

The Orthoptera Insects of Desert Zones in Uzbekistan

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Abstract: In the desert region, 86 species of orthoptera insects have been identified, including 6 species of grasshoppers, 11 species of chirus and 69 species of locusts. In the desert areas, 59 (68.60%), Mubarek desert 41 (47.67%), in Yazyavan Desert 33 (38.37%) and 24 species (27.90%) in the Aral District have been found. *Pyrgomorpha bispinosa deserti*, *Dericorys albidula*, *Dericorys tibialis*, *Calliptamus turanicus*, *C. italicus italicus*, *C. barbarus cephalotes*, *Hyalorhipis clause* are common in desert areas, which are optional *xortobion*, *petrobiont* and *psamobiont* species according to their lifestyle.

Keywords: Orthoptera, insects, desert zones, Uzbekistan

1. Introduction

In order to define species of the orthoptera insects of desert zones in Uzbekistan during 2015-2018 there was collected samples in Kyzylkum Desert, the Saxovan Desert in Mubarek District of Kashkadarya Region, the Yozyavan Desert of Fergana Valley and in Aralkum area which is

located in Aral Sea. The obtained data were analyzed as a fauna of the steppe zone. In the desert region of Uzbekistan there are 86 species of insects, in Kyzylkum 59 (68.6%), in the Mubarek desert 41(47.67%), in the Yazyavan Desert 33 (38.37%), in Aralkum 24 species (27,9%) occur orthoptera insects (Table 1).

Table 1: The structure of orthoptera insects in the steppe region of Uzbekistan and desert distribution

No	Studied species	1	2	3	4
Tettigonioidae					
1.	<i>Tettigonia caudata</i> Charp.	-	-	++	-
2.	<i>Tettigonia viridissima</i> L.	-	-	+	-
3.	<i>Platycleis intermedia</i> Serv.	+	-	+	+
4.	<i>Decticus albifrons</i> P.	+	+	-	+
5.	<i>Decticus verrucivorus</i> (Linnaeus)	-	+	+	-
6.	<i>Semenoviana plotnikovi</i> W	-	+	++	-
Grylloidae					
7.	<i>Melanogryllus desertus</i>	+	+	-	+
8.	<i>Tartarogryllus tartarus</i> Sauss.	+	-	+	+
9.	<i>Modicogryllus bordigalensis</i>	+	+	-	-
10.	<i>Modicogryllus frontalis</i>	++	-	-	-
11.	<i>Turanogryllus lateralis</i> (Fied.)	+	-	+	-
12.	<i>Bothriophylax semonovi</i> Mir	-	+	-	-
13.	<i>Velarifictorus bolivari</i> (Uv)	+	-	-	+
14.	<i>Pteronemobius heydeni concolor</i>	-	++	-	++
15.	<i>Pteronemobius gracillis</i>	-	+	-	+
16.	<i>Oecanthus turanicus</i> Uv	-	-	+	-
Gryllotalpidae.					
17.	<i>Gryllotalpa grullatalpa</i> L	+	-	-	-
Tetrigidae Ramb.					
18.	<i>Tetrixbolivari</i> Saucy.	-	-	+	-
Pyrgomorphidae Brunner					
19.	<i>Pyrgomorpha bispinosa deserti</i> .	+	+	+	+
20.	<i>Chrotogonus turanicus</i> Kuthy	+	-	-	-
PamphagidaeBurm					
21.	<i>Melanotmethis fuscipennis</i> (Rebt)	-	+	-	-
22.	<i>Atrichotmethis semenovi</i> (Zub.)	+	+	-	-
23.	<i>Asiotmethis heptapotamicus</i> (Zub.)	-	-	-	-
24.	<i>Pezotmethis tartarus</i> (Sauss)	-	+	-	-
25.	<i>Thrinchusdesertus</i> B.-Bien.	++	+	-	-
26.	<i>Thrinchnus turcmenus</i> B.-Bien.	+	+	-	-
27.	<i>Thrinchnus campanulatus</i> F.d.W.	-	-	-	-
28.	<i>Strumiger desertorum desertorum</i>	++	+	-	-
Acrididae MacLeay					

