

Cossidae (Lepidoptera) of Andaman Islands (India)

Roman V. YAKOVLEV

57-81, Chkalova str, Barnaul, 656049, Russia. e-mail: yakovlev_r@mail.ru

Abstract An annotated list of Cossidae (Lepidoptera) of the Andaman Islands (India) is provided which includes 8 species, 2 of which being endemics. A new genus and a new species are described: *Pygmeocossus* Yakovlev, gen. n. and *Pygmeocossus tonga* Yakovlev, sp. n.

The Andaman Islands are situated in the northern Indian Ocean between the Bengal Bay and Andaman Sea. Their total area slightly exceeds 6000 km², the archipelago represents peaks of a submerged mountain chain extending from north to south for 350 km, with the maximum elevation above sea level being 732 m. Patches remaining unexplored are covered by ever-green tropical forests.

Until recently there were no information on the Cossidae of this isolated archipelago. Only the paper by Arora (1976) devoted to Cossidae of India, a new species *Xyleutes kapuri* Arora, 1976 was described from the Andaman Islands. As a result of my treatment of Cossidae in the collection of Thomas Witt Museum, Munich (further on MWM), the material collected by many persons in the Andaman Islands was completely identified. Their annotated list, with exact provenance, is given below. All the material is preserved in Thomas Witt Museum.

Cossinae Leach, [1815]

Pygmeocossus Yakovlev, **gen. n.**

Type species: *Pygmeocossus tonga* Yakovlev, sp. n.

Moths of a moderate size. Antennae pectinated, its articles with trapezoid processes. Hind tibia with a pair of spores, those of the proximal pair forked at apex. Fore wing upperside with a pattern of alternating darker and lighter bands, hind wing without patter.

Male genitalia. Uncus broad, short, with a rounded apex; tegumen hemispheric; gnathos arms thin and producing a small gnathos formed by two merged halves. Valva complicated, sclerotized with a membranous apex. Valva costal margin with a process directed toward apex; valva inner surface bearing a weakly sclerotized harpe. Valva inner surface united with juxta lateral processes with a membrane. Saccus also tightly united with valva inner surface with a membrane that makes impossible to spread valvae completely. Juxta with a wide semicircular incision and pointed lateral processes. Saccus semicircular. Arms of transtilla very long and thin, sabel-shaped. Aedeagus straight, long and thin; vesica opening with a dorsal position and occupies 2/3 of aedeagus length. Vesica without cornuti.

Differential diagnosis. The new genus belongs to the subfamily Cossinae Leach, [1815] but is quite isolated from its other genera differing first of all by a very peculiar valva armament, forked proximal spores of the hind tibia These apomorphies suggested erecting of a new genus, so far monotypical.

Range. Andaman Islands (India).

Pygmeocossus tonga Yakovlev, **sp. n.** (Figs 1–4)

Material. Holotype. ♂, M. Andaman, Mayabander, 19–20. 03. 1998, a beach, V. Siniaev leg.,



Figs 1–2. Adults. 1. *Pygmeocossus tonga* Yakovlev, sp. n., ♂, holotype. 2. *Xyleutes kapuri* Arora, 1976, ♂, M. Andaman, Mayabander, 19–20. 03. 1998, beach, V. Siniaev leg., ex coll. A. Schintlmeister (MWM).

ex coll. A. Schintlmeister (MWM).

Description. Male. Fore wing length 10 mm. Antenna articles with trapezoid processes with angles somewhat stretched out up and to sides. Fore wing ochre-coloured at base, with a brown band in medial area, postdiscal area light with narrow dark bands, apex darkened. Hind wing evenly light. Male genitalia characterized with the generic description.

Female unknown.

Etymology. The species is named after Tonga, the hero of the story by Arthur Conan Doyle “The Sign of four”, who was an inhabitant of Andaman Islands.

