

**Tortricidae (Lepidoptera) from Vietnam in the collection of the Berlin
Museum.**

**2. Chlidanotinae and description of one species of Tortricini
(Lepidoptera: Tortricidae)**

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ABSTRACT. Chlidanotini genus *Cnephasitis* is diagnosed and commented and its known species are treated; *C. meyi*, *C. sapana*, and *C. vietnamensis* are described as new; Indian *C. dryadarcha*, *Ebodina sinica*, and *Nexosa hexaphala*, Hilarographini are newly recorded from Vietnam; *Acleris phyllosocia*, Tortricini is newly described.

KEY WORDS: Tortricidae, Chlidanotinae, Tortricini, new species, distribution, Vietnam.

INTRODUCTION

Chlidanotinae was represented in the fauna of Vietnam by a single species (*Lopharcha kopeci* RAZOWSKI, 1992) of Polyorthini (c.f. RAZOWSKI 1992, KUZNETZOV 2000). This paper provides the data on occurrence of further two genera, *Cnephasitis* and *Ebodina*, and one representative of Hilarographini.

The genus *Cnephasitis* RAZOWSKI, 1965 was described to comprise a single Oriental species *Peronea dryadarcha* MEYRICK, 1912. Then DIAKONOFF (1974) described *C. apodicta* from Burma, RAZOWSKI its subspecies (*C. apodicta palaeartica*) from China and LIU & BAI (1986) *Cnephasitis spinata* from Tibet, China. *Cnephasitis* is certainly more widely distributed as one can judge of its occurrence in Vietnam, but not abundant in species. It was described in Cnephasiini but transferred to Polyorthini, Chlidanotinae. *Ebodina*

was revised by RAZOWSKI & TUCK (2000). It comprises four Oriental and two African species. One widely distributed species is now recorded from Vietnam.

Material

The material was collected in the years 1993 - 1996 in North Vietnam (RAZOWSKI 2003). The label data consist usually of the localities, dates of collections and often with the general notes on the habitats. In case of types the labels are reported in extenso, others in a shortened form. The genitalia slides are provided in the provisional numbers and certainly will be replaced by the current numbers of the Museum. Holotypes of new described species are in the collection of the Museum für Naturkunde der Humboldt Universität, Berlin. Some material including paratypes has been kindly donated to the Institute of Systematics and Evolution of Animals, PAS, Cracow.

Abbreviations

GS - genitalia slide; the number given in the descriptions of the labial palpi indicate the proportion of their total length to the horizontal diameter of eye.

Acknowledgements

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SYSTEMATICS

Polyorthini

Cnephasitis RAZOWSKI, 1965

Cnephasitis RAZOWSKI, 1965, Polskie Pismo entomol., **35**(2): 213. Type species: *Peronea dryadarcha* MEYRICK, 1912, designated by monotypy. DIAKONOFF 1974: 81 (redescription). RAZOWSKI 1987, Acta zool. cracov., **30**(11): 151 (redescription).

Diagnosis. Originally *Cnephasitis* was compared with *Acleris* HÜBNER, Tortricini despite it was placed in Cnephasiini. However, the correct position was then suggested by a comparison of *dryadarcha* with representatives of *Polyortha* DOGNIN, 1905.

Externally the species of *Cnephasitis* resemble some *Polyortha*, e.g. *P. viridescens* (MEYRICK, 1912) and *P. bezankoi* BECKER, 1970 from the New World. This genus differs from *Polyortha* and *Ardeutica* MEYRICK, 1913 by the reduction of scent organs (a lack of corema and atrophy of outer split of valva). Other characters are inconstant of

variably distributed throughout the Neotropical species. The venation is in all of them similar and forewing R4-R5 may be separate (e.g. in *dryadarcha*) or stalked (in *spinata*). Signa and sclerites of ductus bursae are variable in shape and size.

RAZOWSKI (1987) supposed that *Cnephasitis* is more advanced than two remaining Palearctic genera (*Isotrias* MEYRICK, 1895 and *Olindia* GENÉE, 1845). This opinion is based on partial reduction of genital muscle R5 (inner branch of this muscle is atrophied whilst the outer branch is preserved).