29.	<i>Dericorys albidula</i> Aud.-Serv.	++	+	-	+
30.	<i>Dericorys tibialis</i> (Pall.).	++	+	-	+
31.	<i>Diexis varentzovi</i> Zub.	+	-	-	-
32.	<i>Con. sokolovi modestum</i> Mists.	-	+	-	-
33.	<i>Anacridium aegyptium</i> (L.).	+	-	+	-
34.	<i>Calliptamus italicus italicus</i> (L.).	+	++	+	+
35.	<i>Calliptamus turanicus</i> Serg.Tarb.	+++	-	++	-
36.	<i>C.barbarus cephalotes</i> (Costa).	+++	++	++	+++
37.	<i>Heteracris adspersa</i> (Redt.).	+	+	++	+
38.	<i>Euthystira brachyptera</i> (Ocsk)	-	-	+	-
39.	<i>Egnatioides desertus desertus</i> Uv.	+	+	-	-
40.	<i>Egnatioides desertus liensis</i> B.-Bien.	++	-	-	-
41.	<i>Egnatius apicalis</i> Stal.	++	+	-	-
42.	<i>Gonistasagitta</i> (Uv.)	+	-	-	-
43.	<i>Ochridia hebetata kazaka</i> (Serg.Tarb).	+	-	-	-
44.	<i>Ochridia hebetata hebetata</i> (Uv.)	+	-	-	-
45.	<i>Acrida oxycephala</i> (Pall.)	-	-	++	-
46.	<i>Truxalis eximia</i> Eichw	-	-	++	-
47.	<i>Duroniellagracilis</i> Uv.	+	-	-	-
48.	<i>Duroniella kalmyka</i> (Ad.)	+	+	+	-
49.	<i>Aiolopus thalassinus thalassinus</i>	-	-	++	-
50.	<i>Helithera turanica</i> Uv.	+	-	-	+
51.	<i>Locusta migratoria migratoria</i> L.	+	-	++	+
52.	<i>Oedaleus decorus</i> (Germ.)	+	+	-	-
53.	<i>Pyrgodera armata</i> F.d.W.	+	-	-	-
54.	<i>Mioscirtus wagneri</i> (Kitt)	+	-	+	-
55.	<i>Oedipoda miniata</i> (Pall.)	+	-	+	+
56.	<i>Acrotylus insubricus</i> (Scop.).	+	++	+	+
57.	<i>Sphingonotus halocnemi</i> Uv.	+	-	+	-
58.	<i>Sphingonotus halophilus</i>	-	+	-	-
59.	<i>Sphingonotus elegans</i> Mistsh.	+	-	+	+
60.	<i>Sphingonotus octofasciatus</i> (Serv.).	+	-	+	-
61.	<i>Sphingonotus rubescens</i> (Walk.).	+	-	-	-
62.	<i>Sph.rubescens rubescens</i> (F. Walk).	+	-	-	+
63.	<i>Sphingonotus satrapes</i> Sauss.	+++	+	-	+
64.	<i>Sphingonotus kirgizorum</i> Ikonn.	-	-	+	-
65.	<i>Sph. maculatus maculatus</i> Uv.	-	-	++	-
66.	<i>Pseudosphingonotus savignyi</i> Sauss.	++	+	+	-
67.	<i>Sphingoderus carinatus</i> (Sauss.)	+++	++	+	+
68.	<i>Helioscirtus moseri</i> Sauss.	++	-	-	-
69.	<i>Hyalorrhhipis clause</i> (Kitt).	+++	+	-	+
70.	<i>Hyalorrhhipisturcmena</i> Uv.	++	-	-	-
71.	<i>Leptotermis iliensis</i> Uv.	+++	-	-	+
72.	<i>Leptotermis gracilis</i> (Ev.).	++	+	-	-
73.	<i>Ramburiella foveolata</i> (Tarb.).	++	+	-	-
74.	<i>Ramburiella turcomana</i> (F.d.W.)	+	-	-	-
75.	<i>Dociostaurus tartarus</i> Uv.	+++	-	-	-
76.	<i>Dociostaurus maroccanus</i> (Thnb).	+++	+++	-	-
77.	<i>Dociostaurus kraussi kraussi</i> Ingen.	++	++	-	-
78.	<i>Dociostaurus plotnikova</i> Uv.	-	++	-	-
79.	<i>Dociostaurus kraussi nigrogeniculatus</i>	-	+	-	-
80.	<i>Notostaurus albicornis</i> (Ev.).	+	+	-	+
81.	<i>Kazakiatarbinskyi</i> B.-Bienko	+	-	-	-
82.	<i>Eremippus simplex simplex</i> (Ev.).	+	+	-	-
83.	<i>Mesasippus kozhevni kovikozh.</i>	-	-	+	-
84.	<i>Chorthippus albomarginatus karelini</i>	-	-	+	-
85.	<i>Glyptobothrus meridionalis</i>	-	+	-	-
86.	<i>Glyptobothrus biguttulus</i> (L.)	-	+	-	-
Total:		59	41	33	24

