

## New records of adventive species of Corylophidae and Silvanidae (Coleoptera: Cucujoidea) from the Western Caucasus

## Новые указания адвентивных видов Corylophidae и Silvanidae (Coleoptera: Cucujoidea) для Западного Кавказа

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Three species of adventive beetles, *Arthrolips fasciata* (Erichson, 1842) from the family Corylophidae, *Silvanoprus cephalotes* (Reitter, 1876) and *Psammoecus trimaculatus* Motschulsky, 1858 from the family Silvanidae, are recorded from the Caucasian region and from Russia for the first time. *Psammoecus trimaculatus* is the first recorded from Europe, and *A. fasciata* and *S. cephalotes* are first recorded from Eastern Europe.

Впервые для Кавказского региона и для России указаны три вида адвентивных жесткокрылых: *Arthrolips fasciata* (Erichson, 1842) из семейства Corylophidae, *Silvanoprus cephalotes* (Reitter, 1876) и *Psammoecus trimaculatus* Motschulsky, 1858 из семейства Silvanidae. *Psammoecus trimaculatus* впервые отмечается для Европы, а *A. fasciata* и *S. cephalotes* – для Восточной Европы.

**Key words:** adventive species, Russia, Western Caucasus, distribution, Coleoptera, Cucujoidea, Corylophidae, Silvanidae, new records

**Ключевые слова:** адвентивные виды, Россия, Западный Кавказ, распространение, Coleoptera, Cucujoidea, Corylophidae, Silvanidae, новые указания

### INTRODUCTION

During field studies in the Sochi National Park in 2014, the author collected three coleopteran species, which are probably adventive to the Caucasian area and have not been recorded from Russia before. All these species seem to be associated with various decaying plant matter, and, most probably, could be imported with planting material. Although none of them is expected to cause notable economic damage, their potential to invade native ecosystems may be worthy of further investigation. All the captured specimens are deposited in the collection of the Zoological Institute of the Russian Academy of Sciences, Saint Petersburg, Russia (ZIN). The digital color photographs were taken with the Canon EOS

11 40D digital camera with a Canon MP-E 65 mm objective and were combined in the *Zerene Stacker* 1.04 software.