The arrangement of known species is proposed below. An additional non-Vietnam species, *Cnephasitis spinata* LIU & BAI, 1986 is to be placed before *dryadarcha*. *Cnephasitis apodicta apodicta* DIAKONOFF, 1974 is probably the most generalized species known of two subspecies, the nominotypical (*Cnephasitis apodicta apodicta* DIAKONOFF) and *Cnephasitis apodicta palaeartica* RAZOWSKI, 1984 from Yunnan and Shaanxi, China.

***Cnephasitis meyi* sp.n.**

(Figs 14, 15)

Diagnosis

Close to *C. apodicta* but *meyi* with grey colouration of forewing, much longer terminal process of aedeagus and long colliculum of antrum. Signum much larger than in *apodicta* followed by strong sclerite represented in *apodicta* by a small scobinate fold.

Description

Male. Wing span 24 mm. Head and proximal part of labial palpus (ca 3) grey, posterior part of palpus blackish grey. Thorax grey with dark grey diffuse marks. Ground colour of forewing grey to middle, slightly tinged brownish in distal part; spots and strigulae dark grey. Markings dark grey with blackish grey marks and rust suffusions. Basal blotch weak; median fascia with rather straight proximal edge; subapical blotch subdivided into three costal spots and rust median spot; subterminal markings in form of a weak fascia. Cilia grey. Hindwing brownish grey; cilia paler.

Female. Wing span 28 mm. Head pale grey; labial palpus ca 3.5 with blackish terminal joint. Thorax and ground colour paler than in male but distal part of forewing brownish grey. Markings more or less diffuse brownish, in distal half of wing rather ill-defined, with traces of rust admixture (mainly in basal blotch).

Variation. Males more or less dark, with brownish grey admixture especially in distal half of forewing, and occasionally distinct markings. Strigulation in a few examples strong. Females are generally paler than males with ground colour of forewing greyish and rather weak markings.

Male genitalia (Figs 1, 2). Uncus slender; sacculus reaching before middle of valva, minutely dentate posteriorly followed by also dentate portion of ventral edge of the latter;

aedeagus large with distinct postmedian process and very long, weakly curved ventral termination; cornutus a small spine.

Female genitalia (Fig. 11). Antrum broad, weakly sclerotized posteriorly with large colliculum membranous terminally, distinctly sclerotized otherwise; signum a deep pocket at mid-length of corpus bursae followed by long, sclerotic half-pipe varying in size.

Biology

The type material was collected in the primary cloud forest at altitude of 1600 m, in November and at 2400 m in October.

Type material

Holotype male: "N-Vietnam, Fan Si Pan 1600 m. 22.17N 103 44E primary forest. 1 - 7. XI. 1995, leg. SINIAEV & AFONIN"; GS 144.

Paratypes 22 males and 5 females with same labels and two males from same locality dated, 2400m, 28. X. 1995. Additional material: 2 males, 1 female, same data as above.

Etymology

The specific epithet is a patronym for Dr. Wolfram MEY, Berlin, the collector of this and many other species of Tortricidae.

Cnephasitis sapana sp.n.

(Figs 16, 17)

Diagnosis

C. sapana is externally similar to *meyi* but *sapana* without brownish admixture of forewing markings, short ventroterminal process of aedeagus, smaller colliculum and signum fused with long postmedian sclerite of corpus bursae.

Description

Male. Wing span 26 mm. Head grey; labial palpus ca 4; thorax grey with darker tegula. Ground colour of forewing pale grey sprinkled and finely strigulated grey; spots along wing edges dark grey, some (probably remnants of markings) black-grey. Markings grey with black marks. Cilia concolorous with ground colour. Hindwing greyish cream; cilia dirty cream.

Female. Wing span 26 mm in holotype, 32 mm in one paratype. Head grey; labial palpus ca 5; thorax and ground colour of forewing grey with darker suffusions, dots and strigulae. Markings dark grey with a few darker dots. Otherwise as described for male.

