

Cossidae of Thailand. Part 2

(Lepidoptera, Cossidae)

by

ROMAN V. YAKOVLEV

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Summary: Four new species and two new genera are described: *Paracossus pinratanae* spec. nov., *Nirvana* gen. nov., *Nirvana buddhi* spec. nov., *Sansara* gen. nov., *Sansara hreblayi* spec. nov., and *Sansara naumanni* spec. nov.

Резюме: В статье описаны четыре новых вида и два новых рода: *Paracossus pinratanae* spec. nov., *Nirvana* gen. nov., *Nirvana buddhi* spec. nov., *Sansara* gen. nov., *Sansara hreblayi* spec. nov. и *Sansara naumanni* spec. nov.

In this second part of the study of Cossidae of Thailand, four new species and two new genera are described which were detected in entomological collections preserved in Germany.

Abbreviation list:

AHC – collection by ARMIN HAUENSTEIN (Untermünkheim, Germany)

MWM – Museum by THOMAS WITT (Munich, Germany)

Paracossus pinratanae spec. nov.
(colour plate XXb, fig. 1, text figs. 1, 2)

Material

Holotype ♂: North Thailand, Chiang Mai Prov., 1800 m, 4 km S of Kop Dong, 99°03' E; 19° 52' N, 06.XI.2002, B. HERCZIG & G. RONKAY leg. (AHC).

Description

Male. Forewing length 16 mm. Antenna unipectinate. Forewing with a diffuse streaky pattern most expressed in postdiscal area. Hindwing gray with a very fine reticulate pattern. Fringe checkered, darker at veins.

Male genitalia. Gnathos narrowly triangular, punctured. Valva wide with a small crest on costal margin; its distal third finely membranaceous. Arms of transtilla long, bent, uneven in width and with rounded apices. Juxta with wide lateral processes. Saccus very weakly developed. Aedeagus straight, vesica opening occupies about half of its length on dorsal side; vesica without cornuti.

Female unknown.

Diagnosis

The new species is peculiar and differs well from other known species of the genus by the

shape of transtilla arms, presence of the lateral processes of the juxta, a long part of the valva being membraneous and a very small saccus.

Etymology

The new species is named in honor of the prominent Thai entomologist A. PINRATANA.

Nirvana gen. nov.

Type species: *Nirvana buddhi* spec. nov.

Description

Moths of intermediate size. Antenna bipectinate. Hind tibia with two pairs of spurs. Body densely covered with dark hairs. Forewing long with a rounded apex, dark gray with a specific pattern of rounded light spots and narrow dark bands.

Male genitalia. Uncus long, triangular. Gnathos arms fused into a small gnathos covered with fine puncturing. Valva inner surface densely set with stiff long hairs, especially in central part. Valva apex turned up; on valva costal margin there is a small sac-like process directed inside and down; sacculus bears a triangular harpe. Juxta carina-shaped, strongly sclerotized. Aedeagus boomerang-shaped, strongly sclerotized. Sperm ductus enters aedeagus at its bent. Vesica opening with an apical incision; there is a forward directed processus on the opening left side and up-directed processus on right side. Vesica with a group of small cornuti in central part. Saccus small, rounded.

The new genus belongs to the subfamily Cossinae LEACH, [1815]. It is very peculiar and differs well from other genera of the subfamily by absence of the transtilla arms, the aedeagus structure and wing pattern. By the wing outline, absence of the transtilla arms, presence of the cornuti and a bent aedeagus it somewhat resembles only representatives of the genera *Sinicoscus* CLENCH and *Catopta* STAUDINGER, from which it differs well by a number of substantial characters:

1. A specific wing pattern, in particular rounded white spots on the forewing.
2. Presence of stiff long hairs on the valva inner surface.
3. A very specific structure of aedeagus, especially its distal part.
4. The juxta shape.

Nirvana buddhi spec. nov.

(colour plate XXb, fig. 2; text figs. 3-5)

Material

Holotype ♂: Thailand, Changwat Nan, 25 km N of Bo Luang, 1150 m, 11.XI.1999, MARTON HREBLAY leg. (MWM).

