Journal of Life Sciences & Biomedicine, vol. 4(77), No 2, p. 44-49 (2022)

Eastern Zangezur economic districts Longhorn beetles (*Coleoptera, Cerambycıdae*) of Karabakh

***Eyvazov Aladdin Gismat, Kerimova Ilhama Gudrat**

Institute of Zoology, Ministry of Science and Education of the Republic of Azerbaijan, 115 A.Abbaszade Str., 1128 Pass., 504 Block, Baku AZ1004, Azerbaijan

****For correspondence:** info@zoology.science.az*

Received: October 8, 2022; Received in revised form: November 21, 2022; Accepted: December 2, 2022

Before the occupation, 53 of 280 species belonging to the fauna of longhorn beetles of Azerbaijan were recorded in the territory of Karabakh. These species belong to the following genera: *Aegomorphus, Agapanthia, Asemum, Cerambyx, Certallum, Chlorophorus, Dinoptera, Dorcadion, Echinocerus, Enoploderes, Gracilia, Hesperophanes, Isotomus, Judolia, Leiopus, Mallosia, Molorchus, Necydalis, Oberea, Pachytodes, Penichroa, Phymatodes, Phytoecia, Plagionotus, Prionus, Purpuricenus, Ropalopus, Rosalia, Rutpela, Saperda, Spondylis, Stenurella, Stictoleptura, Strangalia, Stromatium, Trichopherus*. Of these species, *Rosalia alpina* (Linnaeus, 1758), *Prionus asiaticus* Faldermann, 1837, *Necydalis (Necydalis) ulmi* Chevrolat, 1838, *Mallosia (Eumallosia) herminae* Reitter, 1890, *Cerambyx* (*Cerambyx*) *dux* (Faldermann, 1837), *C.* (*Cerambyx*) *cerdo acuminatus* Motschulsky, 1853 are few. *R. alpina* is included in the IUCN Red List and the Red Book of Azerbaijan under the VU category. Species of the genera *Purpuricenus, Cerambyx, Enoploderes, Molorchus, Necydalis, Prionus, Ropalopus, Rosalia, Saperda, Spondylis, Isotomus, Judolia, Leiopus, Pachytodes, Penichroa, Chlorophorus, Dinoptera, Stictoleptura, Aegomorphus, Gracilia, Asemum, Hesperophanes, Phymatodes, Rutpela, Stenurella, Strangalia* feed on the trunks of trees and shrubs, *Agapanthia, Certallum, Dorcadion, Echinocerus, Mallosia, Phytoecia* on herbaceous plants. Some species of *Oberea* and *Plagionotus* feed on the trunks of deciduous trees, and some on grasses. *Stromatium* and *Trichopherus* damage wooden structures. The liberation of the Karabakh lands from occupation opens up new prospects for Azerbaijani scientists to conduct research in these areas. The re-study of the entomofauna of Karabakh will create conditions for the discovery of rare and endangered species in this area.

***Keywords:** Fauna, longhorn beetles, species composition, Red Book, rare species, endangered species*

INTRODUCTION

Located in the southeastern part of the Lesser Caucasus Karabakh, with its charming nature, occupies a key place among the charming places in Azerbaijan. The relief and climate of Karabakh determined the formation of rich fauna and flora here. Like the Lankaran and Nakhchivan regions of Azerbaijan, Karabakh has always attracted the attention of scientists and researchers. The existence of desert, semi-desert, steppe, dry steppe, mountain xerophyte, alpine, subalpine, low-mountain, plain landscapes created conditions for the formation of a rich entomofauna, including rare and endangered species (Constructive geography of the Azerbaijan Republic, 1996). However, due to the fact that this rich territory was under Armenian occupation for a long time, Azerbaijani scientists could not conduct new scientific research. In the post-occupation period, the rich nature of Karabakh creates a reliable basis for active research and the discovery of new species.

The eggs and larvae of the longhorn beetles may not have suffered from the destruction that occurred during the Karabakh war, as they live a rather secretive life inside the trees. During the

https://doi.org/10.29228/jlsb.1
Available online 30 December 2022

new monitoring, it will be possible to record most of these insects again in the same habitats.

