DISTRIBUTION OF GROUND BEETLES (*COLEOPTERA, CARABIDAE*) IN NORTHWESTERN UZBEKISTAN.

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Abstract. This article highlights the results of research on the general biological and faunistic study of ground beetles (Coleoptera, Carabidae) in the northwestern regions of Uzbekistan. In line with the regional distribution of studied ground beetles, 36 (34.6%) species were found in Ustyurt, 59 (56.7%) species in the Kyzylkum desert landscape, 30 (28.8%) species in the Lower Amudarya biosphere reserve, and 52 (50%) species and subspecies in the agrocenoses.

Key words. Coleoptera, Carabidae, faunistic, beetles, Ustyurt, Kyzylkum desert, species, agrocenoses.

Introduction

The fauna of Uzbekistan is rich and diverse. This situation is reflected in various historical studies of the formation of the fauna and the diversity of species in the country, and is determined by the fact that its natural conditions have a completely unique character.

O.L. Krijanovsky studied the systematization of ground beetles. He paid great attention to the fauna of Central Asia, including Uzbekistan. His scientific work, called 'The Central Asian Carabus Beetle' written in 1953, summarizes many years of research. Moreover, the collections of scientists of the Institute of Zoology and Parasitology, including A.G. Davletshchina, R.A. Olimjanov, M.A. Radzivilovskaya and others, are noteworthy in the study of the fauna of ground beetles in Uzbekistan. Especially, the services of V.V.Yakhontov were of great importance, as he worked hard to study the entomofauna of Uzbekistan and his work are still effectively used to generalize the fauna of the ground beetles. V.V. Yakhontov, A.G. Davletshchina and others listed 31 species of ground beetles in their scientific work 'World of Mirzachul animals'. R.A.Alimjanov points out the harmfulness of *Zabrus* Clairville, 1806 beetles (1972) in the south of Uzbekistan. The Tashkent Museum of Nature plays an important role in the study of the entofauna of Uzbekistan. In particular, the museum includes the rich collections by L.S. Zimin from Khorezm (1992), by V. Motov from Namangan, by I.V. Yankovsky from mountainous areas of Tashkent region and from Tashkent region (1928–1931), by M.N. Churkun from Syrdarya and Fergana valley (1939 – 1940), by N.I. Fursov from Kashkadarya (1946) and others [1,2,3,4].

Materials and methods

In order to study the ground beetles in the northwestern regions of Uzbekistan, the collection of samples was carried out on the designated routes and in the designated areas, mainly in Ustyurt Plateau, Lower Amudarya State Biosphere Reserve, agrocenosis and in the territory of the Aral Sea massif which appeared in the dry basin of the Kyzylkum and the Aral Sea as desert areas. Mainly using entomological handles, by installing various traps, in which a series of bottles or jars, plastic cups are buried in the ground at a few meters distance and 10% acetic acid or 70% alcohol is poured into the containers. Moreover, light-assisted catchers are relatively effective for catching nocturnal insects, providing excellent results in the study of entamofauna. It is also possible to catch insects flying in the light of the lamp (using a lantern) with the help of a handle. Most adult ground beetles are active only during certain periods of the field season, which means that they can only be collected at this time. Thus, entomofauna of spring (late April-second decade of May), late spring (third decade of May-beginning of June), early summer (June), summer (early July-August), late summer (early August-September) and autumn (mid-September-October) aspects can be distinguished.

Results

During the study, 104 species and subspecies belonging to 39 genera, 7 subfamilies of ground beetles were identified in the northwestern regions of Uzbekistan. When we analyzed the biodiversity of these identified beetles in the subgroups, we found that while the most common species belong to *Harpalinae*, which includes 32 species with a maximum of 19 genera, the least common species are the *Omophroninae* subfamily with at least 1 genera, whereas the Broscinae subfamily showed to be 2 genera and 5 species (Table 1).

Table 1. Taxonomic structure of ground beetles in the northwestern regions of Uzbekistan

Family	Subfamily	Number of genera	%	Number of species	%
Carabidae	Omophroninae	1	2.56	1	0.96
	Cicindelinae	2	5.13	12	11.54
	Carabinae	5	12.82	9	8.65
	Scaritinae	3	7.69	20	19.23
	Broscinae	2	5.13	5	4.81
	Harpalinae	19	48.72	32	30.77
	Pterostichinae	1	2.56	8	7.69
	-	6	15.38	17	16.35
Total	7	39	100	104	100

In summary, during the study, 104 species and subspecies belonging to 39 genera, 7 subfamilies of ground beetles were identified in the northwestern regions of Uzbekistan.

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