Note: 1- Kyzyl kum, 2 - Mubarak desert; 3 - Yazyavan desert; 4- Aralkum.

The fauna of orthopteras in the Kyzylkum district. The Kyzylkum desert occupies a large part of the Turan low plain and lies between the Syr Darya and the Amu Darya Rivers. It borders on the south-east to the Zarafshan valley and the Nurota mountain range, the Amudarya oasis in the

southwest, the Aral Sea in the northwest, the Syrdarya oasis in the north and north-east. The total area of the desert is 300 thousand km². From the administrative point of view, large part of the Kyzylkum fall on Uzbekistan, and to the north-eastern part falls on Kazakhstan (Abdulkasimov and others

2001). Its main part - the Central Kyzylkum is made up of sand deserts. Alluvial deposits in the northern part are common. South-East and South-West Kyzylkum are made up of gypsum deserts. The Kyzylkum is mainly composed of crushed or sandy desert zones [3].

It is known that the desert landscape is distinguished from other landscapes with its ancient agility. From 20th century, this region, which has maintained its characteristics under the influence of humanity in the long run, has undergone radical changes as a result of the increase in the population and the increase in its material and spiritual needs. In the South - West Kyzylkum region, the formations of ephemeral - ephemeroïd - efemer-efemeroïd-wormwood, black-wormwood, white saxaul – calligonum sand are widely spread. In these formats *Haloxylon aphyllum*, *Calligonum leucocladum*, *Rhamnus sintenisii*, *Astragalus villosissimus*, *Salsola arbuscula*, *Nanophyton erinaceum*, *Krascheninnikovia ewersmanniana*, *Artemisia diffusa*, *A. juncea*, *Peganum harmala*, *Convolvulus hamadae*, *Alhagi pseudalhagi*, *Carex physodes*, *Carex pachystylis*, *Tulipa lehmanniana*, *T. sogdiana*, *T. buhseana*, *Allium filidens*, *A. borszczowii*, *A. sabulosum*, *Iris falsifolia*, *Iris songarica*, *Leontice incerta*, *Leontice ewersmanni*, *Fritillaria karelinii*, *Eremurus korolkowii*, *Ferula foetida*, *Ferula karelinii*,

Gagea bergii, *Poa bulbosa*, *Ixiolirion tataricum*, *Stipa hohenackeriana*, *Scorzonera gageoides*, *Rheum tataricum*, *Cousinia hamadea*, *Anemone petiolulosa*, *Scariola orientalis*, *Takhtajianantha pusilla*, *Koelplinia linearis*, *Delphinium leptocarpum* such plant species are common [8]. In each formats or stages there are many different types of orthopteras feed on plants which is found on this site.

