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The Effect of Temperature on the Living Conditions of Collembola

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Abstract: The dynamics of the composition and proportions of soil invertebrates helps to think about the direction of the processes of soil formation and the disturbance of the environmental regime. A large number of important results have been obtained in this direction. Information was collected on the system of zoological indication of the age of primitive soils, stages of decomposition of organic residues in composts, elementary soil processes, stages of community formation in industrial waste, stages of wood decomposition, levels of soil degradation in recreational areas, pollution with oil products.

Keywords: Temperature, soil, primitive, Tulgren and the MS-80 microphotocamera.

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Introduction. As for forest soils, it was shown that the structure of arthropod communities in the basal zonal phytocenoses is characterized by a high level of stability and order. Conversely, the decrease in the edifying effect of trees was associated with the instability of the collembolan community. Groups of species typical for different types of forest humus were identified. Communities of Collembola can diagnose the disturbance of the stability of forest ecosystems during soil acidification.

Solving the problems of soil regime optimization in agriculture depends on the creation of conditions that support the complex of soil producers. In this sense, testing different agrotechnical methods with the help of pedobionts, including the collembolan community, is an urgent issue. Communities of Collembola showed high sensitivity to mineral, mainly organic fertilizers, small doses of herbicides, soil plowing depth.

Material and methods. In order to study collembola damage in nature, the materials were taken from places where rodents gather. The soil layer, roots, bulbs and parts of the roots around the roots together with the upper layer of soil (1-2 cm) were placed in wet bags made of cloth and taken to the laboratory.

Microarthropods were placed in a modified Tullgren's Electror, with a layer of substrate no more than 2 cm on the sieve, and a glass beaker (50 ml) filled 2/3 with water was placed at the bottom of the funnel, until the substrate was completely dry completed in 7 days.

Metacestodes were measured and photographed in standard Ringer-Locke solution using an Axiolab phase-contrast microscope and an MS-80 microphotocamera. The morphology of collembola was studied in total preparations of larvae placed in Berlize medium. All dimensions are in mm.

Results and discussion. Collembola have the ability to form aggregations. Legumes are distinguished by their cold tolerance and cold tolerance. They do not freeze due to the presence and accumulation of a wide spectrum of cryoprotectants in their hemolymph, so we can see that at the end of November, when the air temperature is 16°C, most forms of collembola are active in the soil of the

ecosystem even under snow. It increased at temperatures close to 0°C. Cold tolerance helps collembola maintain high community numbers at low temperatures when competitive pressure is
Like all organisms, temperature determines life span, growth rate, and reproduction in collembola. Most species have a life cycle of 2-3 weeks at 25°C, but this period may extend to 2 or more years and may be terminated at any stage of unfavorable conditions. The types we identified are:

Heteromurus margaritarius Wankel, 1860. 350 copies: 194♀, 156♂ were found from the 0-10 cm soil layers of the natural ecosystem of the UzMU botanical garden of Tashkent city.

Brachystomella parvula Gisin, 1960. 315 copies: 139♀, 176♂ were found in the 0-10 cm soil layers of the natural ecosystem of the UzMU botanical garden of Tashkent city.

Megalothorax minimusBorner, 1906. 280 copies: 175♀, 105♂ were found from the 0-10 cm soil layers of the natural ecosystem of the UzMU botanical garden of Tashkent city.

Istoma viridisFjellberg, 1980. 300 specimens were found from 0-10 cm soil layers of the natural ecosystem of the UzMU botanical garden of Tashkent city: 158♀, 142♂.

Ongulonychiurus colpusDeharveng, 1988. 250 copies: 95♀, 155♂ were found from the 0-10 cm soil layers of the natural ecosystem of UzMU botanical garden of Tashkent city. (See Table 1)

Table 1

№	Species name	Number of copies	Famale ♀	Male ♂
1	*Heteromurus margaritarius*	350 copies	194♀	156♂
2	*Brachystomella parvula*	315 copies	139♀	176♂
3	*Megalothorax minimus*	280 copies	175♀	105♂
4	*Istoma viridis*	300 copies	158♀	142♂
5	*Ongulonychiurus colpus*	250 copies	95♀	155♂
Jami:		**1495 copies**	**761**♀	**734**♂

Conclusion. Changes in the seasonal dynamics of collembola fauna in different soil layers are mainly related to changes in temperature, humidity and soil structure. The dynamics of collembola meeting in the soil layers of agrocenoses differed less from each other, and this is due to their adaptation to active life in different soil layers.indicates. The largest number of Collembola is observed in the spring season. In the spring season, taking into account the moderate temperature, the amount of precipitation and the average level of soil moisture, Collembola species are found in the upper layers of the soil.

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