

New and Rare Longhorn Beetles (Coleoptera: Cerambycidae) in Bulgaria

Danail Doychev*, Georgi Georgiev**

Abstract: Twenty-seven new and rare longhorn beetles (Coleoptera: Cerambycidae) were established during the period 1997-2003 in Bulgaria. *Semanotus rusicus* and *Glaphyra marmottani* are new to the fauna of the country. Another species, *Acanthocinus reticulatus*, is reported for the first time in the Bulgarian entomological literature. Ten cerambycids were reared from stems and branches of different tree species.

Key words: Cerambycidae, *Semanotus rusicus*, *Glaphyra marmottani*, *Acanthocinus reticulatus*, Bulgaria

Introduction

The Bulgarian cerambycid fauna (Coleoptera: Cerambycidae) includes about 250 species (ANGELOV 1995). However, this group has not been studied in details yet in different regions of the country.

The article reports data about records of new and rare cerambycids in Bulgaria.

Material and Methods

The longhorn beetles have been studied in Bulgaria since 1997. The biological material discussed in this paper was collected by the following methods:

- hand collections of adults on the ground, flowers and host plants;
- collections of cerambycid larvae and pupae under the bark or in wood of drying and dead forest trees;
- laboratory rearing of adults from samples (damaged cuttings containing larvae and pupae) in photoelectors at room temperature (18-22^o C);
- collections by malaise traps;
- collections by colour plastic bowls filled with water and hanged in the crowns of drying tree species.

The larvae of *Rhamnusium bicolor* (SCHRANK) were identified by the key of ŠVÁCHA, DANILEVSKY (1988).

The nomenclature used in this article is based on the classification of HOSKOVEC, REJZEK (2003).

* University of Forestry - Sofia, Bulgaria

** Forest Research Institute, 132 St. Kliment Ohridski Blvd., Sofia 1756, Bulgaria; e-mail: ggeorg@bas.bg

Results and Discussion

Twenty-seven cerambycid species were found as new or rare in different localities of Bulgaria. In systematical aspect they belong to four subfamilies as follows:

Lepturinae

Anastrangalia sanguinolenta (LINNAEUS, 1761)

Material examined: 1 ex., Lyulin Mts. above Gorna Banya, 750 m, on flowers, 11.06.2000, leg. D. Doychev; 1 ex., Osogovo Mts., Gabra Reserve, 700 m, on *Quercus* sp., 13.06.2001, leg. D. Doychev.

Anoplodera sexguttata (FABRICIUS, 1775)

Material examined: 3 ex., Belasitsa Mts. above Petrich, 700 m, on flowers of *Rubus* sp., 13.05.2003, leg. D. Doychev.

Etorufus pubescens (FABRICIUS, 1787)

Material examined: 1 ex., Chervenata stena Reserve above Bachkovo vill., 1400 m on flowers, 07.08.2002, leg. D. Doychev.

Paracorymbia pallens (BRULLÉ, 1832)

Material examined: 1 ex., Belasitsa Mts. above Petrich, 600 m, on flowers, 13.05.2003, leg. D. Doychev.

Anisorus quercus (GÖTZ, 1783)

Material examined: 2 ex., Elhovo, Dolna Topchia Reserve, 100 m, on herbs, 05.05.2001, leg. D. Doychev.

Cortodera femorata (FABRICIUS, 1787)

Material examined: 1 ex., Sofia, 600 m, on a leaf of *Sambucus ebulus* L., 10.05.2003, leg. D. Doychev.

Grammoptera ruficornis (FABRICIUS, 1781)

Material examined: 1 ex., Lyulin Mts., Bonsovi Polyani, 850 m, on herbs, 09.06.2002, leg. D. Doychev; 1 ex., Golo bardo Mts., Ostritsa Botanic Reserve, 1000 m, pupa in a dead branch of *Sorbus aria* (L.) CRANTZ., 14.04.2002, adult emergence - May 2002, leg. D. Doychev.

