ISSN: 2581-4230, Website: journalnx.com, 19th Aug. 2020

ARTEMISIA DIFFUS A KRASCH AGE SPECTRUM DYNAMICS WITH IN THE UNEVEN-AGED BLACK HALOXYLON PLANTS PHYTOGENIC FIELD

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Abstract
The aim of the study was to study the phytogenic field of uneven-agedd black haloxylon plants by determining their influence on the dynamics of wormwood phytometer species aged spectrum.The black haloxylon phytogenic field was studied by the phytometer method in the Karnabchul desert. The black haloxylon uneven-agedd plants phytogenic fields influence on branching wormwood aged spectrum dynamics depends on the intensity degree of this field. The greatest negative influence of the dificatory species is observed within the middle-agedd generative black haloxylon minimum phytogenic field, as a result of which wormwood aged spectrum gradually acquires a regressive character.
Key words: phytogenic field, black haloxylon, spreading wormwood, aged spectrum, number, influence degree, influence nature.

Introduction
The appearance of a phytocenosis is largely determined by edificatory species, since these plants play a leading role in creating special environmental conditions around individual individuals and throughout the cenosis (Mikhailova, 1977). Therefore, the study of the

relationship between plants through the study of their phytogenic field, especially edificatory species, is of great theoretical and practical importance.

Studies carried out to study the environmental and black haloxylon cenosis-forming ability showed that this edificator species significantly changes environmental conditions around itself (Ubaydullaev, 2009; Shamsutdinov etc., 2016;) and through it affects the distribution, growth and wormwood ephemeral vegetation productivity (Shamsutdinov ect., 1988, 2014, 2016; Ubaydullaev, 1992). As a result of all this, ecological niches differentiation of wormwood-ephemeral vegetation occurs (Shamsutdinov etc., 2013). Despite this, the phytogenic field of uneven-aged plants influences degree and nature of black haloxylon on plants aged range experiencing this effect remains unstudied. Therefore, in the conditions of the wormwood-ephemeral Karnabchul desert, we studied the black haloxylon - the edificator uneven-aged plants phytogenic effect of desert black haloxylon phytocenoses, on wormwood aged composition - the natural wormwood-ephemeral pastures dominant species.

Object, task and research methodology

The studies were carried out in black haloxylon forests formed from self-seeding in the interband spaces of black haloxylon pasture protection plantations by the phytometer method (Uranov and Mikhailova, 1974).

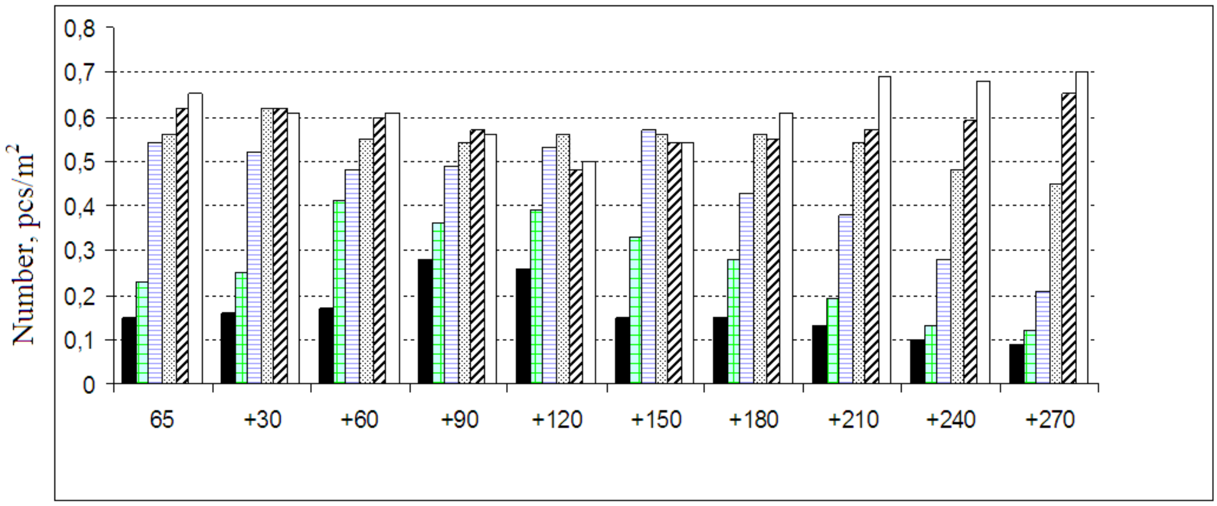
The aim of the study was to study the phytogenic field of uneven-aged black haloxylon plants by determining their influence on the dynamics of the aged spectrum of the phytometer species – wormwood. The aim of the study was to determine the degree and nature of the phytogenic effect of uneven-aged black haloxylon plants on the dynamics of the aged spectrum of common wormwood.

