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The Analysis Of Oscillatoria Vauch Genus Varieties In Some Reservoirs Of The Fergana Valley

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ABSTRACT

The article provides information on the distribution of Oscillatoria Vauch species in some reservoirs of the Fergana Valley. A comparative analysis of the number of species of the family Oscillatoriaceae in the algae flora of the reservoirs of the Fergana Valley with the number of species of algae flora of some reservoirs in Uzbekistan is presented. The distribution of the number of species Oscillatoria Vauch in some reservoirs of the Fergana Valley is given.

KEYWORDS

Reservoir, algae, family, genus, analysis.

INTRODUCTION

It is important to protect water resources in the world, to ensure the stability of water bodies and, in particular, to preserve the natural flora of water bodies, to use them as a strategic object. One of the most pressingissues is the assessment of the current state of the algae flora of artificial water bodies associated with human activities, in particular, and the prospects for their implementation. Modern algological research in the world requires the identification of algae flora in large watersheds, which are strongly influenced by anthropogenic factors and differ from water sources, and assess the degree of their transformation. Reservoirs, which are especially important among water basins, are important not only because of the richness of algae species, but also because they preserve all the ecological groups that have a special place in the comparative distinction of algae flora of water bodies [1]. It is important to

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assess the current state of the algae flora of reservoirs of Uzbekistan, scientifically substantiate the role of saturated water sources in the formation of the taxonomic composition of the algae flora of the reservoir, reveal the impact of anthropogenic factors on the composition of species in the reservoir.

THE RESULTS OBTAINED

A total of 418 species of algae flora of Andijan reservoir, 267 species of algae flora of Eskiyer reservoir and 186 species of algae flora of Karkidon reservoir, which are the largest reservoirs in the Fergana Valley, were identified. In these reservoirs, the family Oscillatoriaceae led with a large number of species. The number of species of the family Oscillatoriaceae in the algae flora of some reservoirs in the Fergana Valley was analyzed.

The Cyanophyta division of the family Oscillatoriaceae belongs to the order Hormogoniophyceae class Oscillatoriales.

Of the 50 families in the algae flora of the Andijan reservoir, 19 are leading families with 328 species (78.46%). Of these, the family Oscillatoriaceae consisted of 57 species, ranking first with 13.63% (Table 1).

Of the 38 families in the algae flora of the Eskiyer reservoir, 10 are the leading families, comprising 161 species (60.29%). Of these, the family Oscillatoriaceae consisted of 23 species, ranking second with 8.61% (Table 1).

Eight of the 30 families in the algae flora of the Karkidon reservoir are leading families, comprising 111 species (59.67%). Of these, the family Oscillatoriaceae consisted of 21 species, ranking second with 11.29% (Table 1)

Table 1

Number of species in some reservoirs of the Fergana Valley of the family *Oscillatoriaceae*

Research areas	Number of species	Total algae flora in%
Andijanreservoir	57	13,63
Eskiyerreservoir	23	8,61
Karkidonreservoir	21	11,29

The number of species of the family Oscillatoriaceae in the algae flora of the Fergana Valley reservoirs was compared with the number of species of algae flora of some reservoirs in Uzbekistan (Figure 1).

There is no significant difference in the percentage of species of the family Oscillatoriaceae in reservoirs comparable to algae flora (1-5%). Hence, these family species are also common in otherreservoirs. The family Oscillatoriaceae has a leading position in the algae flora of Central Asia. In the scientific literature for the algae flora of Central Asia and Uzbekistan, this family is also distinguished by the large number of species [2, 3, 4].

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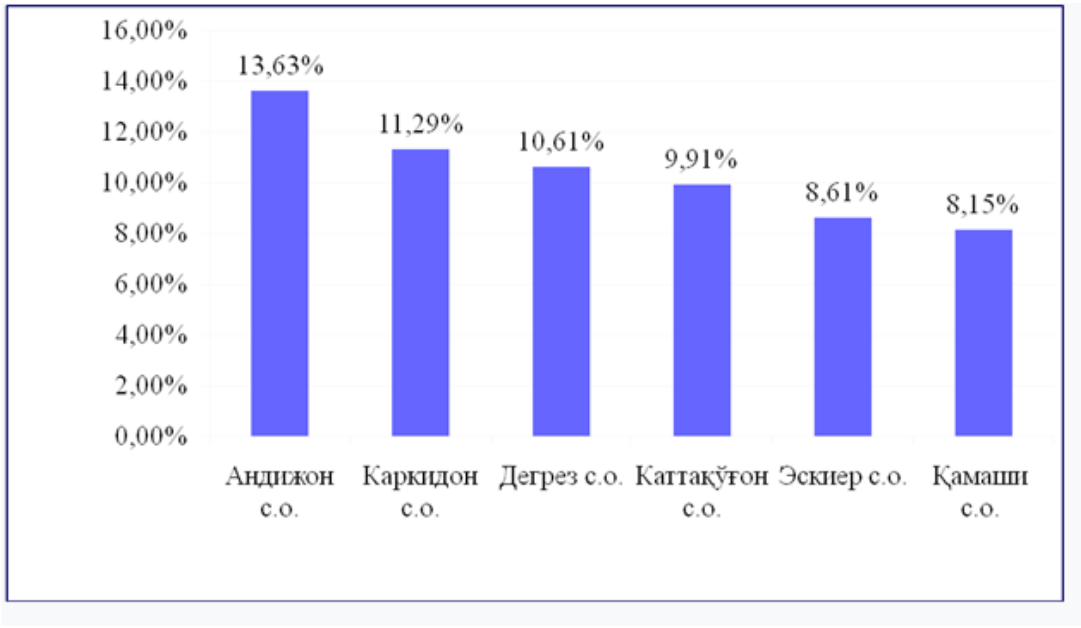

Figure 1. Comparative analysis of the number of species in the family Oscillatoriaceae

In the algae flora of some reservoirs in the Fergana Valley, the OscillatoriaVAUCH.genus was more common than other genera, and the number of species was analyzed.

