriptions.

Pandemis thomasi sp.n. – see descriptions.

Ulodemis trigrapha MEYRICK, 1907

Neocalyptis nuristana (RAZOWSKI, 1967)
Vicinity of Drass 3000 m, 27 VII 1987 and 15 km E Drass, 3000 m, 26 VII 1988 – 2 spns. Described and known untill now from Afghanistan. Ca 20 specimens from vic. of Lotsun 3000 m, 25 VI, 25 VII and 10 VIII and vic. of Gund, ca 2200 m, 14 VIII 1988; Srinagar, 1700 m, 3 VII 1987; 15 and 16 VIII may represent a distinct species.

Neocalyptis ladakhana sp.n. – see descriptions.

Clepsis rurinana (LINNAEUS, 1758)
Vicinity of Gund, 2200 m, 10, 14 VII 1988 – vic. of Sonamarg, 2900 m, 25 VII 1988 13 VIII 1988; Bandipur, 2200 m, 5 VII 1987; Srinagar, 1700 m, 15 VIII 1988; vic. of Lotsun, 3000 m, 13 VII 1987 – numerous specimens. The Kashmir specimens show small genital differences to the European examples; one of differences between the N Karakoram population and the Dutch specimens were realized also by DIAKONOFF (1971).

Chlidanotinae
Polyorthini

Epelebodina conolorata sp.n. – see descriptions.

Olethreutinae
Olethreutini

Endothenia banausopis (MEYRICK, 1938)
Srinagar, 1700 m, 15 VIII 1988 – 1 spn. Described from Yunnan, China.
**Celypha constructa** (MEYRICK, 1922)
Srinagar, 1700 m, 8 VII and 25 VII; vic. of Sonmarg, 2900 m, 10 & 11 VII and 25 VII, all in 1988; Daksum, 2300 m, 6 & 7 VII 1987 – 6 spns. Described from Punjab, India.

**Eppilhus hippeus** sp.n. – see descriptions.

Eucosmini

**Rhopobota naevana** (HÜBNER, [1817])
Srinagar, 1700 m, 15 VIII 1988 – 1 spn. Entire Palaeartic region; the data from the Oriental region e.g. from Sri Lanka require re-consideration.

**Gibberifera obscura** DIAKONOFF, 1955
Sonmarg 2700 m, 28 VII 1987 and vic. of Lotsun, 3000 m, 13 and 23 VII 1987, 10 VIII 1988 – ca 20 spns; a few dark coloured without brownish grey ground colour of forewing, other examples with variable white or greyish white ground colour. The pale coloured specimen was already found by Kawabe & Nasu (1994) in Pakistan. Genitalia with tolerably constant shapes. Known to date from Nepal and Pakistan.

**Epinotia thapsiana** (ZELLER, 1847)
Vicinity of Lotsun, 3000 m, 13 VII 1987 – 6 spns. Distributed from the Canary I. – to Kazakhstan, Tadjikistan, Turkmenia and Korea.

**Pelochrista frustata** sp.n. – see descriptions.

**Pelochrista telopea** sp.n. – see descriptions.

**Eucosma tetraplana** (MÖSCHLER, 1866)
Khardung La, 4100 m, 5, 7, 10 VIII 1988 – 20 spns. Widely distributed in Palaeartics: E Europe, Near East, Asia Minor, Iran, Transcaucasia, S Siberia, Mongolia, Russian Far East: Primorsk. For the first time collected at so high altitude.

**Eucosma conterminana** (GUENÉE, 1845)
Gund, 2200 m, 29 VII 1987 – 2 spns. Distributed from Iberian Peninsula to Ural Mts, Caucasus, Transcaucasia, Asia Minor, Iran, Kazakhstan, S Siberia, Mongolia and Russian Far East.

**Lepteucosma oxychrysa** DIAKONOFF, 1971
Vicinity of Sonamarg, 2900 m, 25 VII 1988, 13 VIII 1988; Srinagar, 1700 m, 15 VIII 1988; Daksum, 2300 m, 6 & 7 VII 1987; 15 km E of Drass, 3000 m, 12 VIII 1988 – ca 30 spns. Known to date from the type locality in NW Karakoram only.