To study the wormwood aged spectrum dynamics in the phytogenic fields of uneven-aged haloxylon plants, 3 areas in the rectangle form with 100x50m sides were identified. Six diagonals are drawn through opposite corners of these areas. Samples were built around the individuals that fell on these diagonals, which consisted of ring-shaped areas. The radius of the first ring-shaped area depended on the averaged crown radius of the black haloxylon individual under study. The size of the subsequent annular areas in the sample approached the averaged diameter of the phytometer species - wormwood and was equal to 30 cm. The construction of annular areas continued until the outer side of the last annular area bordered on the outer part of the crown projection of the edificator species closest neighbor. On these ring-shaped areas, the number of individuals of wormwood was taken into account, taking into account the aged state (j-juvenile, v-virginal, g^1-young generative, g^2-middle-agedd generative, g^3-old generative, s-senile). When determining the aged state of wormwood, we were guided by the classification of T.A. Rabotnov (1950) and the general scheme of qualitative signs of aged conditions for different species (Smirnova et al., 1976). During statistical processing of the materials (Zaitsev, 1984), they were differentiated according to three aged states of black haloxylon: virginal, young generative and middle-aged generative.

In the studied phytocenosis, the old generative aged group of individuals in the coenopopulation of black haloxylon is represented by a small number and, in this regard, it is attached to the group of middle-agedd generative individuals. The aged state of black haloxylon was established according to A.G. Bogdanova and Z.Sh.Shamsutdinov (1979). The data were recalculated per 1 m^2, since without this comparison of the data is impossible due to the unequal size of the sites.

Results and discussion

Fig.1 shows the change in common wormwood aged spectrum dynamics in black virginal aged haloxylon phytogenic field. From the data analysis it became clear that at phytogenic field different points, the phytometer species different ageds individuals' distribution is not the same. With distance from phytogenic field center, the number of senile individuals increases. Their maximum is observed at 90-120 cm distance outside the crown, then decreases and the minimum is observed in the immediate vicinity of the neighboring individual. The virginal individuals' placement is subject to the same regularity: first, their number increases, reaching a maximum at 60 cm distance from the crown projection, and later it decreases. The number of wormwood young generative individuals in the minimum phytogenic field and at some distance from black haloylon phytogenic field center remains relatively the same and decreases with approaching the neighboring individual. There is a slight increase in the number of old generative and phytometer species senile individuals in the minimum phytogenic field and near it.



Distance from the center of the phytogenic field,cm

Fig.1. Wormwood aged spectrum dynamics in Virgil black haloxylon phytogenic field

Explanations:

