

DYNAMICS OF GAME ANIMALS POPULATIONS IN NORTHERN EUROPE
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decreased, which has had a positive impact on the dynamics of bird number. However, the poaching continues to be a destabilizing factor in the number of birds. The legal spring hunting at bird overnight places or on flight routes also negatively contributes to the bird number. The result of this is the significant daily population changes associated with the departure of some birds from the area of migration stopovers. There are also new factors of birds' disturbance, for example, quadcopters and small aircraft. All these factors prevent the growth of the bird number at the migration stopovers and lead to the destabilization of geese flocks and disintegration of the spring migration stopover in the Olonets fields.

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ANTIOXIDANT SYSTEM OF CANIDS IN DIFFERENT SEASONS

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In the European North, the influence of environmental factors, among which photoperiod and ambient temperature are the most important, results in physiological changes in the mammalian organism. At the same time, the optimal functioning of the systems supporting the body's homeostasis is due to the presence of certain biochemical mechanisms. The purpose of this work was to study the indices of the antioxidant system (the activity of superoxide dismutase and catalase, the content of reduced glutathione, vitamins A and E) in the tissues (liver, kidney, heart, lung, spleen, skeletal muscle) of blue fox (*Vulpes lagopus*), silver fox (*V. vulpes*), raccoon dog (*Nyctereutes procyonoides*) and gray wolf (*Canis lupus*) in the autumn-winter and spring seasons. In the liver and kidney of all species in the autumn-winter season the activity of antioxidant enzymes and the level of glutathione were relatively high,

whereas in spring these parameters were decreased. In spring, there was a tendency to increase the role of low-molecular weight antioxidants (glutathione, vitamins A and E) in antioxidant defense of the heart, which was most clearly manifested in foxes. In foxes and raccoon dog, an increase in the activity of antioxidant enzymes, as well as the level of vitamins in silver fox, and a decrease in the content of glutathione in the lung, spleen and skeletal muscle were found in spring that characterizes the intensification of oxidative processes in these organs. Perhaps the increase in day length and the activation of metabolic processes affect the system of antioxidant protection of the spleen, as an organ of the immune system, as well as lung and skeletal muscle, which functioning is related to the locomotor activity of animals. Thus, seasonal changes in the level of endogenous antioxidants in the animals studied were mostly similar, whereas for vitamins A and E there were some differences, probably related to the ecological characteristics of the species. Seasonal factor has a greater effect on the antioxidants in the spleen and skeletal muscle. The research was carried out under state order (projects number 0221–2017–0052 and 0221–2017–0046) using the equipment of the Core Facility of the Karelian Research Centre of the Russian Academy of Sciences.

FATTENING FOODS OF THE BROWN BEAR AND ITS DIET IN THE EUROPEAN TAIGA

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The materials of phenological observations (Nature Chronicles of strict nature reserves) in taiga subzones of North European Russia related to the biology and ecology of the brown bear (*Ursus arctos*) are analyzed. The characteristics of fruiting in berry sites (timing, periodicity, yield), as well as indirect evidence of the completion dates of the fattening period (last dates of bear track sightings in autumn, dates of steady