Grammoptera ustulata (SCHALLER, 1783)

Material examined: 2 ex., Belasitsa Mts. above Petrich, 700 m, on flowers of *Rubus* sp., 13.06.2003, leg. D. Doychev.

Rhagium sycophanta (SCHRANK, 1781)

Material examined: 1 ex., the Rhodopes above Velingrad, 1000 m, imago under the bark of *Quercus petraea* LIEBL. stump, 08.05.2001, leg. D. Doychev; 1 ex., the Rhodopes, Yundola vill., 1200 m., imago on a stump of *Pinus sylvestris* L., 14.05.2002, leg. D. Doychev; 1 ex., Belasitsa Mts. above Petrich, 700 m, imago in a stump of *Castanea sativa* MILL., 14.05.2003, leg. D. Ovcharov.

Rhamnusium bicolor (SCHRANK, 1781)

Material examined: Haskovo, 2 larvae in wood of *Populus* sp., 08.11.2002, leg. D. Doychev; 1 ex., Sofia, 550 m, near old trees of *Aesculus hippocastanum* L., 21.05.2003, leg. T. Ljubomirov.

Spondylidinae

Arhopalus ferus (PIC, 1891)

Material examined: 113 ex., Kyustendil, 1000 m, reared from roots from burned *Pinus sylvestris* L. trees, sample collection - 20 March and 4 April 2002, adult emergence - May-July 2002, leg. D. Doychev; 1 ex., Sakar Mts., 15 km south-east of Topolovgrad, 150 m, on a leaf of *Quercus rubra* L., 23.05.2002, leg. D. Doychev; 1 ex., Sakar Mts., Balgarska polyana vill. near Topolovgrad, 300 m, hand collection on the ground, 25.07.2001, leg. D. Doychev; 1 ex., Sakar Mts., Pastrogor vill. above Svilengrad, 200 m, reared from burned stump of *Pinus nigra* Arn., sample collection - 22.05.2002, adult emergence - June 2002, leg. D. Doychev; 1 ex., 20 km south of Ivailovgrad, 100 m, reared from base of stem of burned *Pinus brutia* Ten., sample collection - 18.04.2003, adult emergence - June 2003, leg. D. Doychev.

Cerambycinae

Axinopalpis gracilis (KRYNICKI, 1832)

Material examined: 1 ex., Panagyurishte, 560 m, hand collection on the ground, 14.06.2003, leg. S. Lazarov.

Semanotus ruscicus (FABRICIUS, 1776)

Material examined: 1 ex., Eastern Rhodopes, Ivailovgrad, 100 m, hand collection, 17.04.2003, leg. D. Doychev.

Glaphyra marmottani (C. BRISOUT DE BARNEVILLE, 1863)

Material examined: 1 ex., Bachkovo vill. above Assenovgrad, 650 m, reared from branches of dried *Pinus sylvestris* L., sample collection - 21.04.2002, adult emergence - June 2002, leg. D. Doychev.

Glaphyra umbellatarum (SCHREBER, 1759)

Material examined: 1 ex., Novi Pazar, 400 m, on flowers of *Crataegus monogyna* L., 31.05.2003 leg. G. Georgiev.

Molorchus minor (LINNAEUS, 1767)

Material examined: 3 ex., Sofia, Borissova gradina Park, 570 m, imago in pupa cells under the bark of cut *Picea pungens* ENGELM., 19.03.2003, leg. D. Doychev.

Callimellum angulatum (SCHRANK, 1789)

Material examined: 1 ex., Balabana Reserve near Elhovo, 100 m, on flowers, 04.05.2001, leg. D. Doychev; 2 ex., Avren vill. near Varna, 280 m, on flowers, 27.05.2003, leg. G. Georgiev; 1 ex., Tranitsa vill. near Novi Pazar, 420 m, on flowers, 30.05.2003, leg. G. Georgiev.