### Order COLEOPTERA

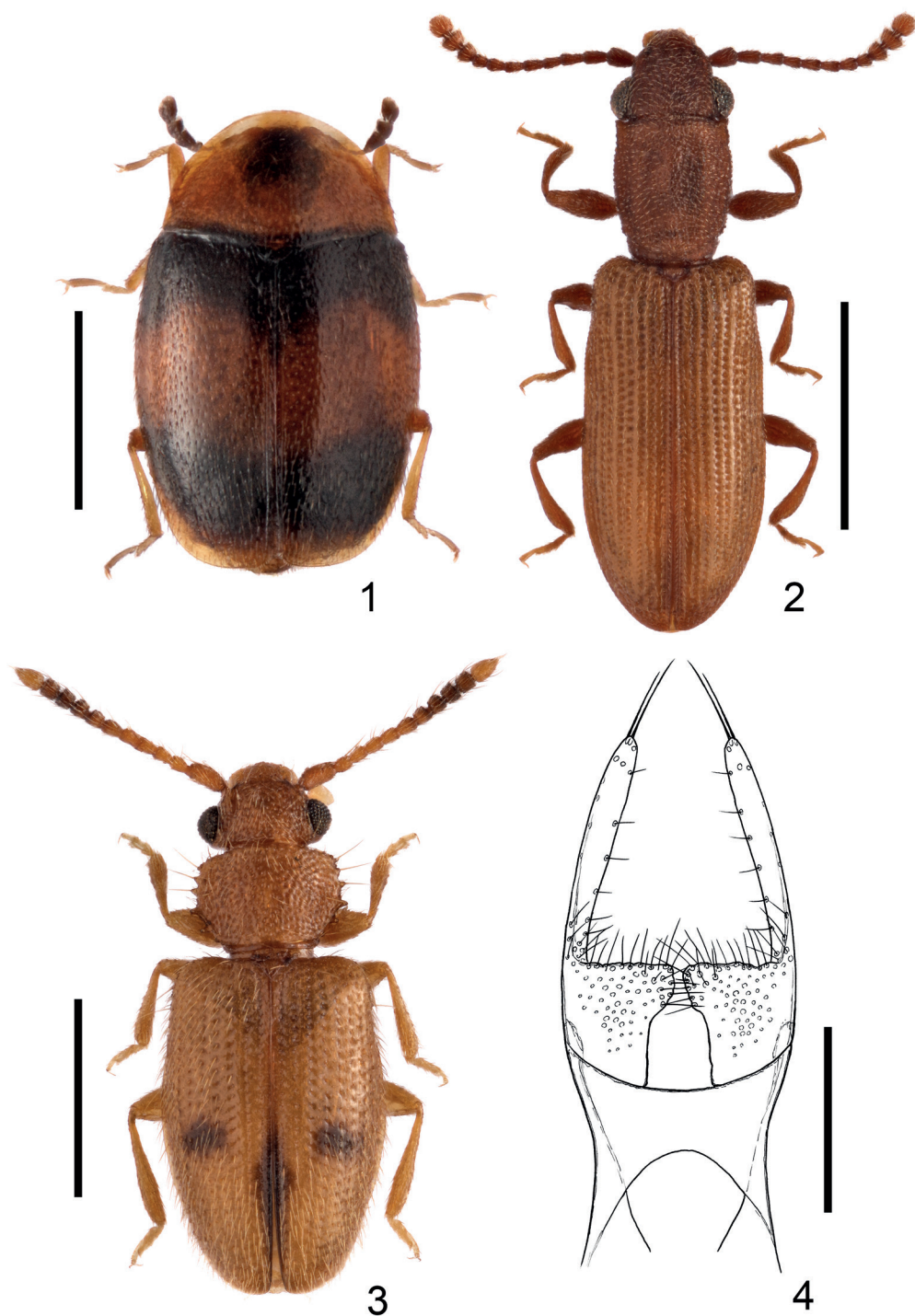
### Superfamily CUCUJOIDEA

### Family CORYLOPHIDAE

*Arthrolips fasciata* (Erichson, 1842)  
(Fig. 1)

*Material examined.* **Russia:** Krasnodar Terr., Dagomys env., 43°39'30"N 39°37'58"E, h ~ 70 m, 25.VII.2014 (A. Kovalev leg.), 1 female (ZIN).

*Comparative note.* *Arthrolips fasciata* is readily distinguishable from all other corylophids of the regional fauna by the characteristic colouration of the body: reddish



**Figs 1–4.** Cucujoidea. **1**, *Arthrolips fasciata*, female; **2**, *Silvanoprus cephalotes*, female; **3**, **4**, *Psammoecus trimaculatus*, male. General view (1–3), apex of tegmen with parameres (4). Scale bars: 0.5 mm (1), 1.0 mm (2, 3), 0.1 mm (4).

pronotum often darkened on the disc and black elytra with large red transverse band about at middle (Fig. 1).

**Distribution.** This species was described from Tasmania, and has also been reported from New South Wales and New Zealand (Bowstead, 2003). In 2003, *A. fasciata* was recorded for the first time from Europe, where now it is known from France (Bowstead, 2003; Dauphin, 2004; Ponel et al., 2010), Italy (Ratti, 2007), and Spain (Viñolas et al., 2012). About the same time *A. fasciata* has also been reported from the United States of America (Florida) and Taiwan (Thomas, 2005). Here it is first recorded from Russia (Western Caucasus).

**Bionomics.** It has been suggested that *A. fasciata* is associated in some way with conifers (Bowstead, 2003), but later it has been collected by sifting litter in a grove of cork oaks and under dehiscent bark of beech (Ponel et al., 2010), as well as in compost and even in caves (Ratti, 2007). The specimen from the Krasnodar Territory was sifted from rotten wood of old fallen oak tree. Most probably *A. fasciata*, like other Corylophidae species, is associated with moulds or other fungi, growing on various plant substrates.