A number of research studies have been known to study Kyzylkum's entomofauna (Pravdin, 1965, Davletshina and othr. 1985). The Kyzylkum is important for identifying an orthoptera insects fauna, studying the biodiversity of species and developing their cadastre. There is given data on the species composition, life forms and their distribution in South - West Kyzylkum orthoptera insects are presented. In 5 cases have been conducted collecting insects in this area of Kyzylkum. Collecting samples from the cliffs, Ephemeral - ephemeroïd - wormwood, black-wormwood, white saxaul - jungle sand and collecting samples of insects with the light traps. According to the data, 37 species (62.71%) in the ephemeral - ephemeroïd - wormwood statios of Kyzylkum, 26 species (44,06%) from black-wormwood, 33 species (55,93%) in the white saxaul - calligonum sand statio - 24 species (40.67%) from low descents and 22 species (37.28%) insects were detected as a result of light trap.

Table 2: Structure of orthoptera insects lifecycle and quantity of South - West Kyzylkum

№	Studied species	1	2	3	4	5
Tettigoniidae						
1.	<i>Platycleis intermedia</i> Serv.	+	-	+	+	+
2.	<i>Decticus albifrons</i> P.	+	-	-	-	-
Grylloidae						
3.	<i>Melanogryllus desertus</i>	+	-	+	-	+
4.	<i>Tartarogryllus tartarus</i> Sauss.	+	+	-	+	++
5.	<i>Modicogryllus bordigalensis</i>	+	-	-	-	+
6.	<i>Modicogryllus frontalis</i>	++	++	-	-	-
7.	<i>Turanogryllus lateralis</i> (Fied.)	+	-	-	++	+
8.	<i>Velarifictorus bolivari</i> (Uv)	-	+	-	-	-
Gryllotalpidae						
9.	<i>Gryllotalpa grullatalpa</i> L.	-	-	-	-	+++
Pyrgomorphidae						
10.	<i>Pyrgomorphabispinosadeserti</i> .	+	+	+	+	+
11.	<i>Chrotogonusturanicus</i> Kuthy	+	-	-	-	-
Pamphagidae						
12.	<i>Atrichotmethis semenovi</i> (Zub.)	+	+	-	-	-
13.	<i>Thrinchus desertus</i> B.-Bien.	++	+	+	-	-
14.	<i>Thrinchus turcmenus</i> B.-Bien.	-	-	-	-	+
15.	<i>Strumiger desertorum desertorum</i>	++		++	+	-
Acrididae						
16.	<i>Dericorys albidula</i> Aud.-Serv.	-	-	++	-	+
17.	<i>Dericorys tibialis</i> (Pall.).	-	+	++	-	-
18.	<i>Diexis varentzovi</i> Zub.	-	+	-	-	-
19.	<i>Anacridium aegyptium</i> (L.).	-	-	+	-	-
20.	<i>Calliptamus italicus italicus</i> (L.).	+	-	+	-	-
21.	<i>Calliptamus turanicus</i> Serg. Tarb.	++	++	++	-	+
22.	<i>C. barbarus cephalotes</i> (Costa).	+++	++	+	+++	+
23.	<i>Heteracris adpersa</i> (Redt.).	-	-	++	-	-
24.	<i>Egnatioides desertus desertus</i> Uv.	+	+	+	-	-
25.	<i>Egnatioides desertus iliensis</i> B.-Bien.	+	+	-	-	-
26.	<i>Egnatius apicalis</i> Stal.	+	-	++	-	-
27.	<i>Gonista sagitta</i> (Uv.)	+	-	-	+	-
28.	<i>Och. hebetata kazaka</i> (Serg. Tarb).	+	+	-	-	-
29.	<i>Ochridia hebetata hebetata</i> (Uv.)	+	-	-	+	-
30.	<i>Duroniella gracilis</i> Uv.	+	-	+	-	-
31.	<i>Duroniella kalmyka</i> (Ad.)	+	+	-	-	+