Callimoxys gracilis (BRULLÉ, 1832)

Material examined: 1 ex., Plana Mts., Vedena River above Kokalyane vill., 800 m, on a leaf of *Populus x euramericana* DODE (GUINIER), 22.06.1997, leg. G. Georgiev; 2 ex., Balabana Reserve near Elhovo, 100 m, on herbs and *Ulmus campestris* L., 04.05.2001, leg. D. Doychev; 1 ex., Elhovo, Dolna Topchia Reserve, 100 m, on a leaf of *Acer tataricum* L., 04.05.2001, leg. D. Doychev; 1 ex., Kresna gorge of the Struma valley, Peyo Yavorov Railway Station, 300 m, 04-18.05.2003, Malaise trap, leg. M. Langourov.

Lamiinae

Acanthocinus reticulatus (RAZOUKOWSKY, 1789)

Material examined: 1 ex., Central Balkan Range, Ribaritsa vill, near Teteven, 700 m, under the bark of dried *Pseudotsuga douglasii* GARR., 25.10.2002, leg. D. Ovcharov.

Exocentrus punctipennis MULSANT ET GUILLEBEU, 1856

Material examined: 1 ex., Maleshevska Planina, Gorna Breznitsa vill., 550 m, 8-21.08.2002, leg. T. Ljubomirov.

Deroplia genei (ARAGONA, 1830)

Material examined: 1 ex., Kresna gorge of the Struma valley, Peyo Yavorov Railway Station, 300 m, 04-18.05.2003, Malaise trap, leg. M. Langourov.

Mesosa curculionoides (LINNAEUS, 1761)

Material examined: 1 ex., Bachkovo vill. above Assenovgrad, 450 m, on a leaf of *Juglans regia* L., 10.06.2002, leg. D. Doychev; 1 ex., Belasitsa Mts. above Petrich, 550 m, on a leaf of *Castanea sativa* MILL., 13.06.2003, leg. D. Doychev; 1 ex., Kresna gorge of the Struma Valley, Stara Kresna Railway Station, 300 m, 03.05-04.06.2003, Malaise trap, leg. M. Langourov.

Pogonocherus decoratus FAIRMAIRE, 1855

Material examined: 2 ex., the Rhodopes, near Martsiganitsa Hut over Chervenata stena Reserve, 1450 m, reared from branches of burned *Pinus nigra* ARN., sample collection - 20.04.2002, adult emergence - May 2002, leg. D. Doychev.

Pogonocherus fasciculatus (DE GEER, 1775)

Material examined: 1 ex., Pirin Mts., above Banderitsa Hut, 1800 m, on *Pinus peuce* GRAB., 16.05.2001, leg. D. Doychev; 1 ex., Gorna Malina vill., 620 m, reared from a stem and branches of dried seedling of *Pinus nigra* ARN., sample collection - 18.04.2002, adult emergence - June 2002, leg. D. Doychev; 1 ex., Kyustendil, 950 m, from branches of *Pinus nigra* ARN., sample collection - 15.11.2002, adult emergence - 04.04.2003, leg. D. Doychev; 1 ex., Kresna gorge of the Struma Valley, Peyo Yavorov Railway Station, 300 m, on a stem of *Quercus pubescens* WILLD., 19.04.2003, leg. N. Simov.

Niphona picticornis MULSANT, 1839

Material examined: 1 ex., Strandzha Mountain, Veleka River, 100 m, 22.06.2003, leg. A. Stojanova.

Saperda punctata (LINNAEUS, 1767)

Material examined: 1 ex., Elhovo, Dolna Topchia Reserve, 100 m, pupa under the bark of *Ulmus campestris* L. - 04.05.2001, adult emergence - 07.05.2001, leg. D. Doychev; 1 ex., Sofia, Geo Milev Park, 600 m, 04-11.08.2003, yellow bowl trap on drying *Ulmus laevis* PALL., leg. T. Ljubomirov.