Zeuserinae Boisduval, [1828]

Zeuzera multistrigata Moore, 1881

Zeuzera multistrigata Moore, 1881, *Proc. zool. Soc. Lond.* **1881**: 327.

Material. 1 ♀, India, Andaman Islands, North Andaman, Mayabander, 6 km S of Karmatany, rainforest, 12°50'61" N, 92°56'06" E, 17–21. 11. 2000, leg. J.-P. Rudloff.

Zeuzera coffeae Nietner, 1861

Zeuzera [sic!] *coffeae* Nietner, 1861, *Enemies of Coffee Tree*: 21.

Material. 2 ♂, India, Middle Andaman, 1.5 km E of Karmatang, rainforest, 12°50'72" N, 92°56'10" E, 17–22. 08. 2001, Jean-Peter Rudloff leg., ex coll. Dr R. Brechlin.

Zeuzera conferta Walker, 1856

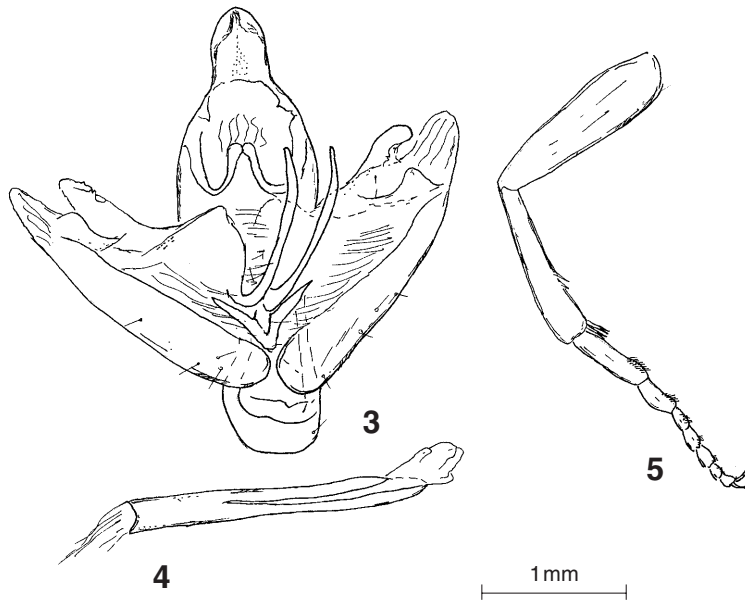
Zeuzera conferta Walker, 1856, *List Specimens lepid. Insects Colln Br. Mus.* **7**: 1536.

Material. 1 ♂, India, Andaman Islands, North Andaman, Mayabander, 6 km S of Karmatany, Rainforest, 12°50'61" N, 92°56'06" E, 17–21. 11. 2000, leg. J.-P. Rudloff; 1 ♂, India, South Andaman, Wandoor, Port Blair, 1–2. 03. 1998, A. Kamenev & V. Siniaev leg., ex coll. Dr A. Schintlmeister.

Panau stenoptera (Roepke, 1957)

Xyleutes stenoptera Roepke, 1957: 30, pl. 3: fig. 4, pl. 7: fig. 5–5a, pl. 8: fig. 3–3a.

Material. 9 ♂, India, Andaman Islands, North Andaman, Mayabander, 6 km S of Karmatany,



Figs 3–5. *Pygmeocossus tonga* Yakovlev, sp. n. (♂ holotype). 3. Male genitalia, frontal aspect. 4. Aedeagus, lateral aspect. 5. Hind tibia, lateral aspect.

rainforest, 12°50'61" N, 92°56'06" E, 17–21. 11. 2000, J.-P. Rudloff leg; 1 ♂, India, Andaman Islands, Middle Andaman, Tagapure, rainforest, 12°50'72" N, 92°49'29" E, 22–26. 11. 2000, J.-P. Rudloff leg.

***Xyleutes kapuri* Arora, 1976 (Fig. 5)**

Xyleutes kapuri Arora, 1976, *Rec. zool. Surv. India* (69): 107–109; pl. 3: fig. 3; text fig. 26; Schoorl, 1990: 139.

