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DYNAMICS OF DIVERSITY AND PRODUCTIVITY OF ALAS STEPPE MEADOWS IN CENTRAL YAKUTIA

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SUMMARY

Present paper is continuation of a series of publications on characteristic of vegetation fluctuations inside alas depressions in Central Yakutia. The purpose of the study was the analysis of diversity and productivity dynamics of meadows in alas xerophytic habitats in a long-term cycle.

This study was carried out during 1988—2012 in model sites of alas steppe meadow belt, where plant communities are formed on insufficiently humidified alas low-humus steppe soils. The method of model sites and Braun-Blanquet scale of abundance was used for research of diversity and productivity of alas steppe meadow. Descriptions were made within the area of 5 m2. Above-ground biomass of grass vegetation was estimated in air-dried material by the method of 1 m2 control sites in 4 replications.

The following features of diversity and of productivity dynamics of steppe meadows were revealed.

1) Under the influence of weather conditions natural fluctuations the area of the steppe meadows varies significantly each year, the range of fluctuations of area during observations was 7 times.

2) The plant species composition of the steppe meadows is not permanent, interannual Jackard index of floristic similarity varies from 0.4 to 0.84.

3) Productivity of meadows has the big interannual fluctuations and varies from 2.81 to 22.44 c/ha, but, in a whole, tends to increase.

Keywords: diversity, productivity, steppe meadows, alas, Central Yakutia.