Variation. Ground colour of forewing more or less dark, markings occasionally blackish grey.

Male genitalia (Figs 3, 4). Uncus rather slender; sacculus as in *meyi*, more distinctly dentate; ventroterminal process of aedeagus proportionally short, distinctly curved dorsally; signum moderately long.

Female genitalia (Fig. 12). Colliculum of antrum much shorter than in *meyi*; signum long, fused with posterior sclerite which almost reaches base of antrum.

Type material

Holotype female: "N-Vietnam, Sa Pa, Fan Si Pang Mts. 25 - 30. III. 1995, leg. W. MEY"; GS 137. Paratypes (3 males, 3 females) with same label.

Etymology

The name refers to the type locality.

***Cnephasitis vietnamensis* sp.n.**

(Figs 18)

Diagnosis

Very closely related to *apodicta* and *sapana* but *vietnamensis* distinguished by its short, broad basally, curved dorsad terminal process of aedeagus and long, slender ductus bursae provided with double sclerite.

Description

Male. Wing span 26 mm. Head grey; labial palpus ca 4, blackish grey, paler in basal third; thorax grey with brown-grey marks (mainly at base of tegula). Ground colour of forewing greyish, mixed white before median fascia. Strigulation and dots grey. Markings grey with darker and paler places. Cilia grey. Hindwing cream grey; cilia much paler.

Female. Wing span 29 mm. Head and thorax as in male. Ground colour of forewing pale grey with some dark grey dots. Markings ill-defined, grey with black spots. Cilia grey. Hindwing dirty cream; cilia paler.

Variation. Paler and darker specimens with more or less distinct marking.

Male genitalia (Figs 5, 6). Tegumen complex, valva and anellus as in *apodicta* and *sapana*; aedeagus somewhat shorter; ventroterminal process of aedeagus fairly short, curved dorsad, with broad basal portion devoid short, sublateral process; cornutus rather as long as base of terminal process, probably variable in size (much shorter in one paratype than in holotype).

Female genitalia (Fig. 13). Sterigma short with straight posterior edge; antrum membranous with large proximal sac (colliculum) provided with strong sclerite; signum large, deepest proximally, fused with long, belt-shaped sclerite of posterior part of corpus bursae.

Holotype female: "N-Vietnam, N-Fan Si Pan 22.15N 103.45E, primary cloud forest, 28. IV. 1995, leg. SINIAEV" ; GS 154. Paratypes (6 males, 3 females) identically labelled.

Etymology

The specific epithet refers to the country of origin.

Cnephasitis dryadarcha (MEYRICK, 1912)

(Figs 19, 20)

Peronea dryadarcha MEYRICK, 1912, Exotic Microlepid.3: 17; type locality: Khasi Hills, Assam, India. CLARKE 1958: 7 (lectotype designated and figured, in *Acleris*); RAZOWSKI, 1965: 213 (head, venation, genitalia, in *Cnephasitis*); DIAKONOFF 1974: 82 (same as preceding); RAZOWSKI 1987: 152 (redescription, genitalia).

Material examined

49 specimens from Sa Pa, Fan Si Pang Mts, 1600 m, late March, and late October - early November; some taken at the altitude of 1600 m in November in a primary forest; one example is from Sa Pa, Mt. Fan Si Pan, 2400 m, late October.

Remarks

Male genitalia of the Vietnam specimens fit well those of the Indian population except for longer sacculus. There is a slight variation in size, shape and position of subterminal thorn of sacculus and size and curvature of the subterminal process of aedeagus.

Until now known from India: Assam (Khasi Hills - type locality), Darjeeling, Sikkim, Bengal (Calcutta) and NE Burma.

