



<http://dx.doi.org/10.11646/zootaxa.3802.2.6>

<http://zoobank.org/urn:lsid:zoobank.org:pub:197B14D0-873A-4280-8934-199E3BE7BC65>

Descriptions of three new species of Cossidae (Lepidoptera) from Vietnam, with an updated annotated checklist

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Abstract

Forty-two species of Cossidae representing 27 genera are reported for Socialist Republic of Vietnam. Three species (*Paracossus zyaung* Yakovlev **sp. nov.**, *Phragmacossia laklong* Yakovlev **sp. nov.**, *Butaya auko* Yakovlev **sp. nov.**) are described as new to science. Five species (*Paracossus indradit* Yakovlev, 2009, *P. griseatus* Yakovlev, 2009, *Aholcocerus ihleorum* Yakovlev & Witt, 2009, *Skeletophyllon puer* Yakovlev, 2011, *Azygophleps scalaris* (Fabricius, 1775) are new country records. A brief biogeographical overview of the Cossidae of Vietnam is given.

Key words: Carpenter-Moths, fauna, Southern Asia

Introduction

The Cossidae of the Socialist Republic of Vietnam have been studied extensively in recent years. Yakovlev & Witt (2009) have provided a synopsis of the fauna, and Yakovlev (2006, 2011) recorded additional species and new species. A total of 34 species had been reported so far.

Recently collected material by the staff of the Ulyanovsk Pedagogical University, Russia during expeditions in 2009–2013 has been become available for study. This material included new records of genera and species for Vietnam in addition to three new species, which are described below. An updated annotated checklist of the Cossidae of Vietnam is provided.

Material and methods

Cossidae were collected using light traps. Holotypes of new species are deposited in ZISP.

Abbreviation list

BMNH	The Natural History Museum (London, G.B.);
MHUB	Museum für Naturkunde der Humboldt-Universität (Berlin, Germany);
MNHN	Muséum National d'Histoire Naturelle (Paris, France);
MNHB	Museum Natural History (Bruxelles, Belgium);
MNHS	Museum Natural History (Stockholm, Sweden);
MWM	Museum of Thomas Witt (Munich, Germany);
NHMT	National History Museum (Tokyo, Japan);
RMNH	Nationaal Natuurhistorisch Museum (Leiden, The Netherlands);
RYB	collection of Roman Yakovlev (Barnaul, Russia);
ZFMK	Zoologisches Forschungsinstitut und Museum Alexander Koenig (Bonn, Germany);
ZISP	Zoological Institute of Science Academy of Russian Federation (St.Petersburg, Russia).
ZMUO	Zoological Museum of Oxford University (Oxford, G.B.).

Material examined: 1 male, Vietnam, Kon Tum prov., Sa Thai distr., Chu Mon Ray N.[ational] P.[ark], Bargok Comm, N14°25'; E 107°43', 20.03.2012, H – 680 m, leg. V. Zolotuhin (RYB).

*Genus *Azygophleps* Hampson, 1892

Azygophleps Hampson, 1892: 309. Type species: *Hepialis scalaris* Fabricius, 1775. By original designation.

**Azygophleps scalaris* (Fabricius, 1775)

(Fig. 10)

Phalaena (*Hepialus*) *scalaris* Fabricius, 1775: 590.

Type locality: China.

Type material: lost.

Distribution: Pakistan, India, China, Sri Lanka, Myanmar, Thailand, Cambodia, Bangladesh, Mauritania, Somali, Senegal, Ivory Coast, Ghana, Nigeria, Congo, Kenya, Angola, Namibia, Tanzania, Sudan, Malawi (Yakovlev 2011).

Material examined: 2 males, Vietnam, Dong Nai, Tan Phu, Nam Cat Tien, Nui Tuong, N11.40511°; E107.38597°, H – 117 m, 07.07.2011, leg. Solovyev, Pugaev & Nedoshivina (RYB).

Biogeographical overview

The cossid fauna of Vietnam includes 27 genera and 42 species placed in three subfamilies. Thirteen species are considered to be endemic, *Catopta tropicalis*, *Paracossus zyaung*, *Hollowiella chanwu*, *Roepkiella loeffleri*, *Chinocossus vjet*, *Streltziella owadai*, *Phragmacossia fansipangi*, *P. laklong*, *Roerichiora bachma*, *Butaya auko*, *Lakshmia sirena*, *Bergaris ruficeps*, and *B. solovievi*. The Vietnamese Cossidae includes five assemblages: (1) endemic Indochine species (16 species); (2) species distributed from India or Central China to Indochina (nine species); (3) species distributed from Indochina through Malacca to the Greater Sunda Islands; (4) Panoriental species (8 species); and (5) widely distributed panpalaeotropical species (1 species).

It is significant to note that the two species of the Vietnamese fauna that have Palearctic affinities, namely *C. tropicalis* and *Streltziella owadai*, are restricted to northern Vietnam. The genus *Catopta* is widely distributed in major mountain ranges of Palearctic Asia, from Central Yakutia of eastern Siberia. The genus *Streltziella* includes two species which are known from southern areas of the Russian Far East through Central and eastern China to northern Vietnam. The other 40 cossid species known from Vietnam are members of 25 genera distributed throughout the Old World Tropics.

Acknowledgement

The author thanks Vadim Zolotuhin, Alexej Soloviev, Svetlana Nedoshivina (Uljanovsk) and Alexander Zhokhov (Borok) who collected the new Cossidae material in Vietnam; Anatoly Krupitsky (Moscow) and Mikhail Skaptsov (Barnaul) for technical support.

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