Paratypes: 1 ♂, Thailand, Changwat Chiang Mai, 20 km NW of Mae Ai, 1650 m, 6.XII.1998, M. HREBLAY, Y. SHERPA & I. SOOS leg., GPrHet MWM-9367 (MWM); 1 ♂, Thailand, Changwat Chiang Mai, Mt. Doi Phahompok, 18 km NW of Fang, 2100 m, 5.XI.1999, MARTON HREBLAY leg. (MWM); 1 ♂, China, Weiboashan, 2800 m, Weishan Co., Yunnan, IX.2002, YING et al. leg. (AHC).

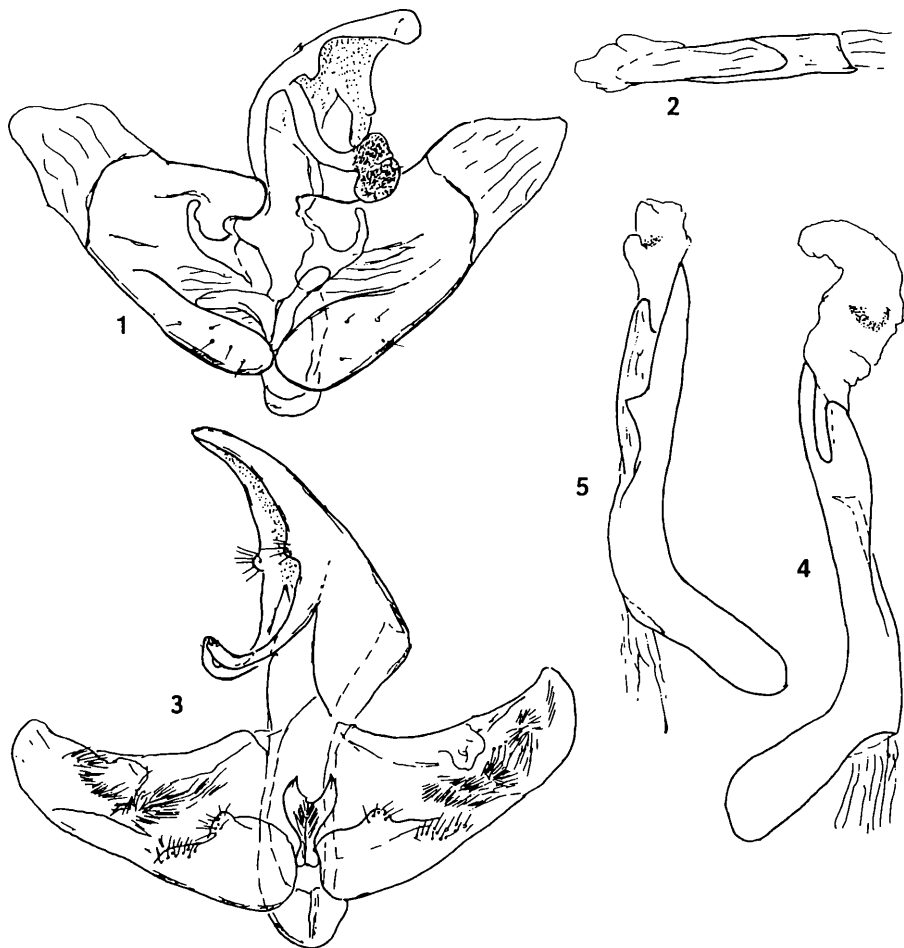


Fig. 1: Male genitalia of *Paracossus pinratanae* spec. nov., frontal projection.

Fig. 2: Aedeagus of *Paracossus pinratanae* spec. nov., lateral projection.

Fig. 3: Male genitalia of *Nirvana buddhi* spec. nov., frontal projection.

Fig. 4: Aedeagus of *Nirvana buddhi* spec. nov., lateral projection, left.

Fig. 5: Aedeagus of *Nirvana buddhi* spec. nov., lateral projection, right.