**Lepteucosma srinagara** sp.n. – see descriptions.

**Lepteucosma charassuncus** sp.n. – see descriptions.

**Lepteucosma lutescens** (RAZOWSKI, 1967)
Vicinity of Lotsun, ca 3000 m, 10 VIII 1968; vic. of Kharbu, ca 2800 m, 11 VIII 1988 and at ca 3000 m, 27 VII 1988; 15 km E of Drass, 3000 m, 12 VIII 1988 – 20 spns. Described and known to this date only from Paghman Mts, Afghanistan where it was collected at an altitude of 3000 m.
Gypsonoma sp.
Vicinity of Lotsun, ca 3000 m, 23 VII 1987 and ca 3000 m, 27 VII 1988 – 1 spn. Similar and closely related with G. sociana (HAWORTH, [1811]). It is much whiter, with weak markings and slightly differs from the Palaearctic species in the female genitalia. Despite this species is not identified this record is important for the distribution of the genus.

Epiblema lasiovalva sp.n. – see descriptions.

Epiblema lochmoda sp. n. – see descriptions.

Grapholitini

Matsumuraeses capax RAZOWSKI & YASUDA, 1975

Dichrorampha enterpes DIAKONOFF, 1971
Khardung La 1500 m, 7 VIII 1988 – ca 50 spns, all males. To this date known from single male from NW Karakoram (Hunza: Nagar Kuto) where it was collected at the altitude of 3300 m.

DESCRIPTIONS OF NEW TAXA

Archips cantinus sp.n.
(Figs 20, 27)

Diagnosis. Closely related with A. asiaticus (WALSINGHAM, 1900) as the shapes of the female genitalia show; it differs from that species in much shorter ductus bursae and proximal portion of cup-shaped part of sterigma. Facies quite different from that in asiaticus reminiscent of A. abiephagus (YASUDA, 1975) and A. pulcher (BUTLER, 1879), both Palaearctic, Japanese.

Description. Wing span 24 mm. Head and thorax cream brownish with slight ferruginous hue; labial palpus 1.5, creamer ventrally. Forewing not expanding posteriorly; costa distinctly convex in basal third, hardly concaving postmedially; termen indistinctly oblique, not concave beneath apex. Ground colour paler than head, sprinkled with rust; veins suffused with same colour, distinctly ferruginous inside median cell and along vein CuP; brown dot at end of cell. Cilia rather concolorous with ground colour, tinged with brownish in apex third. Hindwing pale brownish tinged ferruginous in apex part, creamer towards base. Cilia cream; basal line brownish.

Male genitalia not known.

Female genitalia (Fig. 20). Papilla analis broad; distal edge of poststrial sterigma strongly projecting medially, submedian part expanding laterally, proximal portion short; colliculum sclerite long; ductus bursae proportionally short; cestum reaching middle of the latter; signum slender, long, with large capitulum.


Archips naltarica sp.n.
(Figs 1, 2, 21, 28)

Diagnosis. This species is very closely allied with A. dierli DIAKONOFF, 1976 from Nepal but may be distinguished by long ventral termination of aedeagus and large coecum penis perpendicular to median portion of aedeagus and indistinct prominences of proximal portion of sterigma situated far from one another.
Description. Female. Wing span ca 23 mm. Head and thorax orange rust, labial palpus ca 1.5, concolorous. Forewing not expanding terminally; costa strongly curved in basal part, concave postmedially; apex rather short; termen concave postapically, then convex. Ground colour glossy cream with indistinct pinkish hue, distinct refractive along edges of markings. Markings orange: basal blotch broad, rather diffuse; median fascia slender, pale at costa, very broad, darkening towards dorsum; subapical blotch long, orange rust, fusing with subterminal diffuse marking; concolorous spot at apex. Cilia cream tinged greyish ochreous. Hindwing cream orange, paler basally; cilia cream white, cream at apex. Male: wing span 20 mm; costal fold ill-defined, a long upcurved wing edge. Colouration darker than described above, however, markings more brown, diffuse.