Saperda quercus CHARPENTIER, 1825

Material examined: 1 ex., Gorni Domlyan vill. near Karlovo, 350 m, on a leaf of *Quercus frainetto* TEN., 28.04.2001, leg. G. Georgiev.

S. ruscicus and *G. marmottani* were established for the first time in Bulgaria. The remaining cerambycids were recorded in new localities of the country.

S. ruscicus occurs in South-East and Central Europe, North Africa, Turkey and Transcaucasia (HOSKOVEC, REJZEK 2003). According to the authors, the larvae feed

under the bark of drying or dead coniferous hosts from *Juniperus* and *Cedrus* genera. *G. marmottani* is distributed in Central, South-West and West Europe (HOSKOVEC, REJZEK 2003). The larvae develop in dry twigs and thin branches of *Pinus* spp. (BENSE 1995).

A. reticulatus also appear to be new to the Bulgarian fauna. In the check-list of DANILEVSKY (2003) it is included for Bulgaria, but no data about localities of the species have been found in Bulgarian entomological literature.

The habitats of the most interesting four species are pointed in Fig. 1.

The remaining cerambycids have been reported previously from limited number of localities in Bulgaria (Table 1). Some of them (*E. pubescens*, *R. bicolor*, *C. gracilis*, *D. genei*, *N. picticornis* and *S. quercus*) are known with a single or few localities only.

Ten cerambycids (*G. ruficornis*, *R. sycophanta*, *R. bicolor*, *A. ferus*, *G. marmottani*, *M. minor*, *A. reticulatus*, *P. decoratus*, *P. fasciculatus* and *S. punctata*) were established in trophic associations with different tree species. They were collected under the bark and in the wood of host plants or were reared from samples in laboratory conditions. *A. ferus* was the most abundant among them. It was observed to infest burned stands of different *Pinus* species.

Acknowledgements: We are very grateful to Dr. M. Langourov, Dr. T. Ljubomirov, Dr. S. Lazarov, N. Simov (Institute of Zoology - Sofia), Dr. D. Ovcharov (University of Forestry - Sofia) and Dr. A. Stojanova (University of Plovdiv "Paisii Hilendarski") for providing us a part of the biological material. We also would like to thank S. Kitanova (Forest Research Institute - Sofia) for helping us with the English version of the manuscript and Dr. S. Abadzhiev (Institute of Zoology - Sofia) for providing us with the map of Bulgaria.



Fig. 1. Habitats of *Semanotus russicus*, *Glaphyra marmottani* and *Acanthocinus reticulatus* in Bulgaria

