CHARACTER OF TROPHIC RELATIONSHIPS OF LOCKS (ACRIDIDAE) AS THE FITOPHAGIC CONSUMERS ON THE EXAMPLE GLYPTOBOTHRUS APRICARIUS

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The material on the role of locusts – as consumers-phytophagous in transformed biogeocenoses (agrocenoses) is presented.

Keywords: locusts, consumers-phytophagous, diet, increase, density

There is a fact that the impact of climatic change, antropogenic factors and man-made disasters on the environment has increased in the recent decades. This affects the fauna composition and its structural and functional features in different parts of the world. This also applies to the insects: the species able to damage the environment take priority if the conditions are favorable for them.

Acridoids (Acrididae) – representatives of orthopterous insects (Orthoptera) – dominate among the species able to produce insect epidemics and affect the biogeocenoses by reducing the biomass. That is why this species is classified as potencially dangerous, herewith being the dominant group of primary consumers of phytophagous. Moreover, the acridoids are considered to be good models and indicators of the environmental conditions.

Regarding the harm caused by the acridoids to the ecosystems functioning, the hugest damage done by the acridoids in the forest-steppe zone covers the territories regularly used in agriculture. The literature says that the acridoids utilize up to 20 % of plants green parts. There is also regional specificity of this value. By the way, it is necessary to understand, that the literature takes into consideration not the standard acridoids that cause much more damage.

The purpose is to assess the interaction between the major components of the biogeocenosis (plants and phytophages) based on the nature of the trophic structure of the Chorthippus apricarius – Glyptobothrus apricarius.

The experiment allowed to obtain the data on daily nutrient requirement of a mature Chorthippus apricarius– (Glyptobothrus apricarius) and determine the relationship of this value and density. It is set that congestion has a negative impact on the organism's physiological state, that leads to the inactive nutrient intake and slow nutrition. The experiment also helped to reveal the decrease of daily ration and weight gain by increasing the density of apricarius per unit volume. This species is registered to actively lay generative production, that is considered to be the adaptive reaction to save the species and contributes to the insect's epidemics.

It was established that the daily intake of feed as well as the increase in body weight in non-herd locusts (by the example of the brown horse) – parameters that reflect the physiological state of the organism are in inverse proportion to the density. Their values decrease with increasing density of individuals per unit volume, which corresponds to the data obtained for aquatic invertebrates.

It is known that in herd locusts, physiological and behavioral responses have a different specificity and are expressed by a sharp increase in numbers, as well as by the ability to form flocks or swarms, causing enormous damage to crops and meadows.

DEVELOPMENT OF A METHOD FOR ASSESSING THE STATE OF THE ENVIRONMENT OF AN INDUSTRIAL CITY USING RUDERAL PLANTS BASED ON CITY ZHODINO

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Development of a method for assessing the state of the environment of urbanized areas on the basis of eco-floristic ruderal vegetation classification on an example of a city Zhodino. An analysis of the current state of the flora in Zhodino city will make it possible to identify species that have adapted to the conditions of the urbanized environment, which can later be used to optimize the vegetation cover and improve the hygienic state of urbanized areas.

Keywords: environment, ecotopes, urbanization area, ruderal plants, contamination, desertification.