Variation. Ground colour of forewing more or less dark; markings orange brownish to rust in two specimens with pink hue.

Male genitalia (Figs 1,2). Uncus moderately broad, rounded apically; socius rudimentary; terminal process of sacculus small; aedeagus slender, distinctly extending ventro-terminally, with some ventral microthorns beyond zone; coecum penis long, perpendicular to the latter; two cornuti in vesica.

Female genitalia (Fig. 22). Posterior part of sterigma large, anteostial part broad; colliculum fairly long, slender, well sclerotized; ductus bursae rather short; cestum to 2/3 of the latter, broad in basal half; signum slender with elongate basal plate.

Holotype, male: “Pakistan/Gilgit Naltar, 3000-3200 m, 19.-23. VII. 1982, leg. E. CKWEILER.” Paratypes, 3 females and 1 male with identical labels, GS 13549 [male] and 13550 [female]; one paratype with label: “Indien J&K Bandipur, 2200 m, 5. VII.1987, leg. W. THOMAS.”

Choristoneura colyma sp.n.

(Figs 3, 4, 30)

Diagnosis. Closely related with C. propensa RAZOWSKI, 1992 from which it differs in long thorn of sacculus; and with C. griseicoma (MEYRICK, 1924), C. neurophaea (MEYRICK, 1932) and C. ferrugininotata OBRAZTSOV, 1968 also with different thorn of sacculus, shorter aedeagus and different colouration. Etymology. The species name refers to the systematic difficulties in this group of Choristoneura; Greek: kolyma – obstacle.

Description. Wing span ca 20 mm. Head cream tinged ferruginous; labial palpus 2, brownish. Forewing not expanding terminally, costa convex to middle, apex rather short, termen concave beneath apex. Ground colour cream yellowish, weins in posterior third of wing tinged brownish. Markings ill-defined, pale rust consisting of dorsal remnants of basal blotch, three spots representing median fascia accompanied by weak spot at end of median cell and spot at tornus. Cilia whiter than ground colour. Hindwing cream white; cilia whitish.

Male genitalia (Figs 3,4). Uncus broad, rather short, expanding terminally; socius small; sacculus long with small angulation and rather broad terminal fourth armed with apical thorn; fairly long process beyond middle of sacculus; aedeagus short, broad beyond zone, terminating in small ventral thorn; coecum penis and caulis long; two long, slender cornuti in vesica.

Female genitalia not known.


Lumaria lotsunica sp.n.

(Figs 5, 6)

Diagnosis. Related with L. rhythmologa (MEYRICK, 1937 but easily distinguished by cream brown colour of forewing and the presence of markings; male genitalia differ from those in mentioned species chiefly in much slenderer uncus and sacculus without any spinulae.
**Description.** Wing span 12 mm. Head and thorax cream; labial palpus ca 1.5, broad posteriorly, concolorous. Forewing slightly expanding posteriorly; costa weakly convex; termen fairly oblique, hardly sinuate. Ground colour dirty cream suffused with brownish especially in dorsal half of wing; stratigulation concolorous. Markings brownish, browner along edges: Median fascia slender, straight proximally; subapical spot weakly developed. Cilia cream with slight ochreous hue. Hindwing whitish cream, suffused with brownish on periphery, with a few brownish strigulae at apex. Cilia whitish cream.

Male genitalia (Figs 5,6). Uncus broad, club-shaped; socius rudimentary; sacculus slender, tapering terminally, without spinulation; sterigma a simple transverse band; aedeagus slightly longer than valva, simple; cornuti not found.

Female genitalia not known.


**Meridemis subbathymorpha** sp.n.

(Figs 7, 8, 31)

**Diagnosis.** Closely related and similar to *M. bathyglypta* (DIAKONOFF, 1976) from Nepal but differing in much broader terminal part of uncus and the lack of ventro-terminal thorn of aedeagus.