Appendix

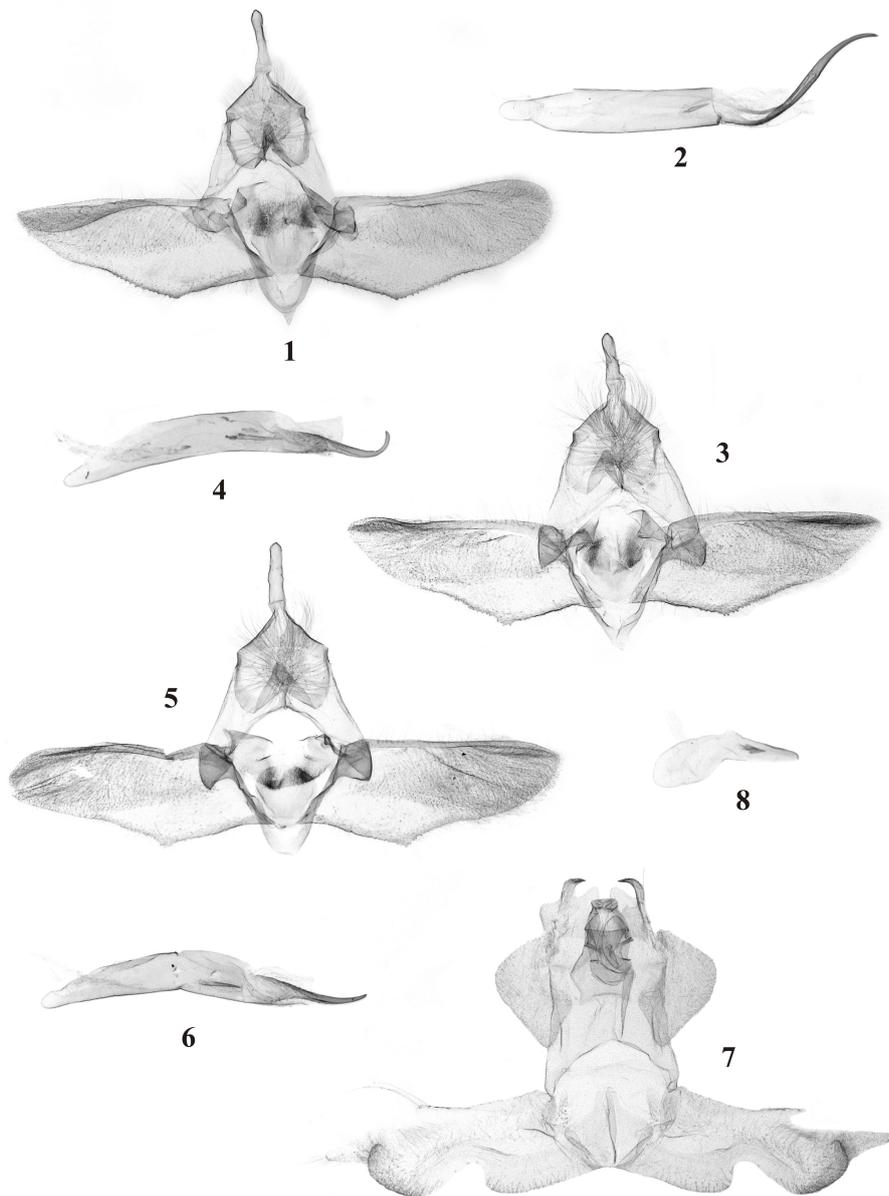
The Palaearctic taxa of *Cnephasitis*

Cnephasitis apodicta palaeartica RAZOWSKI, 1984