Table 1. Localities of cerambycids in Bulgaria according to different authors

Species	Locality	Author
<i>A. sanguinolenta</i>	Rhodopes, Balkan Range, Vitosha Mts., Rila Mts.	ANGELOV (1995)
<i>A. sexguttata</i>	Rila Mts., Strandzha Mts., Osogovo	ANGELOV (1995)
<i>E. pubescens</i>	Rhodopes (Chehliovo, Chepelare, Persenk)	KANTARDJIEWA-MINKOVA (1932), GANEV (1984)
<i>P. pallens</i>	Balkan Range, Strandzha Mts., Assenovgrad, Kresna gorge	ANGELOV (1995)
<i>A. quercus</i>	Rhodopes, Slavyanka Mts., Belasitsa Mts., Balkan Range	ANGELOV (1995)
<i>C. femorata</i>	Slavyanka Mts., Rhodopes	ANGELOV (1995)
<i>G. ruficornis</i>	Balkan Range, Sredna gora Mts., Eastern Rhodopes	ANGELOV (1995)
<i>G. ustulata</i>	Balkan Range, Sredna gora Mts., Rila Mts., Sofia	ANGELOV (1995)
<i>R. sycophanta</i>	Varna, Balkan Range, Rhodopes, Vitosha Mts.	ANGELOV (1995)
<i>R. bicolor</i>	Velingrad, Blagoevgrad	ANGELOV (1995)
<i>A. ferus</i>	Sofia, Yundola, Pirin Mts.	ANGELOV (1995)
<i>A. gracilis</i>	Razgrad, Varna, Haskovo, Assenovgrad, Belovo	ANGELOV (1995)
<i>G. umbellatarum</i>	Strandzha Mts., Rila Mts., Balkan Range, Plovdiv	ANGELOV (1995)
<i>M. minor</i>	Rila Mts., Rhodopes, Osogovo Mts.	ANGELOV (1995)
<i>C. angulatum</i>	Rare in all country	ANGELOV (1995)
<i>C. gracilis</i>	Kresna gorge, Malo Gradishte in the Eastern Rhodopes	ANGELOV (1995)
<i>A. reticulatus</i>	?	DANILEVSKY (2003)
<i>E. punctipennis</i>	Slavyanka Mts., Balkan Range, Sakar Mts., Gotse Delchev, Kresna gorge	HEYROVSKÝ (1931); KANTARDJIEWA-MINKOVA (1934), ANGELOV (1967), GANEV (1984)
<i>D. genei</i>	Kostenets	ANGELOV (1967)
<i>M. curculionoides</i>	Rila Mts., Rhodopes, Kyustendil, Sofia, Vratsa, Razgrad, Plovdiv, Kresna gorge	HEYROVSKÝ (1931); KANTARDJIEWA-MINKOVA (1934); ANGELOV (1967), GANEV (1986)
<i>P. decoratus</i>	Rhodopes (Zdravets Hut)	ANGELOV (1989)
<i>P. fasciculatus</i>	Rhodopes, Rila Mts., Vitosha Mts., Assenovgrad, Gotse Delchev, Pobit kamak	KANTARDJIEWA-MINKOVA (1934); ANGELOV (1967), GANEV (1985, 1986)
<i>N. picticornis</i>	Plovdiv, Kresna gorge, Kozhuh Mts.	ANGELOV (1967), GANEV (1984)
<i>S. punctata</i>	Kresna, Petrich, Plovdiv, Kozhuh Mts., Kresna gorge, Arkutino	HEYROVSKÝ (1931), ANGELOV (1967), GANEV (1984, 1985, 1986)
<i>S. quercus</i>	Tsarevo, Plovdiv	KANTARDJIEWA-MINKOVA (1934); ANGELOV (1967)