**Description.** Wing span 13 mm. Head and thorax brownish cream; labial palpus ca 1.5. Forewing not expanding posteriorly, apex short, termen weakly concave beyond apex, slightly oblique. Costal fold reaching middle of costa, broadest at 1/3. Ground colour cream suffused with brownish especially in proximal 2/3. Markings brownish, tinge with grey and marked with black strigulae in costal parts. It consists of median fascia and subapical spot followed by row of brown dots terminating near tornus. Cilia cream, blackish brown at apex. Hindwing brownish cream; cilia paler.

Male genitalia (Figs 7,8). Uncus club-shaped; socius fairly large; sacculus rather slender, convex near middle ventrally; median part of transtilla strong, tolerably straight terminally; aedeagus terminating in a ventral thorn; cornuti two strong spines.

Female genitalia as illustrated by DIAKONOFF (1973), cf. below.


Remarks. The original illustrations by Diakonoff represent most probably different species than the holotype is. Of the examined specimens of the type series the holotype (not illustrated) characterizes with simple aedeagus and median part of transtilla, the paratype (GS 8892) belongs to *subbathymorpha*, male paratype is probably an additional species characterized with double terminal thorn of aedeagus and concave apical part of transtilla. Of three illustrated females all have cestum but differ by the shapes of sterigma and colliculum from one the other; I am accepting his determination of the allotype.

**Pandemis thomasi** sp.n.

(Figs 9, 10, 32)

**Diagnosis.** Similar and probably closest to *P. heparana* ([DENIS & SCHIFFERMÜLLER], 1775); easily distinguished by slenderer, rounded terminally uncus.

Etymology. This new species is described in honour of Dr. W. THOMAS who collected and donated the Indian Tortricidae chiefly from Kashmir and Ladakh.

**Description.** Wing span ca 24 mm. Head whitish cream, labial palpus ca 3, rather concolorous; thorax brownish. Forewing broad; costa distinctly convex to middle; apex very short;
termen not oblique to middle, somewhat concave beneath apex. Ground colour brownish, markings ill-defined consisting of dorsal part of basal blotch, median fascia broadening towards tornus and subapical blotch. Cilia worn. Hindwing brownish, cilia (worn) dirty cream.

Male genitalia (Figs 9,10). Uncus large, rounded apically, slightly concave medially; socius large, broadest postmedially; gnathos simple, with rather short arms; sacculus long, rounded terminally; median part of transtilla strongly constricted; aedeagus slender provided with a few dorsal thorns near middle and minute dorsal process terminally; one nest of cornutus in vesica.

Female genitalia not known.


**Neocalyptis ladakhana** sp.n.

(Figs 22, 29)

**Diagnosis.** Closely related with *N. nematodes* (MEYRICK, 1928) from Philippines but differing in longer subapical blotch of forewing, the much longer ductus bursae and the atrophied basal sclerite of signum.

**Description.** Wing span 12 mm. Head and thorax brownish, labial palpus ca 2. Forewing not expanding terminally; costa except for basal part tolerably straight; apex short, sharp; termen weakly oblique, somewhat sinuate beneath apex. Ground colour yellow-brown finely strigulated with brown. Markings brown consisting of dorsal remnant of basal blotch, median fascia expanding at tornus and large subapical blotch reaching end of termen. Cilia concolorous with ground colour, brown at tornus, with trace of brownish median line. Hindwing pale grey-brown; cilia hardly paler.

Male genitalia not known.

Female genitalia (Fig. 22). Sterigma without any sharp process of lateral arms, with short cup-shaped part; capitulum of signum distinct accompanied by a belt of microthorns, blade of signum very long.


**Neocalyptis chlansignum** sp.n.

(Fig. 23)

**Diagnosis.** Externally it reminds of Chinese (Shanghai, Province Kiangsu) *N. nexilis* RAZOWSKI, 1984; female genitalia differing from that in *nexilis* in slender, rather long colliculum and larger signum. Etymology: The name refers to the shape of signum; Greek: chlan – slender.