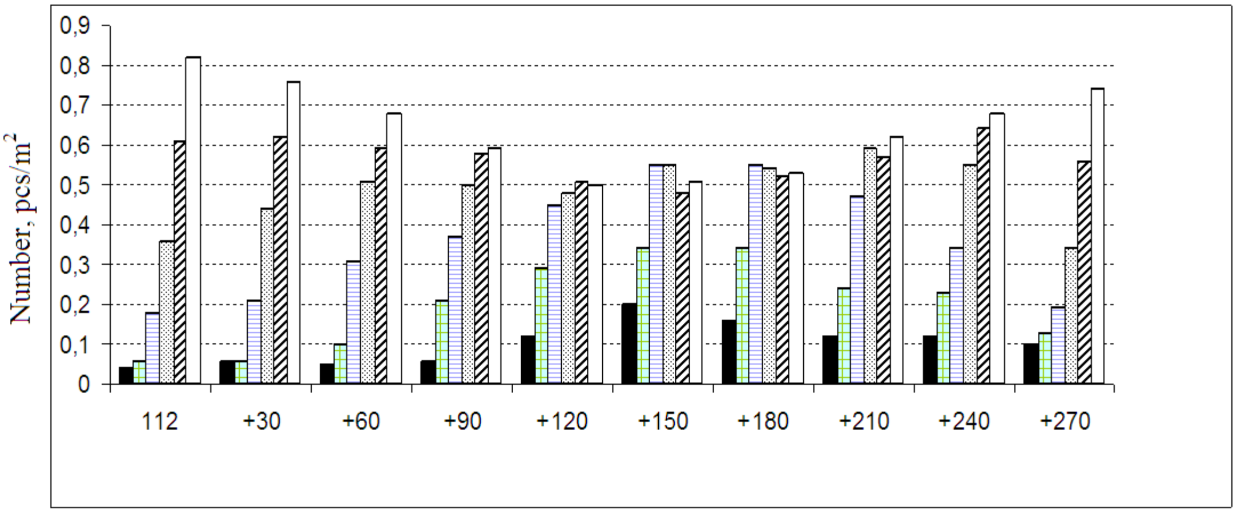
■-J; □-V; □-g_1; □-g_2; □-g_3; □-S

This distribution of different aged wormwood individual's states once again shows that virginal haloxylon plants influence on wormwood is negative. This is reflected in a decrease in the number of regenerative plants and in old generative accumulation and senile wormwood specimens in edificator species phytogenic field.

Figure 2 shows the data characterizing young black haloxylon generative aged state influence on the wormwood.

The influence nature of the young generative aged haloxylon state on the phytometer species is similar to that the virginal aged individuals' state. However, the active species phytogenic effect is more clearly expressed here.

In young generative aged haloxylon minimal phytogenic field state, the number of young and middle-aged generative wormwood individuals significantly decreases. An increase in the number of old generative and senile individuals in the wormwood cenopopulation is observed here. The share of their participation is, respectively, 29,47 и 39,61% (Fig. 2), which is significantly higher than in the minimum phytogenic field of virginal haloxylon plants - 22,55 and 23,64% (Fig. 1).



Distance from the phytogenic field center, cm

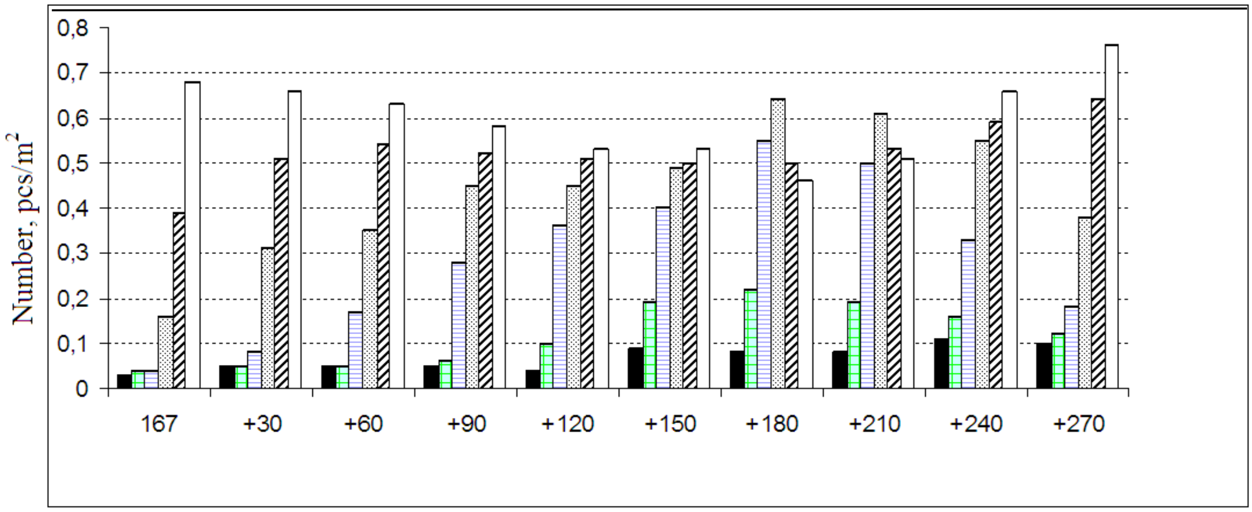
Fig.2. Common wormwood aged spectrum dynamics in young generative aged black haloxylon phytogenic field

Explanations are the same as in fig. 1.