## Family SILVANIDAE

### *Silvanoprus cephalotes* (Reitter, 1876) (Fig. 2)

**Material examined.** Russia: Krasnodar Terr., Chvizhepse Vill., 43°38'32''N 40°04'45''E, h ~ 300 m, 7.VII.2014 (A. Kovalev leg.), 1 female (ZIN).

**Comparative note.** *Silvanoprus cephalotes* can easily be distinguished from the native Caucasian species of Silvaninae by the presence of a small denticle on the front femur, as well as by the barrel-shaped pronotum with anterior angles very small, so that the head is distinctly broader than the pronotum across anterior angles (Fig. 2).

**Distribution.** This species is widely distributed in the Oriental and Papuan regions and also in the Palaearctic Far East, and

has been recorded from India, Sri Lanka, Bangladesh, Nepal, Bhutan, China, Taiwan, Japan, Vietnam, Peninsular Malaysia, Indonesia (Borneo, Sumatra, Java), and Papua New Guinea (Halstead, 1993). It has been imported to the United Kingdom (Aitken, 1975) and to the United States of America (Zimmerman, 1990) with products of plant origin, and also been found in East Africa (Tanzania) (Halstead, 1993), where it probably also was introduced.

**Bionomics.** *Silvanoprus cephalotes* is associated with decomposing plant matter, where appears to feed on various fungal substrates. It has been found in haystacks, under bark, and also on stored products such as grains, copra, etc.; adults are often attracted by light (Halstead, 1993). The specimen from the Krasnodar Territory was collected at light.

### *Psammoecus trimaculatus*

Motschulsky, 1858  
(Figs 3, 4)

**Material examined.** Russia: Krasnodar Terr., Chvizhepse vill., 43°38'32''N 40°04'45''E, h ~ 300 m, 11–26.VII.2014 (A. Kovalev leg.), 4 males (ZIN).

**Comparative note.** *Psammoecus trimaculatus* differs from *P. bipunctatus* (Fabricius, 1792), the only species of the genus known so far from the Caucasian region, by the broader pronotum with longer lateral teeth (Fig. 3) and the structure of the aedeagus with larger bases of parameres (Fig. 4).

**Distribution.** This species, which probably originated in the Oriental Region, has now spread widely in many tropical and subtropical areas of the world. It has been recorded from India, Sri Lanka, Nepal, Bhutan, Myanmar, Japan, and Malaysia in Asia, and also was reported from New Guinea and Australia (Pal, 1985; Karner, 2012; Yoshida & Hirowatari, 2014), although many old records require confirmation. *Psammoecus trimaculatus* is also reported from several countries of the African continent (Tanzania, Uganda, South Africa), as well as from Madagascar, Mauritius and Réunion

(Pal, 1985; Karner, 2012; 2014), and has also been recorded from Brazil (Thomas & Yamamoto, 2007).

**Bionomics.** The species seems to be associated with various decaying plant substrates and has been found in haystacks, under dry cut grass, leaf garbage, etc. (Pal, 1985). All mentioned specimens from the Krasnodar Territory have been collected at light.

#### ACKNOWLEDGEMENTS

I am very grateful to A.G. Kirejtshuk (Saint Petersburg, Russia) for valuable comments and for his help in preparation of the manuscript, to N.B. Nikitsky (Moscow) and M.C. Thomas (Gainesville, USA) for their helpful suggestions and corrections that helped improve the paper, as well as to A.I. Miroshnikov (Sochi, Russia) for his help in organization of field research in the Sochi National Park. The present study was supported by the Russian Science Foundation (RSF), research project 16-14-10031.

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Received 16 Aug. 2016 / Accepted 23 Nov. 2016

Editorial responsibility: B.M. Kataev