**Description.** Wing span 12 mm. Head brownish; labial palpus ca 1.3, brownish marked with brown before end of median joint laterally; thorax brownish. Forewing not expanding terminally; termen tolerably straight, slightly oblique. Ground colour cream sparsely sprinkled with brown. Markings greyish brown consisting of dorsal remnant of basal blotch, ill-defined median fascia darkest at costa and large triangular subapical blotch reaching end of termen. Cilia pale cream ochreous. Hindwing brownish grey; cilia much paler.

Female genitalia (Fig. 23.). Sterigma rather small; colliculum sclerite long; ductus bursae membranous; signum with large capitulum and strongly reduced basal plate.

Polyorthini

Epelebodina gen.n.

Type-species: Epelebodina concolorata sp.n.

Diagnosis. Similar and closely allied with Asian Ebodina DIAKONOFF, [1968] and Xeneboda RAZOWSKI & TUCK, 2000 from Tropical Africa but differing by completely atrophied socii and gnathos; aedeagus in the new genus is stout with a series of strong cornuti and absence of coecum penis. Etymology. The species name is composed of the name of a closely related genus Ebodina and Greek adjective: epel – strange.

Description. Venation: In forewing chorda and M-stem atrophied, distance between bases of R3-R4 much shorter than between preceding veins, R5 to termen beneath apex, CuA1 stalked with CuA2 basally; in hindwing all veins separate.

Male genitalia. Tegumen broad distally, pedunculi slender, long; uncus simple, strong, shoulders broad; vinculum expanding medio-posteriorly, forming a large saccus; valva broad basally, tapering from middle distally, with outer surface distinctly convex and ventral surface densely hairy; sacculus short, simple, followed by broad ventral lobe of valva; aedeagus broad, rather not tapering in distal part terminally; series of cornuti present: proximal ones minute, distal large.

Female not known.

Distribution. A monotypical genus known from Kashmir only, certainly with affinities with Oriental fauna (cf. Ebodina). Ebodina redescribed by RAZOWSKI & TUCK (2000) is distributed in Oriental (5 species), Australian (1) and Afrotropical (2) regions.

Epelebodina concolorata (Figs 11, 33)

Diagnosis. The only species of this genus, externally resembling Ebodina. Etymology: Species name refers to colouration; Latin: concolor – of equal colour.

Description. Wing span 16 mm. Head and thorax cream brownish grey; labial palpus worn. Forewing hardly expanding terminally; costa uniformly weakly convex; apex short, rather sharp; termen tolerably straight, oblique. Wing cream densely sprinkled with cream brown especially in apex area; markings reduced to two postbasal dots and a larger dot near end of median cell. Cilia long, pale brownish cream. Hindwing paler than forewing; cilia whiter.

Male genitalia (Figs 11) as described for the genus.

Olethreutini

Olethreutini

Eppihus gen.n.

Type-species: Eppihus hippeus sp.n.

Diagnosis. Most probably closest to Syntozyga LOWER, 1901 (a similar tegumen, lack of uncus etc.) but differing by the well sclerotized subscaphium and gnatos, the long, slender cuculus and the slender basal part of valva.

Etymology: The epithet is an anagram of the name of type-species of this genus.

Description. Venation not examined; markings similar to some Phiaris, HÜBNER[1825]1816 e.g. the Holarctic P. heinrichana (MCDUNNOUGH, 1927).
Male genitalia. Tegumen simple, tapering terminally, rounded apically; uncus and socii absent; gnathos arms slender with distinct submedian lobes extending in large, well sclerotized tuba analis; distal membrane long hairy; henion small, slender; vinculum slender with minute median convexity; valva very long with dorso-proximal process and very short basal cavity; sacculus strong, concave beyond base ventrally, armed with terminal blade accompanied by a very long sharp process situated more dorso-proximally; cucullus long, spined and hairy; aedeagus small, rather weakly sclerotized.

Female not known.