Received: 22.10.2003
Accepted: 27.02.2004

References

- ANGELOV P. 1967. Beitrag zur Kenntnis der bulgarische Cerambyciden-Arten. - *Travaux scientifiques de l'Ecole Normale Supérieure "Paisii Hilendarski" - Plovdiv*, **5** (1): 113-128. (In Bulgarian, German summary).
- ANGELOV P. 1989. Unbekannten Cerambycidae (Coleoptera) für die Fauna Bulgariens. - *Travaux scientifiques de l'Ecole Normale Supérieure "Paisii Hilendarski" - Plovdiv*, **27** (6): 137-138. (In Bulgarian, German summary).
- ANGELOV P. 1995. Fauna Bulgarica. 24. Coleoptera, Cerambycidae. Part I (Prioninae, Lepturinae, Necydalinae, Aseminae, Cerambycinae). - In: *Aedibus Academiae Scientiarum Bulgaricae*, Sofia, 206 p. (In Bulgarian).
- BENSE U. 1995. Longhorn beetles. Illustrated Key to the Cerambycidae and Vesperidae of Europe. Weikersheim, Margraf Verlag, 512 p.
- DANILEVSKY M. L. 2003. Systematic list of Longhorn Beetles (Cerambycoidea) in Europe (Version March 2003). - In: Hoskovec, M., M. Rejzek. Longhorn Beetles (Cerambycidae) of the Western Palaearctic Region. URL: <http://www.uochb.cas.cz/~natur/cerambyx/index.htm>.
- GANEV J. 1984. New Records for Bulgarian Cerambycidae (Coleoptera). - *Acta entomologica Jugoslavica*, **20** (1-2): 57-61.
- GANEV J. 1985. Über die von Dr. Botscharov von Bulgarien gesammelten Cerambycidae-Arten. - *Articulata*, **2** (6): 147-153.
- GANEV J. 1986. Beitrag zur Verbreitung der Familie Cerambycidae (Coleoptera) in Bulgarien. - *Articulata*, **2** (9): 307-312.
- HEYROVSKÝ L. 1931. Beitrag zur Kenntnis der bulgarischen Cerambyciden. - *Mitteilungen aus den Königlichen naturwissenschaftlichen Instituten in Sofia - Bulgarien*, **4**: 78-86.
- HOSKOVEC M., M. REJZEK 2003. Longhorn Beetles (Cerambycidae) of the Western Palaearctic Region (Last update April 23, 2003). URL: <http://www.uochb.cas.cz/~natur/cerambyx/index.htm>.
- KANTARDJIEWA-MINKOVA S. 1932. Die Arten der Familie Cerambycidae (Col.). I. (Prioninae und Cerambycinae). - *Mitteilungen der Bulgarischen Entomologischen Gesellschaft in Sofia*, **7**: 78-99. (In Bulgarian, German summary).
- KANTARDJIEWA-MINKOVA S. 1934. Die Arten der Familie Cerambycidae (Col.). II. (Lamiinae). - *Bulletin de la Société Entomologique de Bulgarie*, **8**: 132-144. (In Bulgarian, German summary).
- ŠVÁCHA P., M. L. DANILEVSKY 1988. Cerambycoid larvae of Europe and Soviet Union (Coleoptera, Cerambycoidea). Part III. - *Acta Universitatis Carolinae - Biologia*, **32**: 1-205.

Нови и рядки церамбициди (Coleoptera: Cerambycidae) в България

Д. Дойчев, Г. Георгиев

(Резюме)

През периода 1997-2003 г. са проведени проучвания върху церамбицидната фауна (Coleoptera: Cerambycidae) на България. В различни райони на страната са установени следните 27 нови и рядки видове: *Anastrangalia sanguinolenta*, *Anoplodera sexguttata*, *Etorufus pubescens*, *Paracorymbia pallens*, *Anisorus quercus*, *Cortodera femorata*, *Grammoptera ruficornis*, *Grammoptera ustulata*, *Rhagium sycophanta*, *Rhamnusium bicolor* (Lepturinae), *Arhopalus fesus* (Spondylidinae), *Axinopalpis gracilis*, *Semanotus ruscicus*, *Glaphyra marmottani*, *Glaphyra umbellatarum*, *Molorchus minor*, *Callimellum angulatum*, *Callimoxys gracilis* (Cerambycinae), *Acanthocinus reticulatus*, *Exocentrus punctipennis*, *Deroplia genei*, *Mesosa curculionoides*, *Pogonocherus decoratus*, *Pogonocherus fasciculatus*, *Niphona picticornis*, *Saperda punctata* и *Saperda quercus* (Lamiinae).

S. ruscicus и *G. marmottani* са нови за фауната на България, а останалите церамбициди имат нови находища в страната.

При *G. ruficornis*, *R. sycophanta*, *R. bicolor*, *A. fesus*, *G. marmottani*, *M. minor*, *A. reticulatus*, *P. decoratus*, *P. fasciculatus* и *S. punctata* са установени трофични връзки с хранителни растения. Те са намерени под кората и в дървесината на различни горскодървесни видове или са изведени от проби от стъбла и клонове в лабораторни условия. Сред тях най-разпространен и многоброен е *A. fesus*, който се настелява в опожарени насаждения на видове от род *Pinus*.