OCCURRENCE OF COLLEMBOLES IN THE SOIL IN THE WINTER SEASON

Atoeva Dilsora Odilovna[1],
Atoyeva Rukhsora Odilovna[2]
Master Degree Student of Mirzo Ulugbek National University[1]
PhD of Bukhara State University[2]

Annotation
Collembola, the main representative of the soil microfauna, are organisms with a unique specialized system in the soil food chain, and their diversity varies, especially in connection with the degree of transformation of organic matter in different ecosystem soils of the northern regions. In recent years, the wide cultivation of biocenoses soil has caused a change in the species diversity of collembola, which are the leaders in the saprotrophic complex of soil biota. Accordingly, determining the composition of collembola species in the soil layers of agrocenoses is of great scientific and practical importance.

Keywords: Seasonal dynamics, collembola, soil, Khorezm region, winter.

Introduction

Forms living in the deep layers of the soil are usually pigmentless, and most of the rest are dominated by air-black, gray-black and light brown of various intensities. The pigment is usually diffusely distributed throughout the body without forming clearly visible stripes and spots. Mandibles with molar plates and tip with several teeth, rarely toothless. The outer wing of the maxilla has simple papillae and one to three hairs, rarely without hairs. The whiskers are 4-jointed and usually not longer than the head. The season has the following sensory structures: a suction papilla on the tip, sensilla on the top, (usually 5-7) and a sensory area on the bottom in some species [1,2]. Representatives of some generations of the family have a sac-like growth between the 3rd and 4th joints of their whiskers. The antennal organ has a simple structure. In very rare cases, many "guard" sensilla are present. Under the antennal organ in a number of forms, in addition to feathers, there is an additional protrusion. There are 8+8 eyes, Xenylla, Pseudacherontides genera have no eyes at all. All segments on the thorax and abdomen are separated without any traces of fusion. The coarsening of the body coat is especially evident on the last segments of the body[3,4].

Material and Method

Research materials during scientific activity n0-10 cm, 10-20 cm, 20-30 cm of the soil of agrocenoses. a total of 540 samples in the amount of 1 dm3 were taken from the layers. Soil samples were taken from the field at designated points, placed in bags and labeled with paper. The date of sampling, the name of the place, the name of agrocenoses or natural ecosystems, the soil layer and other information were recorded on the label paper. The generally accepted "Berleze-Thulgren apparatus" was used to isolate collembola from soil samples [5]. This apparatus consists of the following parts (devices): a tripod, a large funnel, a sieve, a glass container. First, a funnel is placed on the tripod, then a sieve is placed on top of the funnel and a soil sample is placed inside it [6].

Analysis of the Obtained Results

Shavat district, Khorezm region"Erboev Bakhodir", "Yakhshimurodov Ulug'bek", "Eshzhanov Odilbek", "Bodomzor-Abad" farms are wheat and cotton agrocenoses of soil layers.30 cm. in layers up tothe dynamics of the amount of collembola by seasons was studied. In the winter, that is, in December and January, agrocenoses are average in 1 m2 of soil layers520Specimen found (see Figure 1).

In winter, in December and January, 10-20 sm to Collembola are found in many layers, 270-258 specimens per 1 m^2 in average wheat agrocenosis; 276-283 specimens were observed in cotton agrocenosis (Table 1).

Table 1 The number of collembola in winter season in soil layers of agrocenoses of Khorezm region