**Eppihus hippeus** sp.n.

(Fig. 12)

**Diagnosis.** The only species of the genus, cf. above.

**Etymology.** The species name refers to the heavily armed valva; Latin: hippeus – knight.

**Description.** Wing span 9 mm. Head brown-grey; labial palpus ca 2; thorax dark brown. Forewing broad, somewhat expanding posteriorly; costa gently convex; apex rounded, very short; termen hardly oblique, slightly concaving medially. Ground colour whitish hardly tinged pinkish cream terminally, strongly suffused with brownish grey and striated with brownish in basal half of wing; costal strigulae whitish in distal half of costa, suffused with brownish otherwise; dividings brown; brown spot at apex. Markings blackish brown consisting of weak basal suffusion and diffuse median fascia; fasciae of distal third of wing very slender, incomplete. Cilia brownish white with brown basal line. Hindwing rather pale, brownish grey, dirty cream in terminal third where striated with brownish grey; cilia pale brownish cream; median line brownish.

Male genitalia (Fig. 12) as described for the genus.

Female genitalia not known.


**Lepteucosma srinagara** sp.n.

(Figs 13, 24, 34)

**Diagnosis.** Close to *L. aethopa* (DIAKONOFF, 1984), comb.n. from West Sumba but with much shorter uncus and longer neck of valva which resembles of that in *oxychrysa*. Externally distinct by brown forewing marked with white terminal area.

**Etymology:** The species name refers to the name of collecting locality: Srinagar.

**Description.** Wing span ca 20 mm. Head and anterior part of thorax brownish cream, remaining part of thorax brownish; labial palpus ca 2, cream, hardly tinged rust terminally; front cream. Forewing: costal fold to 1/3; termen hardly concave beneath apex. Ground colour white preserved submedially and in terminal area from beneath apex to tornus included ocellus; the latter with grey posterior line and a few black spots; costal strigulae fine, white; dividings brown and rust. Anterior part of wing strongly suffused with brown, white part densely striated with same colour, remaining area brown with some darker marks and a few black dots. Markings dark brown in form of broad diffuse median line and trace of dorso-basal blotch. Cilia whitish grey, darker at apex. Hindwing brownish grey; cilia paler.

**Variation.** Forewing in males more or less dark, apex rust; dorsal part of termen brownish grey. Female (wing span 21 mm) with well developed postbasal white area and weaker terminal white portion almost limited to ocellus.
Male genitalia (Fig. 13). Uncus broad, narrowing medially, weakly concave apically; socius rather broad slender distally; neck of valva fairly long, slender; ventral lobe of cucullus large, slender than dorsal lobe.

Female genitalia (Fig. 24). Sterigma large with convexly rounded anteostial part; terminal part of ductus bursae (antrum) weakly sclerotized; sclerite of cingulum much stronger than the antrum.


Remark. Also comparable with L. leucotoma (DIAKONOFF, 1955), comb.n. from Nepal but easily distinguished by rust admixture of forewing and longer sclerite of cingulum. L. leucotoma is known to me from the original description only.

Lepteucosma charassuncus sp.n.

(Fig. 14)

Diagnosis. This species is closely allied with L. oxychrysoides KUZNETZOV, 1997 from Vietnam from which charassuncus differs by a broader base of uncus, much slenderer socius and short neck of valva.

Etymology: The species name refers to shape of the uncus; Greek: charasso – sharpen.

Description. Wing span ca 15 mm. Head cream brown, labial palpus ca 1.2; thorax pale brownish. Ground colour of forewing greyish cream sprinkled and suffused with grey especially in basal third; submedian part and distal fourth cream; ocellus dirty cream with indistinct spots. Markings dark brownish grey in form of large subtriangular costal blotch tinged with rust ochreous beneath middle of wing, brown medially and posteriorly; costal strigulae indistinct, dividings rust brown; apex spot pale ochreous ferruginous. Cilia (rubbed) concolorous with ground colour. Hindwing brownish grey; cilia paler.

Male genitalia (Fig. 14). Base of uncus short, convex laterally, terminal bifurcation long, slightly curved; socius broad; neck of valva almost as long as ventral lobe of cucullus.

Female genitalia not known.


Pelochrista frustata sp.n.

(Figs 15, 25, 35)

Diagnosis. Closely related with P. ruschana (OBRAZTSOV, 1943) from Pamirs from which it differs in much slender forewing, oblique dorso-basal blotch, longer neck of valva and shorter cucullus.