Description

Male. Forewing length 23–25 mm. Forewing dark, there is a white band at base composed of white rounded elements interrupted with black strokes in the basal area and a white band, broad at costal margin and strongly narrowing to anal margin and embracing black spots of different size, in the postdiscal area. In the wing mid there are several transversal black

strokes. Fringe checkered, dark at veins, brown between them. Hindwing and its fringe black. Male genitalia described at the genus description. Female unknown.

Range

N. Thailand, S. China (Yunnan).

***Sansara* gen. nov.**

Type species: *Sansara hreblayi* spec. nov.

Description

Moths of intermediate size and light yellowish-brown coloration. Forewing coloration unusual for Cossidae, it has a distinct reticulate pattern more developed in wing periphery, a darkened basal area and postdiscal and submarginal brown bands. Hindwing with a vague reticulate pattern. Antenna bipectinate almost throughout its length, only several distal articles have no processes. End of abdomen with a bunch of hairs that makes the moths look like representatives of the family Metarbelidae.

Male genitalia. Uncus long, pointed. Valva simple, narrow. Gnathos completely reduced. Juxta as a semiring with two long lateral processes. Saccus long, narrow. Aedeagus straight; vesica with two linear cornuti (first at the basal part of vesica; second at the distal end of vesica).

Diagnosis

The new genus belongs to the subfamily Zeuzerinae BOISDUVAL, [1828] and differs well from the close genera *Phragmataecia* NEWMAN, 1850, *Lakshmia* YAKOVLEV, 2004 (YAKOVLEV, 2004a), *Garuda* YAKOVLEV, 2004, *Butaya* YAKOVLEV, 2004 (YAKOVLEV, 2004b) by a number of characters:

1. a specific wing pattern,
2. a hair bunch present at the end of the abdomen,
3. a very small non-pectinated part of antenna,
4. a long saccus,
5. a long and pointed uncus,
6. a simpler structure of the aedeagus.
7. a vesica with two linear cornuti.

Presently the new genus includes two species: the type species *Sansara hreblayi* spec. nov. and *Sansara naumanni* spec. nov.

Range

N. Thailand.

Sansara naumanni spec. nov.
(colour plate XXb, fig. 5; text figs. 8, 9)

Material

Holotype ♂: Thailand, Changwat Chiang Mai, 4 km SE of Pang Faen, 1100 m, 27.I.2004, ATTILA SZABO leg., GPrMWM-9519 (MWM).

Paratype: 1 ♂, Thailand, Changwat Chiang Mai, 15 km SW Wiang Haeng, 1400 m, 9.II.1996, MARTON HREBLAY & CSABA SZABOKY leg. (MWM).

Description

Male. Forewing length 14–16 mm. Forewing with a wide brown submarginal band and a light postdiscal band slightly widening towards wing's hind margin. Central wing part brown with few lightened patches.

Male genitalia: see the genus description; valva slightly tapering to its end, its lower margin without a ledge.

Female unknown.

Etymology

The new species is named in honour of the prominent entomologist, specialist in Zygaenidae, late Prof. Dr. CLAS M. NAUMANN.

Sansara hreblayi spec. nov.
(colour plate XXb, figs. 3, 4; text figs. 6, 7)

Material

Holotype ♂: Thailand, Changwat Nan, 5 km N of Bo Luang, 1000 m, 10.II.2000, leg. MARTON HREBLAY leg. GPrMWM-9520 (MWM).

Paratypes: 2 ♂♂, Thailand, Changwat Nan, 25 km N of Bo Luang, 1150 m, 14.I.1999, SZABO & CZERE leg. (MWM); 1 ♂, Thailand, Changwat Chiang Mai, 15 km SW Wiang Haeng, 1400 m, 9.II.1996, MARTON HREBLAY & CSABA SZABOKY leg. (MWM).

Description

Male. Forewing length 15–16 mm. Coloration much lighter than in *Sansara naumanni spec. nov.*, on forewing submarginal band very narrow, postdiscal light band substantially widening to wing's hind margin, in central and, especially, basal wing area there are many lightened patches in the ground colour.