RESULTS AND DISCUSSION

The article is written on the basis of the materials of the entomological collection of the Institute of Zoology of the Ministry of Science and Education of the Republic of Azerbaijan and the literary data of entomologists who conducted research in Karabakh in the pre-occupation period. Available information in this area is summarized. It has been established that 59 species of longhorn beetles inhabit the territory of Karabakh (Table).

Table. Species of longhorn beetles recorded on the territory of Karabakh

1	2
Tribes and species	**Place of finding**
PRIONINI Latreille, 1802	
Prionus asiaticus Faldermann, 1837	Terter
ENOPOLODERINI Danilevsky in Althoff & Danilevsky, 1997	
Enoploderes (Enoploderes) sanguineum Faldermann, 1837	Kalbajar -Lachin
RHAMNUSIINI Danilevsky in Althoff & Danilevsky, 1997	
Rhamnusium graecum Schaufuss, 1862	Khojali, Khojavend, Khankendi, Shusha, Aghdere
RHAGIINI Kirby, 1837	
Rhagium (Megarhagium) fasciculatum Faldermann, 1837	Kalbajar -Lachin
Dinoptera (Dinoptera) collaris Linnaeus, 1758	Khojali, Khojavend, Khankendi, Shusha, Aghdere
Cortoderaq pseudomophlus Reitter, 1889	Khojali, Khojavend, Khankendi, Shusha, Aghdere
LEPTURINI Latreille, 1804	
Vadonia unipunctata unipunctata Fabricius, 1787	Khankendi, Shusha
Judolia erratica erratica var. erythrura (Küster, 1848)	Khankendi, Shusha
Stictoleptura Stictoleptura) cordigera cordigera Fuessly, 1775	Khojali, Khojavend, Khankendi, Shusha, Aghdere
Stictoleptura (Stictoleptura) scutellata (Fabricius, 1781)	Khankendi
Pachytodes erratica erratica var. erythrura (Küster, 1848)	Khojali, Khojavend, Khankendi, Shusha, Lachın, Kalbajar
Pachytodes erraticus erraticus (Dalman, 1817)	Khojali, Khojavend, Khankendi, Shusha, Lachın, Kalbajar
Leptura quadrifasciata Linnaeus, 1758	Khojali, Khojavend, Khankendi, Shusha,
Stenurella (Stenurella) melanura melanura Linnaeus, 1758	Khojali, Khojavend, Khankendi, Shusha,
Stenurella (Priscostenurella) bifasciata bifasciata (O.F. Müller, 1776)	Khankendi
S.(Nigrostenurella) nigra nigra (Linnaeus, 1758)	Khojali, Khojavend, Khankendi, Shusha, Lachin,
Strangalia attenuata (Linnaeus, 1758)	Khankendi
Rutpela maculata (Poda von Neuhaus, 1 76 1)	Khankendi
NECYDALINI Latreille, 1825	
Necydalis (Necydalis) ulmi Chevrolat, 1838	Khojali, Khojavend, Khankendi, Shusha, Aghdere
ASEMINI Thomson, 1860	
Asemum striatum (Linnaeus, 1758)	Khojali, Khojavend, Khankendi, Shusha, Aghdere
SPONDYLIDINI Audinet-Serville, 1832	
Spondylis buprestoides (Linnaeus, 1758)	Khojali, Khojavend, Khankendi, Shusha, Aghdere
HESPEROPHANINI Mulsant, 1839	
Hesperophanes sericeus (Fabricius, 1787)	Jabrayil
Trichopherus holosericeus (Rossi, 1790)	Kalbajar-Lachin, Xankəndi
Stromatium auratum (Böber, 1793)	Terter
CERAMBYCINI Latreille, 1804	
Cerambyx Cerambyx) cerdo acuminatus Motschulsky, 1853	Aghdam, Lachin
C. (Cerambyx) dux (Faldermann, 1837)	Aghdam, Khankendi
C.*(C.) miles* (Bonelli, 1812)	Khojali, Khojavend, Khankendi, Shusha, Aghdere
COMPSOCERINI Thomson, 1864	
Rosalia alpina (Linnaeus, 1758)	Shusha
PURPURICENINI Thomson, 1864	
Purpuricenus budensis (Götz, 1783)	Askeran, Aghdere, Khankendi
P.budensis budensis var. punctiger Apfelbeck	Askeran