Description. Wing span 26-28 mm. Head whitish; labial palpus over 2, tinged brownish cream laterally; thorax whitish with ochreous brownish marks. Costal fold of forewing to 1/3; ground colour white sprinkled and dotted brownish cream; costal spots and suffusions between markings concolorous. Markings brownish with weak yellowish hue: dorso-postbasal blotch connecting median fascia which terminates beneath middle of wing; subtornal blotch slender; subterminal marking half-moon-shaped with median spot at costa; terminal marking very slender. Cilia pale yellowish brown. Hindwing cream brownish; cilia paler.

Variation in shape of markings which may be interrupted or incomplete and its colour varying from grey to brownish grey.

Male genitalia (Fig. 15). Uncus elongate, rounded; socius slender; angle of sacculus before mid-length of valva; neck fairly long, irregularly dentate ventrally; cucullus elongate; spine of pollex slender.
Female genitalia (Fig. 25). Papilla anales distinctly tapering terminad; apophyses posteriores twice shorter than apophyses anteriores; sterigma broad, rounded proximally; sclerites of cingulum and corpus bursae weak; signa two, one large funnel-shaped, the other small concave rounded plate.

Holotype, male: “Indien J&K Ladakh 15 km östl. Drass, 12. VIII. 1988, 3000 m, leg. THOMAS”; GS 13294. Paratypes 6 specimens, 2 females labelled as above, and 4 males from vicinity of Lotsun, ca 3000 m, 10 VIII 1988.

**Pelochrista telopea** sp.n.

*(Figs 16, 36)*

**Diagnosis**. Very similar to *P. idotatana* (KENNEL, 1901) from East Thian Shan but readily distinguished by peculiarly slender cucullus and long pollex. Etymology: the species epithet concerns distinct shapes of valva; Greek teleopa – visible from afar.

**Description**. Wing span 19 mm. Head cream hardly tinged with brownish; labial palpus over 2; thorax brownish rust. Forewing rather slender; costal fold to 1/3, slender; termen rather short weakly oblique, tolerably straight. Ground colour pale cinnamon densely scaled darker, more brown in distal fourth especially towards tornus; costal strigulae atrophied; markings much darker than ground colour rust brown consisting of dorso-postbasal blotch and tornal blotch. Cilia concolorous with wing. Hindwing brownish tinged cream in basal area cilia concolorous with postbasal part of wing.

**Variation**. Forewing unicolorous yellow-brown or brown, in a few examples with groups of darker scales; one specimen pale brownish with browner strigulation, whitish dorsal blotch subdivided into lines and limited by brown dorsobasal and subtornal blotches.

Male genitalia (Fig. 16). Top of tegumen rather small; socius broad; valva long with very slender cucullus and strong pollex; sacculus large, simple, rounded terminally; pulvinus fairly large; aedeagus long.

Female genitalia not known.


**Epiblema lasiovalva** sp.n.

*(Figs 17, 26, 37)*

**Diagnosis**. Somewhat similar to *E. foenellum* (LINNAEUS, 1758) but with very broad pale brownish dorsal mark, broader cucullus and horn of distal edge of basal cavity and broader sterigma. Female genitalia resemble those of *E. gammanum* (MANN, 1866) or some species of *Notocelesia* HÜBNER 1816[1825]).

**Description**. Wing span 20 mm; head brownish cream; labial palpus ca 2. Forewing not expanding terminally; costal fold slender reaching to about mid-costa; apex short; termen rather not oblique. Ground colour dirty cream dorsal interfascia distictly suffused with brownish grey in dorsal half of wing, along costa and in proximal part of ocellus; costal strigulae in distal half of cream wing, in proximal half suffused; dividings brownish; ocellus with a few brown dots limited by brownish suffusion extending from end of median cell to apex. Markings brown: dorso-basal blotch extending posteriorly to before costa; slender blotch from middle of dorum to tornus. Cilia pale brownish. Hindwing brown; cilia brownish cream.