32.	<i>Helithera turanica</i> Uv.	-	-	+	+	-
33.	<i>Locusta migratoria migratoria</i> L.	-	-	-	+	+
34.	<i>Oedaleus decorus</i> (Germ.)	-	-	-	+	-
35.	<i>Pyrgoderma armata</i> F.d.W.	+	-	-	-	-
36.	<i>Mioscirtus wagneri</i> (Kitt)	-	-	-	+	-
37.	<i>Oedipo daminiata</i> (Pall.)	-	+	+	-	-
38.	<i>Acrotylus insubricus</i> (Scop.).	+		+	+	+++
39.	<i>Sphingonotus halocnemi</i> Uv.	-	+	-	-	-
40.	<i>Sphingonotus elegans</i> Mistsh.	-	+	+	+	-
41.	<i>Sphingonotus octofasciatus</i> (Serv.).	-	+	+	+	-
42.	<i>Sphingonotus rubescens</i> (Walk.).	+	+	-	+	+
43.	<i>Sph. rubescens rubescens</i> (F. Walk).	+	-	+	-	-
44.	<i>Sphingonotus satrapes</i> Sauss.	+	+	+	-	+++
45.	<i>Pseudosphingonotus savignyi</i> Sauss.	-	+	-	+	-
46.	<i>Sphingoderus carinatus</i> (Sauss.)	-	+	-	+	+++
47.	<i>Helioscirtus moseri</i> Sauss.	-	+	-	-	-
48.	<i>Hyalorrhapis clause</i> (Kitt).	+	-	+	+	-
49.	<i>Hyalorrhapis turcomana</i> Uv.	+	-	+	-	-
50.	<i>Leptoternis iliensis</i> Uv.	+	-	+	+	++
51.	<i>Leptoternis gracilis</i> (Ev.).	+	-	+	-	+
52.	<i>Ramburiella foveolata</i> (Tarb.).	+	-	+	-	-
53.	<i>Ramburiella turcomana</i> (F.d.W.)	+	-	-	-	-
54.	<i>Dociopterus tartarus</i> Uv.	+	-	+	+	-
55.	<i>Dociopterus maroccanus</i> (Thnb).	+	+	+	+	++
56.	<i>Dociopterus kraussi kraussi</i> Ingen.	+	-	+	+	-
57.	<i>Notostaurus albicornis</i> (Ev.).	+	+	+	+	-
58.	<i>Kazakia tarbinskyi</i> B.-Bienko	+	+	-	-	-
59.	<i>Eremippus simplex simplex</i> (Ev.).	+	-	+	-	+
Total:		37	26	33	24	22

Note: 1. Efemer-efemeroid-wormwood; 2 – Black-wormwood, 3 - White saxaul – calligonum sand; 4 Low - descents; 5 Collected by light trap.

In terms of spreading on Biotops and density there seen “very rarely” 31 species (52.5%) 23 species (39%) are rarely spread and 5 of them (8.5%) are seen permanently. According to their lifestyle, they have 12 species of hortobion, geobionite, gerpetobion, specialized phytophyll, microtamnobion, psammobiont, tamnobiont, pilot migrant, eremobion, optional chortobion, fissurobiont, belong to petrobiont groups. *Pyrgomorpha bispinosa* desert, Paleolithic, *Tibilicus* (Pall.), *Calliptamus turanicus*, T., C barbarous cephalotes (Costa), *Hyalorrhapis clause* (Kitt), are commonly spread in the Kyzylkum Desert, which are considered optional xortobion and petrobiont species according to their lifestyle .

Thus, there are 6 families of orthopteras and 59 species of 39 generations are spread in the South-West Kyzylkum. Ephemeral-ephemeroid wormwood 37 species (62,71%), from black-wormwood 26 species (44,06%), from white saxaul calligonum sand statio 33 species (55,93%), from low-descents 24 species (40,67%) and 22 species (37.28%) insects were detected as a result of lighting trap.