Soil layers	Wheat agrocenosis		Cotton agrocenosis	
	December	January	December	January
0-10 cm	90	80	90	96
10-20 cm	100	90	98	100
20-30 cm	85	88	88	87
Total	270	258	276	283
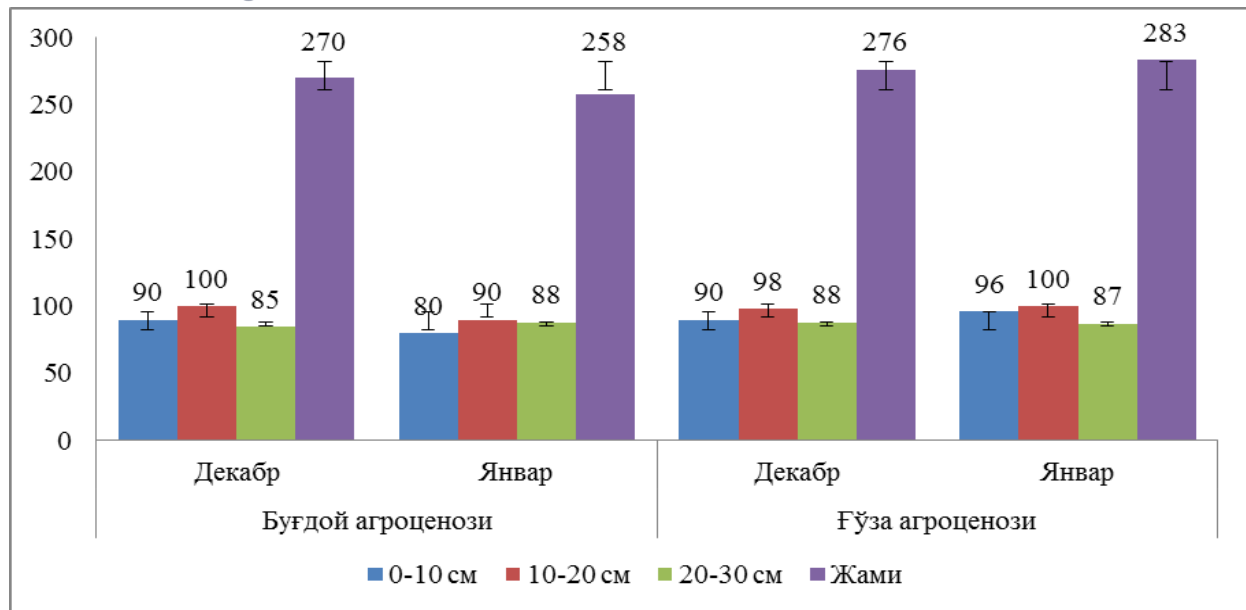
Picture 1. The number of collembola in the winter season in the soil layers of agrocenoses of Khorezm region.

Conculition

Collembola in soil layers of agrocenoses of Northern Uzbekistan belongs to 2 suborders, 5 families, 13 generaThere are 14 types. Poduromorpha in regions (13 species) The diversity of the subfamily is explained by their distribution in the surface layers of the soil.Collembola communities in the soil of agrocenoses of Northern Uzbekistan are diverse in terms of species composition and quantity. As a result of the comparison of the fauna of collembola identified as a result of research from the agrocenoses of Northern Uzbekistan, the activity of the species composition was observed. In the agrocenoses of Northern Uzbekistan, the species composition and amount of collembola are maximally distributed in the 10-20 cm layer of the soil. Changes in the seasonal dynamics of collembola fauna in different soil layers are mainly related to changes in humidity and soil structure. The dynamics of collembola meeting in the soil layers of agrocenoses differed little from each other, and this indicates that they are adapted to active life in different soil layers.

List of Used Literature

1. Babenko, A. B. Nogokhvostki (Hexapoda, Collembola) tundrovyx landscape Kolskogo poluostrova // Zoological journal. - Leningrad, 2012. - T. 91, No. 4. - S. 411–427.
2. Kuznetsova N.A. The organization is soobshchestv pochvoobitayushchikh collembol. Moscow: Prometheus, 2005. – 244 p.

3. Potapov M. Synopses on palaearctic Collembola, volume 3: Isotomidae. ed. Wolfram Dunger. Staatliches Museum fur Naturkunde Goerlitz, Goerlitz, 2001. – P. 601

4. Saifutdinov R.A. Evidence of a trait-specific response to burning in springtails (Hexapoda: Collembola) in the boreal forests of European Russia // Geoderma. - 2018. - Vol. 332. - P. 173-179.

5. Rakhimov Matnazar Shomurotovich, Azimov Djaloliddin Azimovich Ecological – taxonomical analysis of collembolans of the northeast of Uzbekistan // European scientific review, Premier Publishing sro Vienna. No. 3-4. 2019 - P. 9-11.

6. Rakhimov M.Sh., Elmuratova Z.U. Fauna and seasonal dynamics of the collembolans of Uzbekistan //"International Journal of Advanced Science and Technology" Austria. #28. 2019. - P. 68-87.