Table continued

1	2
GRACILIINI Mulsant, 1839	
Gracilia minuta (Fabricius, 1781)	Khojali, Khojavend, Khankendi, Shusha, Aghdere
MOLORCHINI Mulsant, 1863	
Molorchus (Molorchus) umbellatarum umbellatarum (Schreber, 1759)	Khojali, Khojavend, Khankendi, Shusha, Aghdere
CERTALLINI Faimaire, 1854	
Certallum ebulinum (Linnaeus, 1767)	Aghdam
C. ebulinum ruficolle (Fabricius, 1781)	Aghdam
CALLIDIINI Kirby, 1837	
Ropalopus (Ropalopus) clavipes (Fabricius, 1775)	Khankendi
Semanotus russicus russicus Fabricius,1776	Khojali, Khojavend, Khankendi, Shusha, Aghdere
Phymatodes testaceus (Linnaeus, 1758)	Ağdam
Phymatodes(Phymatodes) lividus Rossi, 1794	Khojali, Khojavend, Khankendi, Shusha, Aghdere
CLYTINI Mulsant, 1839	
Plagionotus arcuatus (Linnaeus, 1758)	Fizuli
P. arcuatus lugubris (Ménétriés, 1832)	Khankendi
Echinocerus floralis floralis (Pallas, 1773)	Fizuli
Isotomus speciosus ssp. comptus (Mannerheim, 1825)	Khankendi
Chlorophorus varius varius (O.F.Müller, 1766)	Shusha
Ch.sartor (O.F.Müller, 1766)	Shusha
Xylotrechus (Xylotrechus) arvicola (Olivier, 1795)	Shusha
DORCADIINI Latreille, 1825	
D.(C.) shirvanicum azerbajdzhanicum Plavilstshikov, 1937	Khojali, Khojavend, Khankendi, Shusha, Aghdere
D.(C.) scabricolle corpulentum Ménétriés, 1832	Shusha, Terter, Khankendi
Dorcadion (Cribridorcadion)seminudum Kraatz, 1873	Khojali, Khojavend, Khankendi, Shusha, Aghdere
D. scabricolle var. lutescens Kraatz, 1873	Terter
D.sulcipenne caucasicum Küster, 1847	Shusha
D.shushense Lazarev, 2010	Shusha
ACANTHODERINI Thomson, 1860	
Aegomorphus clavipes (Schrank, 1781)	Khojali, Khojavend, Khankendi, Shusha, Aghdere
ACANTHOCININI Blanchard, 1845	
Leiopus nebulosus caucasicus Ganglbauer, 1887	Khojali, Khojavend, Khankendi, Shusha, Aghdere
SAPERDINI Mulsant, 1839	
Saperda (Compsidia) populnea (Linnaeus, 1758)	Khojali, Khojavend, Khankendi, Shusha, Aghdere
Saperda (Anaerea) carcharias Linnaeus, 1758	Khojali, Khojavend, Khankendi, Shusha, Aghdere
Oberea (Oberea) linearis (Linnaeus, 1761)	Khojali, Khojavend, Khankendi, Shusha, Aghdere
Mallosia (Eumallosia) herminae Reitter, 1890	Khankendi
Phytoecia(Paracoptosia) compacta (Ménétriés, 1832)	Aghdam, Fizuli, Terter
Phytoecia (Musaria) puncticollis puncticollis Faldermann, 1837	Aghdam, Fizuli, Terter
AGAPANTHIINI Mulsant, 1839	
Calamobius filum Rossi, 1790	Khankendi, Shusha, Aghdere
Agapanthia (Epoptes) cynarae cynarae (Germar, 1817)	Khankendi, Shusha, Aghdere
A. (E.) villosoviridescens (De Geer, 1775)	Khankendi, Shusha, Aghdere

Images of most species of longhorn beetles are found on flowering plants, but they are divided into separate groups according to the feeding of larvae. Thus, species from 26 genera (*Purpuricenus, Cerambyx, Enoploderes, Molorchus, Necydalis, Prionus, Ropalopus, Rosalia, Saperda, Spondylis, Isotomus, Judolia, Leiopus, Pachytodes, Penichroa, Chlorophorus, Dinoptera, Stictoleptura, Aegomorphus, Gracilia, Asemum, Hesperophanes,* the larvae of species belonging to the genera *Phymatodes, Rutpela, Stenurella, Strangalia*) feed on the trunks of forest and fruit trees and shrubs. Representatives of 6 genera (*Agapanthia, Certallum, Dorcadion,*

