

## THE BIOLOGICAL EFFECTS CONNECTED TO ACCUMULATION POLLUTION AND ESSENTIAL OF ELEMENTS IN WATER-MARSH ECOSYSTEMS

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**Key words:** *water, lead shot, ecosystems, the coefficient of biological absorption, waterfowl, pollutants, essential elements, heavy metals, water, bottom sediments.*

Studied ecological and physiological effects of pollution natural water biotopes heavy metals. The special attention is given to the reasons and consequences of accumulation of lead and cadmium by different kinds of ducks. The contents in their body of heavy metals and microcells analyzed separately in different bodies and fabrics a method of nuclear absorption. Pollution of reservoirs by lead is promoted by fraction, the gun went off during realization of hunting for natatorium game. The probability of accumulation of the fraction accessible for swallow grows at be overgrown reservoirs. The groupings of the ducks which have adapted for wintering in anthropogenous landscapes, are exposed to intensive influence poisons which grows according to increase industrial pollution of water objects. With other things being equal different bodies and fabrics absorb not identical quantity of chemical elements. Feathers, similarly to internal bodies, quickly accumulate the lead which has appeared in a stomach. The significant amount of lead (up to 50 % and more) collects in fatty выделениях, used by ducks for greasing feathers. By results of the analysis of roentgenograms of stomachs of ducks which orally entered fraction it is established, that they quickly can be released from it in process excretion. But the fraction detaining in a stomach, with growing speed is spent, being accumulated by different bodies and fabrics. Probably, the lethal doze of accumulation lead in muscular fabrics is at a level close to 1g/kg of their dry weight.

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## THE DISTURBANCE FACTOR OF WILD ANIMALS IN FOREST LANDSCAPES OF MOSCOW REGION

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**Key words:** *occurrence of people, route accounting, Moscow region, a factor of concern.*

Human occurrence was studied by means of visual registrations in Moscow region on the counting transects during 1982-2008; types of the human's outdoor activity and width of men's movements within the area were estimated on a basis of the outward appearance of men, their behavior and short talks. Minimal level of occurrence was peculiar for winter (December-March): 0.5-0.8 men/10 km on weekdays and 1.5-2.6 men/10 km on weekends. It reached the highest values in summer (July-November): 5.9-7.1 men/10 km on weekdays and 8.8-10.7 men/10 km on weekends. The significant differences between weekdays and weekends were recorded only for winter and demiseasons. During daily hours of August, human occurrence increased from 4 to 7-10 hours and then decreased to the evening. Influence of the distances from settlements on men' occurrence seems as vague, depend upon the scale of investigation perhaps, and demands of special research. Recreation and gathering of berries and mushrooms are considered to be the main cause of disturbance for wild animals; only 11% of humans were involved in agriculture or other kind of production. Recorded types of men's outdoor activity suggest the wide movements of people (70% of men counted) within the natural areas. Almost each twentieth person was recorded with the dog (*Canis familiaris*), 43% of them were animals of hunting kinds. Occurrence of dogs was

estimated as 1.2-3.2 ind./100 km during most part of year but reached up to 5.1-5.5 ind./100 km in November and December. 17% of dogs were recorded without men; majority of them was typically vagabond individuals. They partly replace the wolf (*C. lupus*) in Moscow region perhaps.

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## **RANGE FRAGMENTATION OF THE EURASIAN MOOSE DURING THE DEPRESSION OF ITS NUMBERS**

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**Key words:** *Eurasian elk, habitat fragmentation, depression, systematic, subspecies, Holocene, Pleistocene.*

Published data were used for the analyses of change of moose range during Holocene and Pleistocene. Boundaries of its natural habitats and duration of isolation of different fragments of moose range varied. There are some evidences about the population depression of moose in most parts of the isolated locations in the past. Such complicated history determined the formation of its intraspecific structure. It is suggested to revise genetic structure of moose on the base of ascertained historic fragmentation of its range.

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## **DOMESTICATION AND HOMOLOGOUS SERIES IN GENETIC VARIATION OF CERVIDAE MORPHOGENETIC FEATURES**

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**Key words:** *genetics, domestication, breeding, anomalies, biodiversity, species.*

Generalized are data of home and foreign authors, under review come general mechanisms of variation of behavioral, morphological and genetic features of some Cervidae wild representatives during their keeping and breeding in a made habitat. Discussed are possible reasons: domestication and destabilizing selection, inbreeding depression, negative selection.

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## **MANAGEMENT OF RESOURCES OF GAME ANIMALS: PRINCIPLES AND METHODS**

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**Key words:** *ungulates, population, resource management, harvesting, production of fingerlings, management models.*

Discussion on principles, methods and models of control of populations of wild hoofed animals.

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## **BADGER (*MELES MELES*) IN THE CONDITIONS OF CENTRAL RUSSIAN FOREST-STEPPE**

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**Key words:** *badger, morphological features, the group feeds, daily activity, the settlement.*

Considered are badger morphological and feeding habits in the Voronezh region.

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## **RED FOX (*VULPES VULPES*) IN THE USMANSKY BOR STATE WILDLIFE RESERVE**

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**Key words:** *fox, food, wild ungulates, excrement, brood burrows, reserve.*

Under review come feeding habits and habitat expansion of the red fox in the Voronezh region.