41 species of orthoptera insects have been identified in the saxaul desert in Mubarek district of Kashkadarya region, based on biotopes distribution and density these *Bothriophylax semonovi*, *Pteronemobius heydeni concolor*, *Pteronemobius gracillis*, *Melanotmethis fuscipennis*, *Atrichotmethis semenovi*, *Thrinchnus turcmenus*, *Con. sokolovi modestum*, *Egnatioides desertus desertus*, *Egnatius apicalis*, *Sphingonotus halophilus*, *Eremippus simplex simplex* are rare accounted, *Decticus albifrons*, *Decticus verrucivorus*, *Semenoviana plotnikovi*, *Melanogryllus desertus*, *Modicogryllus bordigalensis*, *Thrinchnus desertus*,

Strumiger desertorum desertorum, *Pezotmethis tartarus*, *Heteracris adspersa*, *Duroniella kalmyka*, *Oedaleus decorus*, *Acrotylus insubricus*, *Pseudosphingonotus savignyi*, *Sphingoderus carinatus*, *Leptoternis gracilis*, *Ramburiella foveolata*, *Dociopterus kraussi kraussi*Ingen, *Dociopterus plotnikova*, *Dociopterus kraussi nigrogeniculatus*, *Notostaurus albicornis*, *Glyptobothrus meridionalis*, *Glyptobothrus biguttulus* are seen commonly in this region *Pyrgomorpha bispinosa deserti*, *Dericorys albidula*, *Dericorys tibialis*, *Calliptamus barbarus cephalotes*, *Calliptamus italicus italicus*, *Sphingonotus satrapes*, *Hyalorrhapis clause* are common species and *Dociopterus maroccanus*, *Calliptamus italicus italicus* live as a creator of a group.

During 2017-2018 scientific research has conducted on orthoptera insects in three parts of Yazyavan desert: the Kumlu desert (Hakki desert), around the water in desert, in the agrolandscapes in desert.

The natural landscape of Central Fergana today has been completely transformed due to the economic activity of people. The relief’s low and high parts has flattened, the canals and ditches were dug and water has brought.

Instead of the old sandy steppes, cotton fields, gardens, and fields have been erected now[3]. As a result, the structure of orthoptera insects of the Yazyavan desert with typical steppe species *Semenoviana plotnikovi* W, *C.barbarus cephalotes* (Costa), *Heteracris adspersa* (Redt.), *Anacridium aegyptium*, *Oedipoda miniata* (Pall.), *Sphingonotus halocnemi* Uv., *Sphingonotus elegans* Mistsh., *Sphingonotus octofasciatus* (Serv.), *Sphingonotus*

kirgizorum Ikonn., *Sph. maculatus maculatus* Uv., *Pseudoshingonotus savignyi* Sauss., *Sphingoderus carinatus* (Sauss.) unsuitable for the desert *Tettigonia caudata* Charp., *Tettigonia viridissima* L., *Tetrix bolivari* Saulcy., *Euthystira brachyptera* (Ocsk), *Locusta migratoria migratoria* L., *Mioscirtus wagneri* (Kitt), *Chorthippus albomarginatus karelini* species are also observed.

Noted 33 species of orthoptera insects, 17 of them are spring-breeding species, and 16 species are emerged from an egg in summer month then live to the end of the autumn. Some *Acrotylus insubricus*, *Anacridium aegyptium*, *Pyrgomorpha bispinosa deserti* species noted as adult and larvae. It is known from studies 2017 that the density of orthopteras around the water and roadside which are growing among different plants 1.7 - 2 exemplar / m² weeds which are less than desert zones quite high 0.2 - 0.3 exemplar / m². According to the observation in 2018, 56% of insects were larvae in the second decade of April. Of these, 3 types: *Platycleis intermedia*, *Acrotylus insubricus*, *Pyrgomorpha bispinosa deserti* can be estimated as a dominant species. Coming to May, the proportion of the larvae was 37.2%, whereas the high density of insects was maintained. In the third decade of May, however, an increase in the number of insects was observed (71 exemplar/hour), but dominant species remained in their place, meaning the quantity following: *Platycleis intermedia* 13 exemplar/hour, *Pyrgomorpha bispinosa deserti* exemplar/hour, *Acrotylus insubricus* exemplar/hour. There was observed decreasing of larvae-4/7%.

The structure of orthoptera insects is quite high in Yazyavan agrolandscapes. In the third decade of July, the number of insects in desert agrolandscapes has increased and the species have significantly increased. 85 exemplar of insects in per hour in this area has been identified 17 species of orthopteras. 25% of the spread species *Heteracris adspersa* (Redt.) and *Calliptamus barbarus cephalotes* included. Other species are seen rarely. Very rare species are *Tettigonia viridissima* L., *Tetrix bolivari* Saulcy., *Mioscirtus wagneri* considered.