Of the 116 genera in the algae flora of the Andijanreservoir, 22 are the leading genera, comprising 189 species (45.21%). Of these, the Oscillatoria VAUCH series consisted of 21 species and ranked first with 5.02% (Table 2).

Of the 75 families in the algae flora of the Eskiyer reservoir, 14 are the leading families, with 105 species (39.32%). Of these, the Oscillatoria VAUCH series consisted of 16 species and ranked first with 5.99% (Table 2).

Of the 66 families in the algae flora of the Karkidon reservoir, 7 are the leading families with 62 species (33.33%). Of these, the Oscillatoria VAUCH.series consisted of 15 species and took first place with 8.06% (Table 2).

Table 2

The number of species of *Oscillatoria* VAUCH genus in some reservoirs of the Fergana Valley

Research areas	Number of species	Total algae flora in %
Andijan reservoir	21	5,02
Eskiyer reservoir	16	5,99
Karkidonreservoir	15	8,06

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The saprobility of the species that make up the *Oscillatoria* family has been studied to occur during the seasons (Table 3).

Table 3

Analysis of the Oscillatoria series in the Fergana Valley reservoirs

Order - *Oscillatoria les* Family - *Oscillatoria ceae* (Kirchn.) Elenk. Category- *Oscillatoria* VAUCH.								
T/p	Names of species	Saprobility	Occurrence of water weeds in the seasons				Scenotherm (mesophile, thermophile)	Eurytherm
			Spring	Summer	Autumn	Winter		
1	*O. brevis* (Kuetz.) Gom.	+	+	+	+	+		+
2	*O. chalybea* (Mert.) Gom.		+	+	+			+
3	*O. cortiana* (Menegh) Gom.		+				m	
4	*O. deflexoides* Elenk. Et. Kossin.			+			t	
5	*O. formosa*Bory			+			t	
6	*O. irrigua* (Kuetz.) Gom.		+	+	+			+
7	*O. lacustris* (Klebs) Geitl.			+			t	
8	*O. lemmermanni*Wolosz.		+	+	+			+
9	*O. limosa* Ag.		+	+	+			+
10	*O. mougeotii* (Kuetz.) Forti		+	+				+
11	*O. nitida*Schorb				+		m	
12	*O. okeanii* Ag.				+		m	

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13	*O. princeps*VAUCH.	+	+	+	+			+
14	*O. profunda*Kichn.		+				m	
15	*O. proboscidea*Gom.	+		+			m	
16	*O. rubescens* (D.C.) Gom.			+	+			+
17	*O. rupicola*Hansg.		+	+				+
18	*O. sancta* (Kuetz.) Gom.		+	+	+			+
19	*O. subproboscidea* W. et G.S. West			+	+			+
20	*O. terebriformis* (Ag.) Elenk. Emend.		+	+	+	+		+
21	*O. woronichinii*Anissim.		+	+	+			+

The amount of the most common species in the composition of algae flora in reservoirsvaries under the influence of seasonal changes and environmental factors. Cold-loving group algae develop in early spring and late fall, and warm-loving group algae in mid-spring, summer, and early fall. The specificity of the stenothermic and eurythermic species of the Oscillatoria family in the algae flora in thereservoirs of the Fergana Valley was also studied and presented on the basis of the table. Algae flora is dominated by algae, which have the largest amount and biomass at any time of the season.

Of the table species belonging to the Oscillatoria family, two species are dominant:

1. Oscillatoriabrevis (Quetz.) Gom is common throughout the year in plankton and benthos when the water temperature is 22-26C. Widespread at the entrance to the reservoir, on the right and left banks of the coast, in the middle and on the dam. The amount was 890 thousand cells / liter in spring, 1150 thousand cells / liter in summer and 910 thousand cells / liter in autumn.
2. Oscillatoria principers VAUCH occurs on the right and left banks of the reservoir, at the entrance to the reservoir, in the middle and in the foothills, in spring, summer and autumn when the temperature of water is 16-30C. Distributed throughout the reservoir. The amount was 875 thousand cells / liter in spring, 1200 thousand cells / liter in summer and 1000 thousand cells / liter in autumn.

CONCLUSION

The fact that the number of species of the family Oscillatoriaceae in the algae flora of the Fergana Valleyreservoirs is higher than in other families indicates that all the ecological conditions in the water basins of Uzbekistan are sufficient for members of this family. In particular, this family species also leads in the composition of river algae flora that feeds reservoirs. This situation indicates that the

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algae flora of the reservoir is related to the algae flora of the water sources that flow into it. The Oscillatoriaseries ranked first in terms of the number of species. The fibrous structure and multicellular nature of the species belonging to this category ensure that they are widespread in various water bodies. The richness of this category shows that the Fergana Valley reservoirs are an algal region of special importance in Uzbekistan. Species belonging to the family Oscillatoriaceae are resistant to factors such as water temperature, clarity, depth of the water basin, its coastal and middle and pre-dam conditions, pH, mineralization. It also adapts quickly to river, reservoir or lake conditions of water bodies.

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