**Variation**. Forewing more or less suffused with brown.

Male genitalia (Fig. 17). Top of tegumen weak, subtriangular; socius moderate; valva rather broad with short, broad neck whose proximal edge oblique, long, posterior edge short; ventral lobe of cucullus distinct, almost triangular; cucullus broad.
Female genitalia (Fig. 26). Sterigma broad, convex distally with distinct antecostial part; cingulum sclerite postmedian, rather short; two large unequal signa present.


_Epiblema lochmoda_ sp.n. (Figs 18, 38)

**Diagnosis.** Externally resembling _E. concava_ DIAKONOFF, 1971 from Nepal but differing by the long valva which resembles of _Notocelia incarnatana_ (HÜBNER, [1799-1800]). However, that of _incarnatana_ has more dorsal horn and convex median part of neck.

**Description.** Wing span ca 18 mm. Head greyish, front cream, labial palpus 1.5, greyish cream. Forewing fold slender, not reaching mid-costa; costa and termen rather straight, termen slightly oblique. Ground colour white cream delicately sprinkled and strigulated with brownish grey suffused with same colour in costal fourth and terminal third of wing; costal strigulae cream, dividings brownish grey; ocellus whitish extending towards apex, with a row of black dots. Markings brownish grey: basal blotch marked with white in middle basally, strigulated with dark brownish grey, with black spots dorso-posteriorly; median fascia concolorous, weak, interrupted near middle, black at tornus. Cilia rubbed. Hindwing brownish; cilia (rubbed) dirty cream.

Male genitalia (Fig. 18). Top of tegumen broad; socius long; angulation of sacculus weak, neck of valva rather uniformly broad, cucullus very long with small ventral lobe; horn situated near middle of distal edge of basal cavity.

Female genitalia not known.


REFERENCES


Figs 1-10. Male genitalia. 1,2 – *Archips naltarica* sp.n., paratype, Kashmir; 3,4 – *Choristoneura colyma* sp.n., holotype; 5,6 – *Lumaria lotsunica* sp.n., holotype; 7,8 – *Meridemis subbathymorpha* sp.n., holotype; 9,10 – *Pandemis thomasi* sp.n., holotype.
Figs 11-16. Male genitalia. 11 – *Epelebodina concolorata* sp.n., holotype; 12 – *Eppichus hippeus* sp.n., holotype; 13 – *Lepteucosma srinagara* sp.n., holotype; 14 – *Lepteucosma charassuncus* sp.n., holotype; 15 – *Pelochrista frustata* sp.n., holotype; 16 – *Pelochrista teleopa* sp.n., holotype.
Figs 17-22. Male and female genitalia. 17 – *Epiblema lasiovalva* sp.n., holotype; 18 – *E. lochmoda* sp.n., holotype; 19 – *Cnephasia hunzorum* DIKONOFF, Kashmir; 20 – *Archips cantinus* sp.n., holotype; 21 – *Arhips naltarica* sp.n., holotype; 22 – *Neocalyptis ladakhana* sp.n., holotype.
Figs 23-26. Female genitalia. 23 – *Neocalyptis chlansignum* p.n., holotype; 24 – *Lepteucosma srinagara* sp.n., paratype; 25 – *Pelochrista frustata* sp.n., paratype; 26 – *Epiblema lasiovalva* sp.n., paratype.
Figs 27-38. Adults. 27 – Archips cantinus sp.n., holotype; 28 – Archips naltarica sp.n., holotype; 29 – Neocalyptis lada-khana sp.n., holotype; 30 – Choristoneura colyma sp.n., holotype; 31 – Meridemis subbathyglypta sp.n., holotype; 32 – Pandemis thomasi sp.n., holotype; 33 – Epelebodina concolorata sp.n., holotype; 34 – Lepteucosma srinagara sp.n., holotype; 35 – Pelochrista frustata sp.n., holotype; 36 – Pelochrista teleopa sp.n., holotype; 37 – Epiblema lasiovalva sp.n., holotype; 38 – Epiblema lochmoda sp.n., holotype.