

SOME WAYS TO INCREASE BIODIVERSITY IN URBAN ECOSYSTEMS OF UKRAINE

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In the paper the ways of biodiversity increase in urban ecosystems of Ukraine are presented. Among them there are restoration of green areas, maintenance of city ecosystems, etc.

Key words: biodiversity, urban ecosystems, biota.

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СПОСОБИ ЗБІЛЬШЕННЯ БІОРІЗНОМАНІТТЯ В УРБАНІЗОВАНИХ ЕКОСИСТЕМАХ УКРАЇНИ

У статті представлені способи збільшення біорізноманіття у міських екосистемах України, серед яких відновлення зелених зон, збереження екосистем міста та ін.

Ключові слова: біорізноманіття, міські екосистеми, біота.

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СПОСОБЫ УВЕЛИЧЕНИЯ БИОРАЗНООБРАЗИЯ В УРБАНИЗИРОВАННЫХ ЭКОСИСТЕМАХ УКРАИНЫ

В статье представлены способы увеличения биоразнообразия в городских экосистемах Украины, среди которых восстановление зеленых зон, сохранение экосистем города и др.

Ключевые слова: биоразнообразие, городские экосистемы, биота.

Biodiversity protecting and preservation is the important problem because in connection with anthropogenic influences on natural ecosystems many species is disappearing. Normally, the ecosystem can withstand strong anthropogenic pressures due to the possibility of self-control, self-preservation and maintenance of its species composition and rebalancing of populations of many species interacting in biocenoses and, in general to maintain functional stability. But with growth and development of large cities in the vast territories the sustainability of ecosystems was sharply declined. Reduced species diversity of plants and animals in urban ecosystems drastically disrupted the natural mechanisms of regulation biocenoses. It is known that the more diverse views presented by each group, the more stable the ecosystem as a whole, thanks to the interchangeability of species.

The trophic attitudes between species have special values for normal homeostasis of ecosystems. The diversity of species determines the stability of biocenoses due to abundance of trophic chains, the necessary for transformation and destruction of organic matter of the biosphere. In natural ecosystems the biota supports a balance between production and destruction of organics. But in urban areas the processes of environmental degradation is catastrophically increasing. We know that climate and biotic component of the urban environment is very differing from natural ecosystems. Cities that have historically created on the field of natural ecosystems, in some areas preserved the islets of living nature in the form of park areas or simply undeveloped land. At such sites, biota largely replenished from the surrounding city environment. Therefore condition of the biocenoses in suburban line plays the extremely important role in maintenance of city ecosystems. It is necessary to enrich connatural ecosystems symbiosing around the city, to reduce a degree of their degradation and pollution by urban wastes. The modern city represents an unstable artificial ecosystem for which maintenance the constant care of the person is necessary. The special role in cities is played by green regions promoting conservation of a diversity of aboriginal species of animals and plants. Therefore the main

task of ensuring normal living of the population in urban conditions is the restoration of green areas, which clean the air basin, reduce the effect of increased urban temperatures and employees of food and shelter for animals.

In modern conditions in cities are massive replacement of native species and introduction of exotic species. As a result is used only a few species of woody plants, which leads to a dramatic reduction of biodiversity and to forming the unstable fragile natural ecosystem with few species. Directional and accidental introduction of the resettlement adventive species also violate the established functional relationships between the populations in biocenoses and sharply reduce their resistance. In the green areas of cities with adventive plant species appear their pests, often yielding dramatic flare size, distributed pathogens of animals and humans. The large cities are generally characterized by a variety of natural systems and green areas, which gives rise to a large number of ecological niches. This is created normal conditions for increasing biodiversity and the existence of the species composition of flora and fauna of cities can be quite rich. Such diversity is ensured not only by native species, but also a large number of exotic species, accidentally or purposefully brought by a man for a long history of cities as places of mass resettling of people. Therefore, introduced species, along with native species, play an important role in urban biocenoses. Status of-perennials in the city-depends on the degree of compaction and soil pollution, air quality, water availability. In the maintenance of green areas at cities the birds and insects particularly important roles are played. They regulate the number of harmful plants invertebrates, provide pollination and the resettlement of their seeds and fruits. Studying the dynamics and mechanisms of adaptation of insects to the urban conditions showed that it is necessary to take care of the maintenance of their habitat in a state close to their natural conditions. In this case the city should maintain or restore essential habitat types, to ensure their conditions for nesting. Need to restore native species of vegetation and protected natural areas still left, which can not be replaced by artificial ones, because the last usually is not giving shelter and fodder for animals. In parks and squares should stop mowing flowering wild plants, as this will remain without food and die many kinds of butterflies, bumblebees and other useful insects. Necessary to create conditions for the settlement and artificial breeding in parks cities some of the most important pollinators of flowering plants, such as representatives of the superfamily Apoidea, in particular the genera *Osmia*, *Megachile*, *Bombus*, which simultaneously increases the diversity of wild flowering plants.

Надійшла до редколегії 08.12.10