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COMMUNICATIONS

ANALYSIS OF FUNCTIONAL TRAITS AND THE STRUCTURE OF THEIR RELATIONSHIPS IN THE COENOPOPULATIONS OF *PANZERINA LANATA* (LAMIACEAE)

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The relationships of 10 functional traits in the coenopopulations of *Panzerina lanata* located in different regions of Siberia (Tyva and Mountain Altai) were studied. The studied traits were found more variable but weakly correlated in undisturbed sandy and stony steppes than in a disturbed sandy steppe. Conversely, the studied traits are characterized by a high level of variation and strong correlations in a disturbed sandy steppe. We have revealed that the plants of *P. lanata* are large with a very branched shoot system and a high seed productivity in undisturbed variants of sandy and stony steppes. On the contrary, when overgrowing a fallow in the disturbed steppe, *P. lanata* forms small, few-branched plants with low seed productivity. The analysis of general and concordant variability of these traits has shown that the best indicator functional trait is a potential seed productivity (number of ovules per plant), which value determines the ability of populations for self-maintenance in different types of steppes. The example of *P. lanata* shows that a high determinacy and concordance of this trait with others allows to use it to analyze coenopopulations stability in other perennial taproot plants. The ratio of individuals of different age in populations in undisturbed steppes reflects the result of a balanced rotation of generations, an even rate of development of individuals, and a periodic dispersal, which leads to wave processes and the formation of a multi-vertex spectrum. In the disturbed type of steppe, an asynchronous rate of individuals development and an unbalanced rotation of generations, a low and irregular semination are noted, which determines the formation of a unimodal left-sided spectrum.

Keywords: functional traits, variability, correlation system, coenopopulations, ontogenetic structure, *Panzerina lanata*

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