Echinocerus, Mallosia, Phytoecia) are herbivores both at the larval and adult stages. Some species of the genera Oberea and Plagionotus feed on the trunks of broad-leaved trees, while others feed on grasses. Representatives of the genera Stromatium and Trichopherus are considered technical pests and cause damage to wooden buildings and furniture. Among these species *Rosalia alpina* (Linnaeus, 1758), *Prionus asiaticus* Faldermann, 1837, *Necydalis* (*Necydalis*) *ulmi* Chevrolat, 1838, *Mallosia* (*Eumallosia*) *herminae* Reitter, 1890, *Cerambyx* (*Cerambyx*) *dux* (Faldermann, 1837), *C.* (*Cerambyx*) *cerdo acuminatus* Motschulsky, 1853 are rare. *R.alpina* is included in the World Red List, Appendix II of the Berne Convention of 1979 and I, II and III editions of the Red Book of Azerbaijan under the VU category (Fig. 1).

Fig. 1. *Rosalia alpina* (photo: N.Snegovaya)

The great capricorn beetle *C. (Cerambyx) cerdo acuminatus* is one of the greatest beetles in Azerbaijan (Fig. 2). Found on old oak trees.

The herbivorous longhorn beetle, which lives mainly in meadows and feeds on plant roots, was named the Shusha longhorn beetle (*Dorcadion shushense* Lazarev, 2010) since it was first recorded in Shusha in 1905 (Fig. 3).

Fig. 2. *Cerambyx cerdo acuminatus* (photo: I.Kerimova)

Fig. 3. *Dorcadion (Cribcidorcadion) shushense* (photo: M.Lazarev)

CONCLUSION

So, to date, 280 species of longhorn beetles have been registered in Azerbaijan (Samadov, 2010; Danilevsky, 2014), 59 of them were registered on the territory of Karabakh in the pre-occupation period. Of these, 3 species are found only in Terter, 23 species in Khojaly, Khojavend, Khankendi, Shusha and Aghdere, 4 species in Khankendi, Shusha, Aghdere, 2 species in Agdam, Fizuli, Terter, 8 species - only in Khankendi, 2 species in Kalbajar and Lachin, 1 species in Kalbajar, Lachin, Khankendi, 6 species only in Shusha, 2 species in Khankendi and Shusha, 1 species in Shusha, Tartar and Khankendi, 1 species only in Jabrayil, 2 species

only in Fizuli, 3 species only in Agdam, 1 species in Agdam and Lachin, 1 species in Agdam and Khankendi, 1 species recorded only in Askeran, 1 species recorded in Askeran, Aghdere and Khankendi.

The liberation of Karabakh from occupation opens up new prospects for research in these areas for Azerbaijani scientists. The re-study of the entomofauna of Karabakh will also allow monitoring of rare and endangered species in this area. These studies will also create conditions for the discovery of new species.

REFERENCES

Constructive geography of the Azerbaijan Republic (1996) Ed. by B.Budagov. Baku: Elm, **Volume I:** 265 p.

Danilevsky M.L. (2014) Longhorn beetles (*Coleoptera, Cerambycoidea*) of Russia and neighboring countries. M.: VSHK, **Part 1:** 522 p.

Samadov N.Kh. (2010) Longhorn beetles (*Coleoptera, Cerambycidae*) of Azerbaijan. Baku: Elm, 160 p.

