versions is considerably more. Among the basic it is possible to isolate land-reclamation channels, floodlands of rivers, and also of meadow and neglected farmsteads (here the density of population it reached yes maximum mark into 7,8±3,6 ekz./ga.)

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FEATURES OF ECOLOGY OF WETLAND BIRDS OF THE SVISLOCH RIVER IN MINSK METROPOLIS

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The paper presents data on the density of the ornithological population, species richness and dominance of some species of birds on the territory of the Svisloch river. The most preferable areas for birds are reservoirs. Less favorable habitat is the city center.

Keywords: avifauna, species richness, population density, dominance.

In connection with the active growth of the urban population of the planet, particularly acute is the issue of conservation of biological diversity in urban areas. Anthropogenic load strongly affects the state of natural habitats of birds. This is especially evident in large cities.

The research location was the river Svisloch, the length of which in the territory of Minsk and 22 km from the city centre shores of the Svisloch concreted and landscaped. The natural regime of the river is regulated by numerous reservoirs. For the convenience of research, the river was divided into 9 sections: from the reservoir Drozdy and to Chizhovsky reservoir.

When conducting research on the ornithological population of the river Svisloch were found 37 species of birds, living on an area of 651 hectares. The total density of birds is 3.16. The greatest density of the population is observed on the part of the river flowing through the territory of Gorky Park – 9 ind/ ha. The lowest density is observed in the territories of the reservoir Drozdy and Chizhovsky reservoir. – 1.74 and 1,12 ind/ ha, respectively. This is due to the fact that these sites have the largest area and birds are settled freely.

One of the main components of biodiversity is species richness [1, 2]. The most diverse species is the site corresponding to the Drozdy reservoir. On its territory were recorded 20 species of birds. The smallest species diversity was noted in the city center (from station Nemiga and to the end Gorky Park). On these sections of the river there is a strong anthropogenic load, a large number of vehicles and concreted natural shores, so the number of species inhabiting them is not large - 4 and 5, respectively.

Simpsons index calculations give an idea of the degree of dominance of certain species and community equalization. The highest index in the territory of the Chizhovsky reservoir is 6.43. The lowest index of dominance in the area from the station Nemiga to the entrance to Gorky Park–1.36. From this it can be concluded that the bird communities in these areas are not in an equilibrium state.

The Berger-Parker index expresses the relative importance of the most abundant species [3]. The highest index on the territory of the Chizhovsky reservoir (4.73), the smallest on the river section from the station Nemiga up to the entrance to Gorky Park (1.17).

Thus, the most favorable for the habitat of wetland and water birds in Minsk are the marginal areas, as they are subject to the least anthropogenic load. The central part of the city, due to the large number of land vehicles and vast recreational areas, made this part of the city the most unfavorable for the habitat of wetland birds.

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PLANT UPTAKE OF RADIOCAESIUM – POTENTIAL FOR REMEDIATE RADIOCONTAMINATED SOILS

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In this work it is studied the impact of some environmental and physiological factors, such as density of sowing, watering, CEC (Cation Exchange Capacity) and presence of AM (Arbuscular mycorrhizal) fungal hyphae, on the plant ability to uptake and accumulate radiocaesium by roots. Five plant species were used: pea, wheat, soybean, barley and oats. The obtained results show that different density of sowing and alteration of the soil moisture lead to a considerable alteration of CEC and of the level of radiopollution for all used plants. It was found that the density of sowing increases both the CEC of plant tissues (leaves and stem) and the total content of 137Cs in plants. Also, soil moisture increases the plant uptake of radiocaesium. Concerning the hyphae of AM fungus, it was found that it can absorb radiocaesium from the soil and transfer this radiopollutant to the plant with the following order of magnitude: soybean>pea>barley>wheat>oats. Moreover, it was observed that plant species can differentiate the 137Cs uptake in all experiments. This study indicates that careful selection of plant species could enhance the perspectives of plant uses to remediate radiopolluted lands.

Keywords: Cation Exchange Capacity, radiopolluted lands, fungal hyphae, plant uptake.

This work was focused on the plant CEC and on the regulation of the uptake of radiocaesium by the plants, and especially on the: effect of different density of sowing, effect of different level of soil moisture, mycorrhiza influence and uptake differences of plant species.We found that the density of sowing increases both the CEC of plant tissues (leaves and stem) and the total content of ^{137} Cs in plants. In a modelling study[1] it was found that the higher the density of roots in the soil the more ^{137}Cs was accumulated by a wide variety of grassland plants. Although the ability to accumulated radionuclides varies among a wide array of plant species occupying different habitats, many plants growing on contaminated soil have been shown to accumulate radionuclides, especially ^{137}Cs and ^{90}Sr [2-4].We also found that the plant uptake of radiocaesium can be dependent from soil moisture. This data agree with the opinion that soil properties, especially soil moisture, play an important role on the process of soil-to-plant transfer of radiocaesium [5]. Moreover, the relative migration of radiocaesium into the "root compartment" is influenced by the AM of plant species. It was found that inoculation with AM increased root biomass which resulted in greater quantities of ^{137}Cs accumulation from the soil [6]. Finally, the plant species differentiated the ^{137}Cs uptake in all cases of our experiment. It is of importance to notice that data on variation due to plant species might be integrated into mathematical models predicting the fate of radiocesium in various soil-plant systems and/or assessing the radiological risk. Moreover, a selection of plants species for the purpose of phytoremediation of soil contaminated with high levels of radiocaesium could be foreseen.