

relationship. In the water voles, a semi-aquatic species, the average area of erythrocytes is higher ($33.09 \pm 0.09 \mu\text{m}^2$) than that of the related bank voles ($24.23 \pm 0.16 \mu\text{m}^2$). The area of erythrocytes of terrestrial rodents varied in the range from $31.16 \pm 0.09 \mu\text{m}^2$ to $34.95 \pm 0.08 \mu\text{m}^2$ and decreased in the sequence *C. lanigera* – *R. norvegicus* – *S. Vulgaris* – *M. Musculus* – *M. glareolus*. For all studied species, significant sex differences in the diameter and surface area of erythrocytes have been revealed.

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MORPHOFUNCTIONAL ORGANIZATION OF BLOOD CELLS AT SOME REPRESENTATIVES OF THE FAMILY CERVIDAE IN NORTH EUROPE

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At present, the relationship between physiological-biochemical and hematological parameters with the dynamics of population density is widely discussed (Davis et al., 2008; Scanes, 2016). An important part of hematological studies is the study of the count, morphological features and morphometric parameters of blood cells. These methods are extremely informative in assessing the physiological status of mammals and allow us to evaluate about the degree of influence of various factors, including unfavorable ones. The aim of the study was to study the morphofunctional organization of blood cells of wild game animals by the example of representatives of the family Cervidae.

The subjects of the study were adult individuals of moose (*Alces alces*) and forest reindeer (*Rangifer tarandus fennicus*), which inhabited in nature in the Republic of Karelia. Based on previous studies, it is known that in moose, the ratio of lymphocytes and

neutrophils – the two dominant types of leukocytes is approximately equivalent (Rostal et al., 2012). Our studies demonstrated a lymphocyte blood profile; the lymphocyte count in some individuals amount to 85 %, an average of 54.50 ± 17.03 %. In reindeer, the number of lymphocytes in the blood is twice that of neutrophils. Differences in the data obtained by us with the previously described can be explained by the features of the hematological parameters of the subspecies studied or by the influence of habitat conditions. A characteristic feature for both species is a high number of eosinophils, which obviously indicates the development of parasitic invasion and disruption of the organism homeostasis. Moose and reindeer had similar morphology of blood cells: lymphocytes in both species are represented by small, medium, rarely large forms; segmented neutrophils have polysegmented nuclei and low noticeable granulation, and eosinophils contain abundant small granules. As a result of the morphometric analysis, it was established that the average diameter of the moose erythrocytes, the largest representative of the Cervidae family, is 6.34 ± 0.01 μm , while in the reindeer it is 5.92 ± 0.01 μm . Using the example of a large number of species, it has been shown that the size of red blood cells positively correlates with the weight of animals (Kostelecka-Myrcha, 2002).

Characterization of the morphofunctional organization of blood cells of wild game mammals can be used to assess the adaptive capacity, viability and distribution of both the species and the population.

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