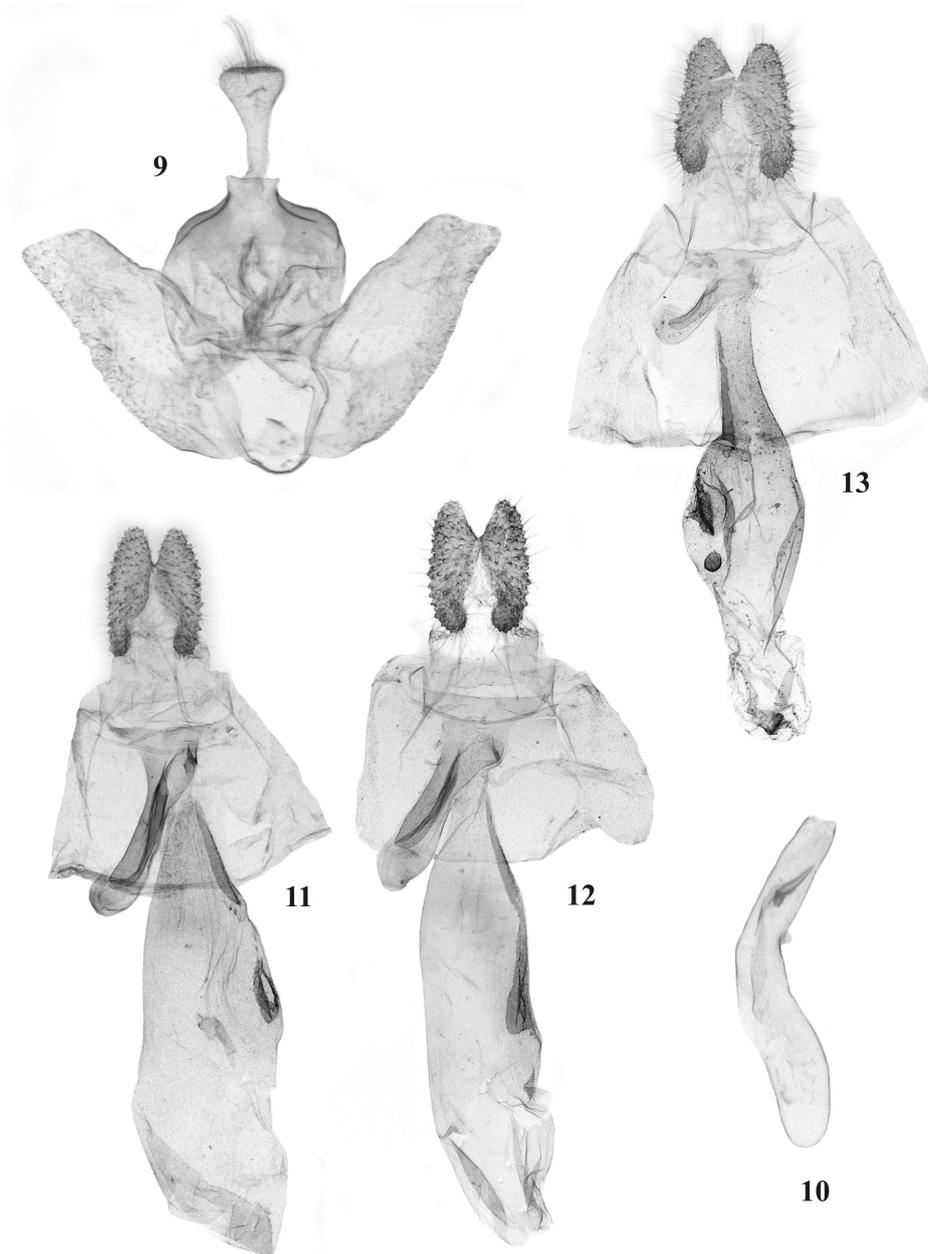
Cnephasitis apodicta palaeartica RAZOWSKI, 1984, Acta zool. cracov.,27(16): 291; type locality: Tapaishan, South Shanxi, China.

