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DISTRIBUTION AREAS OF THE GROUND BEETLES (*CARABIDAE)* IN THE DESERT LANDSCAPES OF THE TURTKUL DISTRICT

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ANNOTATION

The article discusses the features of the distribution of ground beetles (Carabidae) in the desert landscapes of the Turtkul region. Ground beetles (Carabidae) are one of the largest and most numerous families of beetles. The number of species of the world fauna, according to various estimates, ranges from 25,000 to 50,000; more than 3,000 species are already known in the CIS countries.

KEY WORDS: ***FOrmation, landscape, zone, biotope, region, species, beetle, north, region.***

Ground beetles (*Carabidae*) are one of the largest and most numerous families of beetles. The number of species of the world fauna, according to various estimates, ranges from 25,000 to 50,000; more than 3,000 species are already known in the CIS countries. The number of open species is increasing every year. Many different features are used to identify ground beetles: color, body shape, external structure, surface structure, size, genital structure and chaetotaxy are taken into account [3].

The color of ground beetles is very diverse, mostly in dark colors, often with a metallic tint. Often, with black or dark coloring, an iridescent tint is encountered, which is created by micro sculpture from thin transverse lines [3].

Some taxa, mainly at the level of subfamilies and tribes, have a characteristic body shape. Sometimes the body shape is very different from the usual for ground beetles: species of the genus *Omophron* living on sandy beaches, with their rounded shape, resemble ladybugs or some dark beetles; representatives of the genera *Drypta,* Demetrius and *Odacantha* living on grass stems have an elongated, stem-like body shape; burrowing species from the subfamily *Scaritinae*, as well as some other groups, are characterized by a neck-like ligation between the anterior and posterior part of the body, as well as wide, toothed fore tibiae. The body shape is peculiar in species from the genera *Cicindela*, *Elaphrus*, *Notiophilus* and some others [3].

The extraordinary ecological plasticity of the members of the family is the reason for the widespread abundance of these beetles. Ground beetles inhabit almost the entire range of latitudes from cold tundra to deserts and tropical forests; in the mountains they rise to the subnival belt and in most cases are one of the most characteristic components of adnival ecosystems.

The northern part of the Turtkul region is located in the desert zone of the Republic of Karakalrakstan. The number of species found in the desert landscape was less than in other biotopes in the region. Here, in the course of our research conducted from May to September 2021-2022, 24 species belonging to 9 relatives were identified (Table 1), with the most numerous species being *Cicendela auropunctatum.*

In the course of our research, materials were collected using entomological methods in the formations of ephemera, barberries, saxaul and juzgun.

Scarites angustus and *Scarites tetricola* were collected in large numbers. *Scarites bucid, Scarites tetricola* were more common in ephemeral formations, *Skarites busida, Bembidion (Emphanes) latiplaga* in saxaul formations.

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Species characteristic of this zone are *Cicendela auropunctatum* and *Skarites busida*, while *Cicendela auropunctatum* feeds on the seeds of the plant, while Skarites busida is a predator and feeds on all kinds of arthropods.

Table 1

The distribution of ground beetles in a desert landscape (2021, May)

№	Species name	Barberry Geurik	Saxaul, juzgun	Ephemeral Pharmacy
1	*Megacerhala euphratica armeniaca* Cast., 1834.	-	+	-
2	*Cicendela deserticole* Fald., 1836.	+	+	-
3	*C. galatchem* Thieme., 1881.	+	+	+
4	*C. Lasteola* Pall., 1776.	+	-	+
5	*C. oblique fasciata* Ad., 1817	+	-	-
6	C. *auropunctatum subsp. dzungaricum* Gebl., 1835.	+	+	+
7	*C. imbricatum desertikola* Sem., 1897.	+	+	-
8	*Dyschirius cylindricos ssp. Transcaspicum* Sem., 1906.	-	-	+
9	*Scarites angustus* Chaud, 1855.	+	+	+
10	*S. bucida* Pall., 1776	+	+	-
11	*S. euraytus* F.-W., 1825.	+	-	+
12	*S. terricola* Bon., 1813.	+	+	+
13	*Broscus punctatus* Dej. 1823	+	-	-
14	*B. semistriatus* F.- W., 1823.	+	-	-
15	*Bembidion* (Ch). *Luridicorne* Sols., 1874.	+	-	+
16	*B. (Notaphocampa) niloticum* Dej, 1831.	+	+	-
17	*B. (Emphanes) latiplaga* Chd., 1850.	+	+	-
18	*B. (E.) tenellum ssp. buchariplaga* Nat., 1943.	+	-	+
19	*Pogonus virens* Men., 1849.	-	+	-
20	*Pogonistus (Syrdenus) grayi* Woll., 1862.	+	+	-
21	*Chlaenius (tricliochlaenius) stoveni* Quens., 1806.	-	+	-
22	*Ch. (Chlaenites) inderiensis* Motsch., 1858.	-	+	-
23	*Ch. (Ch.) spoliatus* Rossi., 1790.	+	-	-
24	*Agonum (s. str.) atratum* Duft., 1812.	-	+	-
Total		18	15	9

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Skarites busida C. Lasteola, C. oblique fasciat belonging to the genus *Cicendela* are often found in desert landscapes, *S. Euraytus* is rare. As a result of our research, 18 species belonging to 6 genera in the barberry and geurik formations, 15 species belonging to 8 genera in the juzgun formations, 9 species belonging to 4 genera in ephemeral formations were studied.

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