With the exit to phytogenic field outer part, an increase in the number of wormwood pregenerative and young generative individuals is observed, on the one hand, and, on the other, a decrease in old generative and senile individuals. The middle-aged generative individuals' participation in the wormwood cenopopulation in the phytogenic field outer part remains approximately the same at 240 cm distance from the haloxylon crown. With a direct approach to the phytogenic field neighboring source, the number of phytometer species middle-aged generative individuals significantly decreases (0.34 pcs/m^2), the participation in the cenopopulation of this age group decreases to 16, 51%.

The increase in the edificator species phytogenic field intensity with the transition to an older age group is clearly reflected in the phytometer species individuals' redistribution. Here, the wormwood age spectrum cenopopulation is characterized by an increase in senile individuals and they constitute more than half of the cenopopulation. At the same time, the number of pregenerative individuals here is insignificant (0.07 pcs/m^2), which cannot support the wormwood cenopopulation further existence as a whole. This is evidenced by the small number of young (0.04 pcs/m^2) and middle-aged (0.16 pcs/m^2) generative wormwood individuals.

In the phytogenic field outer part of middle-aged generative haloxylon plants, the number of pregenerative wormwood individuals along the phytogenic field rays, i.e. with distance from its center, it increases, reaching its maximum at 150-180 cm distance from haloxylon crown projection. The number of young and middle-aged generative wormwood individuals is increasing. Their maximum is observed at 180 cm distance outside the crown. The number of old generative and senile age's individuals, on the contrary, decreases. Their minimum abundance was found at 180 cm distance from the active species crown projection (Fig. 3).



Distance from the phytogenic field center, cm

Fig.3. Common wormwood age spectrum dynamics in middle-aged generative age black haloxylon phytogenic field

Explanations are as in Fig.1.

A decrease in pre-generative, young and middle-aged generative number of old generative and phytometer species senile individuals' accumulation indicate the negative impact of the haloxylon phytogenic field on wormwood. This phytometer species cenopopulation in the minimum phytogenic field is little replenished by juvenile individuals, moreover, they are not able to move to an older age group. This is prevented by readily soluble salts high content in the undercrown soil and a significant decrease in illumination. In the phytogenic field outer part, the bulbous bluegrass, which thrives and is the most abundant, contributes to phytometer species individuals vital state deterioration (Shamsutdinov et al., 1988). The result is a dense bluegrass sod. In addition, the superficially located root system of bluegrass helps it catch and utilize precipitation extremely well. At the same time, bluegrass is distinguished by transpiration high intensity (Shamsutdinov and Chalbash, 1960), which undoubtedly leads to a rapid drying out of the upper soil layers.

The above ecological and biological features of bulbous bluegrass lead to a deterioration in the young wormwood moisture supply, whose roots do not have time to go deep enough into the soil and, ultimately, they die. In addition, bluegrass sod is a phytocenotic barrier to seed wormwood regeneration. In this regard, under these conditions, the wormwood cenopopulation is not replenished by younger individuals, which is necessary for the further maintenance and survival of this phytometer species population. Soil moisture regime deterioration affects not only the young vital state, but also adult wormwood.

Conclusion

1. The black haloxylon different-aged plants phytogenic fields' influence on the wormwood age spectrum dynamics depends on the degree of this field intensity. This influence degree turned out to be the highest within the phytogenic field of middle-aged generative plants, and the lowest – virginal plants of black haloxylon.
2. Within the minimum phytogenic field limits, with an increase in the edificator species age state, as a result of an increase in soil salinity and a significant decrease in illumination, the conditions of existence for wormwood are deteriorating, which leads to a significant decrease in its numbers. In this phytometer species age spectrum, there is a sharp decrease in the number of pregenerative individuals and senile individuals clear predominance.
3. In the phytogenic field outer part, especially near the black haloxylon crown, the formed bluegrass sod is a phytocenotic barrier for seed regeneration, as well as the growth and development of wormwood young individuals, as a result of which a decrease in the number of young and an increase in old ones is observed in individuals phytometer species age spectrum.
4. The branching wormwood age spectrum within the minimum phytogenic field of middle-aged generative black haloxylon gradually acquires a regressive character, which indicates this age edificator species significant negative influence state on the phytometer species.

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