Remarks

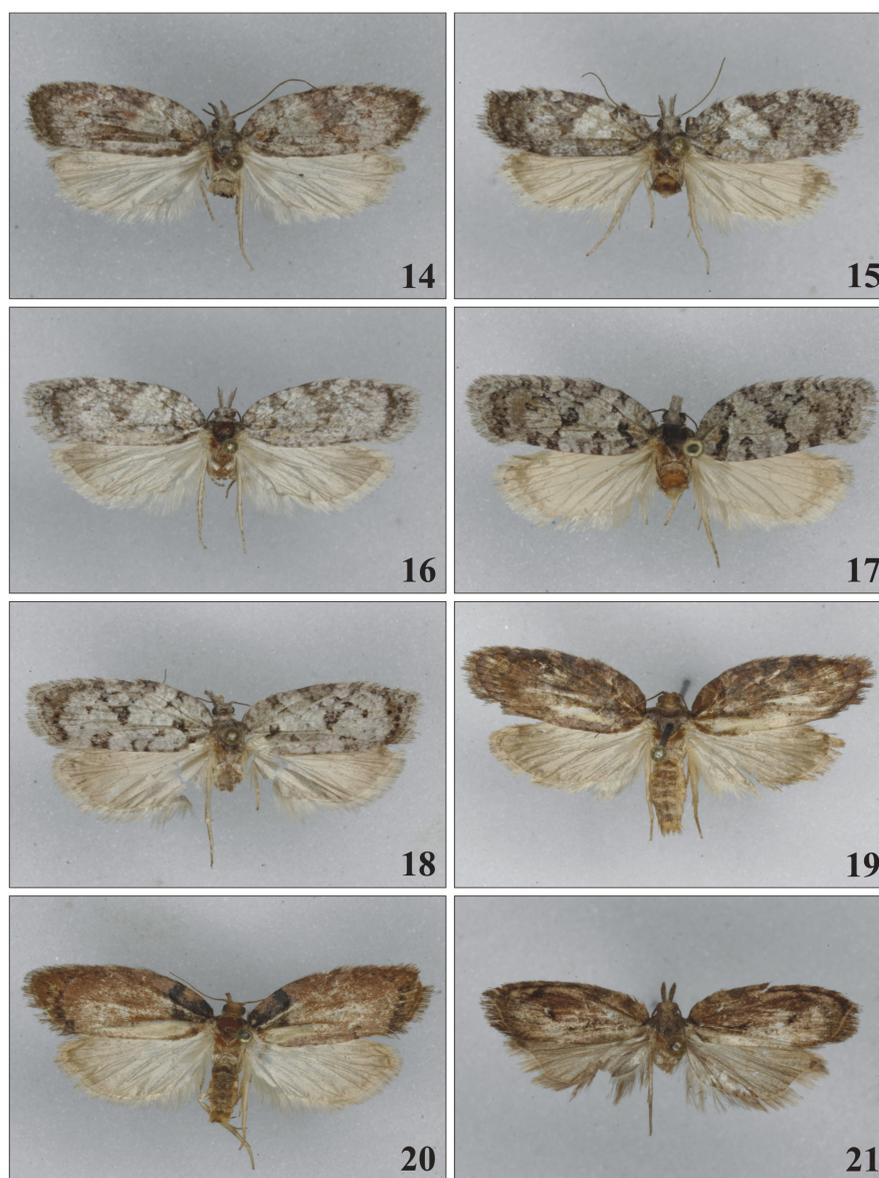
As mentioned in the original description this subspecies slightly differs from the nominate subspecies, mainly in the colouration.



Figs 1-8. Male genitalia of *Cnephasitis* RAZOWSKI and *Acleris* HÜBNER : 1, 2 – *C. meyi* sp.n., holotype, 3, 4 – *C. sapana* sp. n., holotype, 5, 6 – *C. vietnamensis* sp. n., holotype, 7, 8 – *A. phyllosocia* sp.n., holotype.



Figs 9-13. Male and female genitalia of *Cnephasitis* RAZOWSKI and *Nexosa* DIAKONOFF: 9, 10 – *N. hexaphala* (MEYRICK), Vietnam; 11 – *C. meyi* sp. n., paratype; 12 – *C. sapana* sp. n., paratype; 13 – *C. vietnamensis* sp. n.



Figs 14-21. Adults of *Cnephasitis* RAZOWSKI and *Acleris* HÜBNER: 14 – *C. meyi* sp.n., holotype; 15 – same species, paratype; 16 – *C. sapana* sp.n., holotype; 17 – same species, paratype; 18 – *C. vietnamensis* sp. n., holotype; 19 – *C. dryadarcha* (MEYRICK), Vietnam; 20 – same species, Vietnam; 21 – *A. phyllosocia* sp.n., holotype.