Male genitalia: see the genus description; valva lower margin with a noticeable ledge.

Female unknown.

Etymology

The new species is named in honor of the prominent noctuidologist MARTON HREBLAY who perished during an expedition to Thailand.

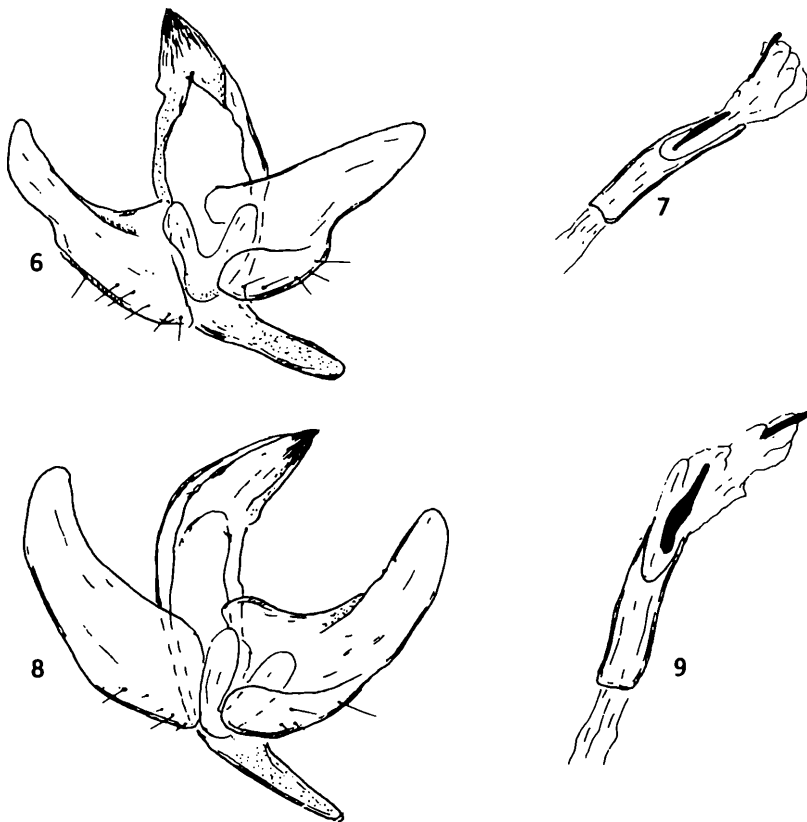


Fig. 6: Male genitalia of *Sansara hreblayi* spec. nov., frontal projection.

Fig. 7: Aedeagus of *Sansara hreblayi* spec. nov., lateral projection.

Fig. 8: Male genitalia of *Sansara naumanni* spec. nov., frontal projection.

Fig. 9: Aedeagus of *Sansara naumanni* spec. nov., lateral projection.

Acknowledgements

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References

- YAKOVLEV, R. V. (2004a): Cossidae of Thailand. Part 1 (Lepidoptera, Cossidae). – *Atalanta* **35** (3/4): 335–351.

Explanation of colour plate XXb (p. 485):

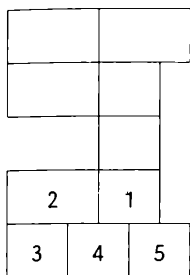
Fig. 1: *Paracossus pinratanae* spec. nov., holotype ♂.

Fig. 2: *Nirvana buddhi* spec. nov., holotype ♂.

Fig. 3: *Sansara hreblayi* spec. nov., holotype ♂.

Fig. 4: *Sansara hreblayi* spec. nov., paratype ♂, Thailand, Changwat Nan, 25 km N of Bo Luang, 1150 m, 14.I.1999, leg. SZABO & CZERE (MWM).

Fig. 5: *Sansara naumanni* spec. nov., holotype ♂.