In the third decade of July, in the natural desert area 65 exemplar in an hour due to low density 14 species of orthoptera insects were composed. At this time *Pseudoshingonotus savignyi*, *Sphingonotus maculatus*, *Acrotylus insubricus* locusts were dominated. In the third of July there was observed the orthopteras which are spread around the water in desert area are not influence decreasing in the number of structures. In this area *Aiolopus thalassinus* and *Pyrgomorpha bispinosa deserti* locusts dominated in this period. In end of summer season and early autumn *Acrotylus insubricus*, *Anacridium aegyptium*, *Pyrgomorpha bispinosa deserti* appearing of species on the fields indicates the emergence of the aging generation larvae.

Classification of species by lifecycle: 1- *thamnobiont*; 2- *fac. hortobiont*; 3- *under the layer geophilic*; 4- *herbivorous hortobiont*; 5- *fussurobiont*; 6- *specialized phytophyll*; 7- *herpetobiont*; 8- *hortobiont*; 9 *sedge-cereal hortobiont*; 10- *a flying migrant*; 11- *eremobiont*; 12- *petrobiont*; 13- *cereal hortobiont*.

According to the method of F.N. Pravdin we have classified 33 species of orthoptera insects by their lifecycle [6,7]. From them: 3 types of *thamnobiont* (species living in trees and shrubs); 3 types of *optional xortobiont* (on the soil surface, living in open areas); 1 type *layered geophilia* (those that are fix the layer at certain periods of ontogenesis); 1 type – *herbivorous Hortobiont* (species living on grass cover); 2 type *fissurobiont* (species that live under cracks and bushings); 2 type *special phytophyll species* (habitat species in the highest layer of herbs and grasses); 1 type *gerpetobiont* (mesophylls feeding with organic remnants); 3 type *hortobiont* (differentiated by body structure and adapted to live an ear of wheat); 2 types of *sedge-cereal hortobiont* (riverbeds and rivers feeding species with sedges and reeds in riverside banks); 1 type *flying migrante* (immigrant species); 9 types of *eremobiont* (soil surface types in open areas); 1 type *petrobiont* (residents of rocky areas); 2 species of *grass hortobiont* (species live on grass and grass in different biotopes).

In order to analyze deeply the orthopteras of Yazyavan desert has identified that the species were grouped by geographic latitude and longitudes. This analysis has studied by [7] method. Accordingly, the distribution of 33 species and subspecies of the species identified on the territory by geographic latitude and longitude. According to the data studying on locality obtained in the region, pollinal species 4 (12.1%), steppe species 1 (3%), northern steppe species 3 (9.1%), southern steppe species 5 (15.2%), semi-steppe species 8 (24.3%), desert species 11 (33.3%) and southern desert type (3%).

33 species of orthopteras spread in Yazyavan Desert 25 types of them are locusts, 8 species of grasshopper and chirus. 17 of them are species that meet in early spring, and 16 species come out in the summer.

From these, 8 species are very rare, 16 species are rare species and 9 species are permanently species. In terms of life, they comprise 13, zoogeographic widths of 7, and length by 12 groups.

The data obtained from the territory of the Aralkum range, which appeared on the dried-up Aral Sea bed, were analyzed as fauna of the steppe zone. As a result, 24 species of orthoptera insects were detected in Aralkum. Today's biocenosis, which has emerged as a result of the drying of water *Platycleis intermedia*, *Decticus albifrons*, *Melanogryllus desertus*, *Pyrgomorpha bispinosa deserti*, *Dericorys albidula*, *Calliptamus italicus italicus*, *C.barbarus cephalotes*, *Acrotylus insubricus*, *Sphingonotus rubescens rubescens*, *Sphingoderus carinatus*, *Hyalorrhypis clause*, *Leptoternis iliensis* there were varieties (egg and larvae). Other 46.7% species were species from other regions.

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