***Cnephasitis apodicta apodicta* DIAKONOFF, 1986**

DIAKONOFF, 1974, Zool. Verh., Leiden, Nr 131: 82. Type locality: Hpimaw Fort, Upper Burma.

Remarks

The nominotypical subspecies differs from *palaeartica* mainly in larger size and more brown colouration of forewing, and somewhat longer ventral termination of aedeagus. Female of this subspecies remains unknown.

***Cnephasitis spinata* LIU & BAI, 1986**

Cnephasitis spinata LIU & BAI, 1986, Acta Zootaxon. Sin., 3: 94. Type locality: China: Tibet: Yadong.

Remarks

C. spinata is a Tibetan species originally compared with *dryadarcha*; *spinata* differs from *dryadarcha* in its postmedian position of the free termination of sacculus. The female genitalia are not known.

***Ebodina sinica* LIU & BAI, 1986**

Ebodina sinica LIU & BAI, 1986, Sinozoologia, 4: 149. Type locality: China: Yunnan: Mengla.

Material examined

Three males from Sa Pa, Fan Si Pan Mts, 25 - 30. III. 1995; Sa Pa, Okui ho, 1100 m, 31. III. 1995; Mai-Chau, 40 km SE Moc-chau, 1400 m, 7-15. IV. 1995 (in primary forest).

Remarks

Widely distributed as known to date from China (Yunnan), N. Thailand (RAZOWSKI & TUCK 2000).

Hilarographini

This tribe is represented in Vietnam by a single species, *Mictocommosis nigromaculata* (Issiki, 1930) (cf. KUZNETZOV 2000). Now another species of the genus *Nexosa* DIAKONOFF, 1977 is found.

Nexosa hexaphala (MEYRICK, 1912)**Material examined**

One male from Tam dao, 17. X. 1995., 950 m, SINIAEV.

Description

Male genitalia (Figs 9, 10). Uncus extending from broad base, expanding terminally, with group of longer apical hair; arm of gnathos with lateral lobe; valva broad to 2/3, slender terminally, extending ventroposteriorly; sacculus simple, convex; aedeagus large, weakly bent; coecum penis large; cornutus short; caulis reduced.

Remarks

N. hexaphala is known of a single female collected in Sri Lanka. This specimen is determined by comparison with a photograph of the holotype by CLARKE (1958).

Tortricini*Acleris phyllosocia* sp.n.

(Fig. 21)

Diagnosis

This species is most probably closest to *A. lucipara* RAZOWSKI, 1964 from North Manipur, India as shapes of its spined termination of sacculus, brachiola, apical lobes of tegumen and aedeagus show. *A. phyllosocia* is, however, distinct mainly by very broad main parts of socii, their rod like processes, and broad apical lobes of tegumen.

Description

Wing span 21 mm. Head brownish cream, labial palpus ca 5, cream brown to before middle, then brown. Thorax darker than head, tegula more brown in part tinged rust. Forewing not expanding posteriorly; costa strongly convex at base, then weakly so; apex pointed; termen oblique to before middle, then less so. Extending scales mainly in basal part of costa. Ground colour cream tinged brownish, suffused and sprinkled chestnut brown; cream scaling on some veins mainly dorsobasally. Markings typical tortricine, rather weak, chestnut brown, better developed in costal area than dorsally. It consists of postbasal, median and two slender subterminal fasciae.

Cilia darker than ground colour. Hindwing grey brown; cilia paler.

Male genitalia (Figs 7, 8). Tegumen long with broad, extending posteriorly inner corners; socius very broad, slightly protruding ventrally, with large rod like, hooked distal processes; tuba analis with broad ventroposterior sclerites; costa of valva much shorter than sacculus; brachiola slender; sacculus deeply incised beyond angulate submedian part; spined termination long, densely bristled; transtilla slender; aedeagus rather short; coecum penis large; cornuti four moderate spines.

Female not known.

Holotype male: "N-Vietnam, Sa-pa, Mont Fan Si Pan, 28. X. 1994, 2400 m, leg. V. SINIAEV"; GS 185.

Etymology

The name refers to the very broad, flat parts of socii; Greek: phyllon - leaf.

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