Qarabağın uzunbığ böcəkləri (*Coleoptera, Cerambycidae*)

Eyvazov Ələddin Qismət oğlu, Kərimova İlhamə Qüdrət qızı

Azərbaycan Respublikası Elm və Təhsil Nazirliyinin Zoologiya İnstitutu, Bakı, Azərbaycan

Azərbaycanın uzunbığ böcəklər (*Cerambycidae*) faunasına aid olan 280 növün 53-ü işğalaqədərki dövrdə Qarabağ ərazisində qeydə alınmışdır. Bu növlər içərisində *Rosalia alpina* (Linnaeus, 1758), *Prionus asiaticus* Faldermann, 1837, *Necydalis (Necydalis) ulmi* Chevrolat, 1838, *Mallosia (Eumallosia) herminae* Reitter, 1890, *Cerambyx (Cerambyx) dux* (Faldermann, 1837), *C. (Cerambyx) cerdo acuminatus* Motschulsky, 1853 azsaylı növlərdir. *Rosalia alpina* isə Ümumdünya Qırmızı Siyahısına və Azərbaycanın Qırmızı kitabına VU kateqoriyası ilə daxil edilmişdir. Uzunbığ böcək cinslərindən *Purpuricenus, Cerambyx, Enoploderes, Molorchus, Necydalis, Prionus, Ropalopus, Rosalia, Saperda, Spondylis, Isotomus, Judolia, Leiopus, Pachytodes, Penichroa, Chlorophorus, Dinoptera, Stictoleptura, Aegomorphus, Gracilia, Asemum, Hesperophanes, Phymatodes, Rutpela, Stenurella, Strangalia* növləri meşə və meyvə ağac və kollarının gövdələrində, *Agapanthia, Certallum, Dorcadion, Echinocerus, Mallosia, Phytoecia* ot bitkiləri üzərində qidalanır. *Oberea, Plagionotus* cinslərinin bəzi növləri enliyarpaqlı ağacların gövdələrində, bəzi növləri isə otlar üzərində qidalanır. *Stromatium və Trichopherus* cinslərinin nümayəndələri isə ağac tikililərə ziyan vurur. Qarabağ torpağının işğaldan azad edilməsi Azərbaycan alimləri qarşısında bu ərazilərdə tədqiqatın aparılması üçün yeni-yeni perspektivlər açır. Qarabağın entomofaunasının yenidən öyrənilməsi bu ərazidə nadir və nəsli kəsilməkdə olan növlərin də aşkar edilməsinə şərait yaradacaqdır.

Açar sözlər: *Fauna, uzunbığ böcəklər, növ tərkibi, Qırmızı Kitab, nadir növ, təhlükədə olan növ*

Жуки-усачи (*Coleoptera, Cerambycidae*) Карабаха

Айвазов Аладдин Гисмет оглу, Керимова Ильхама Гудрат гызы

Институт зоологии Министерства науки и образования Азербайджанской Республики, Баку, Азербайджан

Из 280 видов жуков-усачей (*Cerambycidae*) фауны Азербайджана 53 были отмечены на территории Карабаха в дооккупационный период. Из этих видов *Rosalia alpina* (Linnaeus, 1758), *Prionus asiaticus* Faldermann, 1837, *Necydalis (Necydalis) ulmi* Chevrolat, 1838, *Mallosia (Eumallosia)*

herminae Reitter, 1890, *Cerambyx (Cerambyx) dux* (Faldermann, 1837), *C. (Cerambyx) cerdo acuminatus* Motschulsky, 1853 являются редкими. Альпийская розалия включена во Всемирный Красный список и Красную книгу Азербайджана по категории VU. Личинки *Purpuricenus, Cerambyx, Enoploderes, Molorchus, Necydalis, Prionus, Ropalopus, Rosalia, Saperda, Spondylis, Isotomus, Judolia, Leiopus, Pachytodes, Penichroa, Chlorophorus, Dinoptera, Stictoleptura, Aegomorphus, Gracilia, Asemum, Hesperophanes, Phymatodes, Rutpela, Stenurella* питаются древесиной лесных и плодовых деревьев и кустарников. А личинки *Agapanthia, Certallum, Dorcadion, Echinocerus, Mallosia, Phytoecia* обитают на травянистой растительности. Одни виды родов *Oberea* и *Plagionotus* питаются древесиной широколиственных деревьев, другие - травами. Представители родов *Stromatium* и *Trichopherus* повреждают деревянные конструкции. Освобождение карабахских земель от оккупации открывает перед азербайджанскими учеными новые перспективы для проведения исследований этих областей. Повторное изучение энтомофауны Карабаха создаст условия для обнаружения в этой местности редких и исчезающих видов.

Ключевые слова: *Фауна, жуки усачи, видовой состав, Красная книга, редкий вид, вид находящийся под угрозой исчезновения*