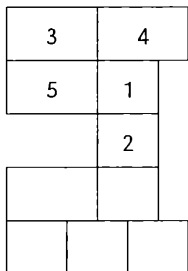
address of the author

Dr. ROMAN V. YAKOVLEV
57–81, Chkalova str.
Barnaul, 656049
Russia
e-mail: yakovlev_r@mail.ru

Colour plate XXa

YAKOVLEV, R. V.: New taxa of Cossidae from SE. Asia (Lepidoptera, Cossidae). – *Atalanta* 35 (3/4): 369–382.

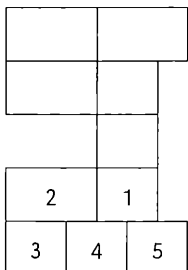
- Fig. 1: *Garuda galina* spec. nov., holotype ♂.
- Fig. 2: *Butaya gracilis* spec. nov., holotype ♂.
- Fig. 3: *Butaya gracilis* spec. nov., paratype ♀.
- Fig. 4: *Trismelasmos robinson* spec. nov., holotype ♂.
- Fig. 5: *Panau borealis* spec. nov., holotype ♂.



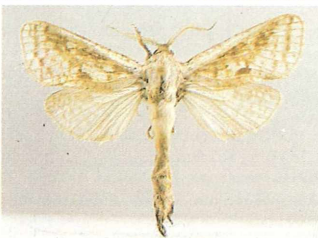
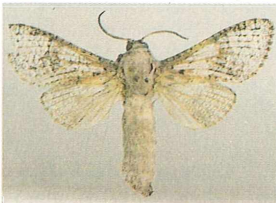
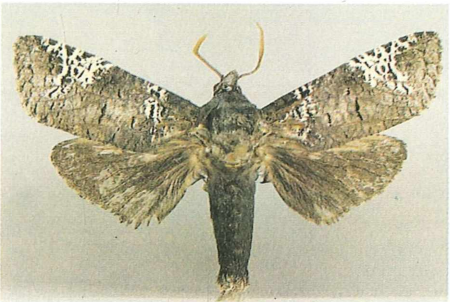
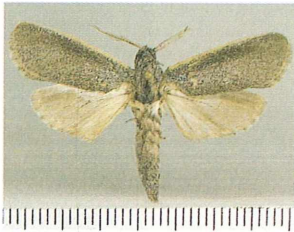
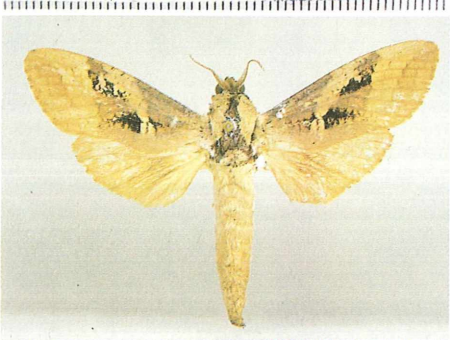
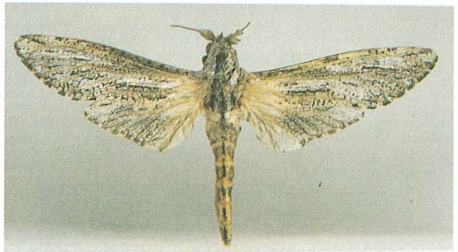
Colour plate XXb

YAKOVLEV, R. V.: Cossidae of Thailand. Part 2 (Lepidoptera, Cossidae). – *Atalanta* 35 (3/4): 383–389.

- Fig. 1: *Paracossus pinratanai* spec. nov., holotype ♂.
- Fig. 2: *Nirvana buddhi* spec. nov., holotype ♂.
- Fig. 3: *Sansara hreblayi* spec. nov., holotype ♂.
- Fig. 4: *Sansara hreblayi* spec. nov., paratype ♂, Thailand, Changwat Nan, 25 km N of Bo Luang, 1150 m, 14.I.1999, leg. SZABO & CZERE (MWM).
- Fig. 5: *Sansara naumanni* spec. nov., holotype ♂.



Colour plate XXa/b



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