Material. 1 ♂, India, Andaman Islands, North Andaman, Mayabander, 6 km S of Karmatany, rainforest, 12°50'51" N, 92°56'06" E, 17–21. 11. 2000, J.-P. Rudloff leg; 2 ♂, India, Andaman Islands, North Andaman, Baratang Isl., 21–22. 03. 1998, V. Siniaev & A. Kamenev leg., ex coll. Dr A. Schintlmeister; 1 ♂, North Andaman, Sound Island, 10–12. 03. 1998, V. Siniaev & A. Kamenev leg., ex coll. Dr A. Schintlmeister; 4 ♂, M. Andaman, Mayabander, 19–20. 03. 1998, beach, V. Siniaev leg., ex coll. A. Schintlmeister (MWM); 1 ♂, India, Andaman Islands, South Andaman, Wandoor, Port Blair, 1–2. 03. 1998, A. Kamenev & V. Siniaev leg., ex coll. Dr A. Schintlmeister.

Taxonomic notes. Schoorl (1990: 129) supposed that *Xyleutes kapuri* Arora, 1976 belongs to the genus *Rapdalus* Schoorl, 1990 he described but abstained from proposing a new combination. At the present state of our knowledge, it is impossible to specify the proper combination or to describe a monotypical genus for this species without a thorough study of the whole complex of genera isolated by Schoorl (1990) from the genus *Xyleutes* Hübner, [1820]. Therefore, in the present work I retain the original combination although intend to clarify the generic position of this species in further studies. In the original description, the following localities were reported: S Andaman, Humphrygunj; Middle Andaman, Rangat Rest House.

Xyleutes persona (Le Guillou, 1841)

Cossus persona Le Guillou, 1841, *Revue Zool.* **4**: 257.

Material. 1 ♂, India, S Andaman, Port Blair, Harriet Mt., 11°43'21" N, 92°44'03" E, 23–24. 08. 2001, Jean-Peter Rudloff leg., ex coll. Dr R. Brechlin.

Chalcidica minea (Cramer, 1777)

Phalaena-Bombyx mineus Cramer, 1777, *Papill. Exot.* **2**: 131, fig. D.

Material. 2 ♂, India, Middle Andaman, 1.5 km E of Karmatang, rainforest, 12°50'72" N, 92°56'10" E, 17–22. 08. 2001, Jean-Peter Rudloff leg., ex coll. Dr R. Brechlin; 3 ♂, India, Middle Andaman, 2.5 km S of Rangat, 12°27'61" N, 92°56'23" E, 12–23. 08. 2001, Jean-Peter Rudloff leg., ex coll. Dr R. Brechlin; 2 ♂, India, Middle Andaman, 3 km S of Tugapure, 12°48'89" N, 92°49'29" E, 14–16. 08. 2001, Jean-Peter Rudloff leg., coll. Dr R. Brechlin; 6 ♂, India, Andaman Islands, North Andaman, Mayabander, 6 km S of Karmatany, rainforest, 12°50'61" N, 92°56'06" E, 17–21. 11. 2000, J.-P. Rudloff leg.; 4 ♂, India, Andaman Islands, Middle Andaman, Tagapure, Rainforest, 12°50'72" N, 92°49'29" E, 22–26. 11. 2000, J.-P. Rudloff leg.; 1 ♂, Andaman Islands, Middle Andaman, 100 m, Rangat, 22–25. 03. 1996, S. Naumann leg., ex coll. Schitlmeister.

Thus, presently eight species of Cossidae are known from the Andaman Islands, two of which being endemics. The rest species range quite widely in SE Asia and Oceania. Any new material from this region would be of a great interest, especially of *Pygmeocossus tonga* Yakovlev, sp. n., for they would help in revealing phylogenetic connections of this very specialized genus with other representatives of the subfamily Cossinae Leach, [1815].

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