MUCHNISTROY MUSHROOMS HAS BEEN DISCOVERED IN THE FERGANA VALLEY

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Abstract: This article contains information about the powdery mushroom of higher plants of Ferghana Valley, in which micromycetes belonging to 7 genera, 37 species, 40 forms and 2 variations are identified, and also the patterns of their seasonal development are studied.

Key words: Obligate, Fungus, Taxonomy, Micromycete, Xerophyll, Hygrophil, Erysiphe Cichoracearum, Blumeria Graminis, Lepidolopha Komarowii, Ranunculus Baldschuanicus.

Research Methodology Observations made in the Ferghana Valley during 2017–2019 and herbarium samples collected in this region served as a source of scientific work. Herbarium samples were collected seasonally on planned routes.

The collected herbarium samples were mycological analyzed at the Laboratory of Mycology and Algological Institute of Botany of the Academy of Sciences of the Republic of Uzbekistan.

Universal microscopes NU 2E and Motic-1 were used to determine the species composition of micromycetes and study their morphological characteristics.

Plant samples with signs of damage were analyzed in the laboratory based on techniques developed by N.A.Naumov (1937), N.A.Naumov, V.E.Kozlev (1954) and others. Mycological determinants and monographs were used to determine the species composition of mushrooms (A. A. Yachevsky, 1927; H. M. Kirgizbaeva etc., 1983; N.P. Pidoplichko, 1977; 1977a; 1978, Parpiev, G.G., G‘ayratov, O.G. 2024).

During the study, 7 genera, 37 species, 40 forms and 2 varieties of powdery mushrooms were identified in higher plants of the Ferghana Valley

(Table 1). It was revealed that the identified mushroom affect 28 families, 62 genera, and 76 species of higher plants.

If you pay attention to the seasonal development of mushroom, identified during the research, they are isolated from the genus Erysiphe in accordance with the modern systematic of representatives of the genus Blumeria. From this genus Blumeria graminis (DC.) Speer, mainly develops in plants belonging to the genus Poa L. from April to May. This species is hydrophilic and is reported to develop during the year from spring to late fall, when conditions are suitable.

TABLE 1 TAXONOMIC ANALYSIS OF МУЧНИСТОРОСЯНЫХ MUSHROOM FOUND IN HIGHER PLANTS OF FERGHANA VALLEY.

Class	Order	Family	Kind	Type (variation form)
Leotiomycetes	Erysiphales	Erysiphaceae	Erysiphe Leveillula Sphaerotheca Phyllactinia Podosphaera Uncinula Golovinomyces	10 (18-1) 11 (15) 8 (3-1) 2 (3) 3 (1) 2 1

Representatives of the genus Erysiphe begin to develop in the lower and upper hills in March, April and May, some species being hygrophilic and others xerophilic. For example, the fungus Erysiphe aquilegiae. ranunculi (Grev.) R.Y. Zheng & G.Q. Chen develops in Ranunculus baldschuanicus Regel ex Kom. in extremely high humidity. Species with a xerophilic character and their forms are more adapted to development in mountainous regions on the mountain slopes.

The development of the genus Erysiphe, widespread in Ferghana Valley, can be divided into two periods: spring-summer and summer-autumn, and the period of development of spring-summer takes place mainly in the lower part of the lower and upper hills. The species, which began to develop in the lower hills in the second half of March, develops rapidly in early May-June, ending the

growing season with an increase in temperature. In connection with a decrease in temperature and an increase in relative humidity in autumn, representatives of this group again develop and form ascocarp. This is due not only to climatic factors, but also to the fact that mushroom repeatedly form conidia during the growing season. Examples of mushrooms that develop in the first period Erysiphe graminis f. hordei-spontanei Jacz., E. cruciferarum Opiz ex L., E. cichoracearum f. althaeae Jacz., E. cichoracearum f. cichorii S. Blumer, E. cichoracearum f. verbenae Jacz., E. horridula f. asperuginis S. Blumer, E. horridula f. solenanthi Jacz., E. convolvuli var. convolvuli, E. urticae (Wallr.) S. Blumer, E. polygoni var. rumicis Y.S. Paul & V.K.

The second summer-autumn period a fall on the highlands and mountainous regions of the high hill, and begins in the second half and early July. Species of the genus Erysiphe that develop during this period are more xerophilic in nature, to which we can lead the following mushrooms: E. E. umbelliferarum f. ferulae Golovin, E. labiatarum f. phlomidisJacz., E. labiatarum f. leonur Jacz., E. horridula f. LindelofiaeGolovin, E. communis f. dianthi Jacz. and etc.

Representatives of the genus Leveillula differ in that they are the most xerophilous species among mushroom. Among the powdery mildew bogs identified in the valley, the genus Leveillula is the leader in the number of species, and its prevalence is explained by the xeromorphic nature of the region's climate. The development of representatives of the genus Leveillula mainly lasts from July to late autumn. They almost do not exist in the spring because of their ability to grow and develop at much higher temperatures. One of the distinguishing features of representatives of this genus, unlike other mushrooms, is that they require high temperatures and grow well in places exposed to direct sunlight.

Accordingly, they have a development period only in summer and autumn. On the lower hill, they begin to develop from the end of June to July,

while on the upper hill and in the mountainous region, they continue from mid-July to autumn. Representatives of the genus Sphaerotheca begin to develop from late April to early May. Scientific sources report that some members of this genus are adapted to certain cold conditions and are also located on the northern slopes at an altitude of 3000 m (Golovin, 1949).

It was noted that they occur in early spring (March-April) not only on the lower, but also on the upper hill, despite the low temperatures. Examples may include the following types: Sphaerotheca fugaxPenz. & Sacc., Sphaerotheca pannosa. Nevertheless, the development of representatives of this category occurs mainly in the spring-summer period on the lower and upper hills, and in the mountainous region coincides with the summer-autumn period. Phyllactinia suffulta from the genus Phyllactinia has been developing mainly since July. Although scientific sources claim that this species is mainly found in trees growing near a water edge, it is mesophilic, but also found on mountain slopes with some arid conditions in the valley.

Representatives of the genus Podosphaera are hygrophilic and have been reported only in areas with very high humidity. Accordingly, representatives of this group were found mainly in the spring on the embankment, but no development was observed on the mountain slopes. Representatives of the genus Uncinula are hygrophilous and have been found to develop in summer and autumn. Uncinula necator (Schwein.) Burrill was found on the lower hill mainly in June, while Uncinula ulmi M.N. Kusnezowa was observed only in September and October in the fall. Representatives of the genus Trichocladia are xerophilic in nature and have been discovered on open mountain slopes since July. From this genus, the species Trichocladia atraphaxidis Golovin is often found in the plant Atraphaxis pyrifolia Bunge, which begins to develop mainly in late June - early July. Golovinomyces salviae (Jacz.) M. Scholler, a representative of the genus Golovinomyces, occurs only in autumn.

Due to the relief of Ferghana Valley and the specific climatic conditions arising in them, powdery mushroom develop throughout the year, that is, from March to late autumn, which obeys the patterns of mycobiota formation in the mountainous regions of Central Asia.

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