



have been published elsewhere (Zimin et al., 2007). This paper summarises the results of years of observations over ducks and waders during spring migration across Olonets grasslands. There gather birds that breed in the forest and tundra zones of Russia and winter mostly in Europe and Africa. So far, 7 species of poodle ducks, 8 diving ducks, 3 merganser species and 26 wader species have been recorded from the area between mid-April and late May. The dates of earliest and latest sightings (for passage migrants) of the species in the study area, abundances and their among-year variations, the species' wintering areas have been determined.



PRE-WINTER DIET COMPOSITION OF ESTONIAN RED DEER

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The present study was carried out on three different red deer (*Cervus elaphus* L.) populations in Estonia, located on the islands of Saaremaa and Hiiumaa and in Southern Estonia. The diet composition of red deer was studied from September to January using the rumen content analysis of 86 animals, which were culled during the period of 2004-2009. Grasses formed the main component of red deer diet throughout the period, 70% of volume on the average. The trophic diversity was the highest in September and November, when red deer consumed more shoots from deciduous trees, fruits, lichen, crops and shrubs. Conifers are less frequently used as a food source than deciduous trees. The biggest share of conifers (mainly *Juniperus communis*) was found in the rumens of deer, culled in the island of Saaremaa. Our results show, that red deer browsing does not have a significant economical effect on



forestry, because the main species in red deer diet are not economically significant. However, it can become a problem in the future if the number of red deer increases significantly.



RESEARCH ON BROWN BEAR *URSUS ARCTOS* L. ALONG THE GREEN BELT OF FENNOSCANDIA

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Brown bear is a widespread species in forests of European Russia. Latest investigations using non-invasive techniques for sampling of biological material for genetic analysis showed the populations of this large predator are not isolated. Bears from Russia were found to wander to the neighbouring Norway and Finland. Although such crossings are not so massive, they do testify to contacts between micropopulations over extensive spaces. Gene drift is continuous, perhaps involving also groups further away. It promotes heterosis and stability of populations. At the same time, expansion of brown bear northwards, to the tundra zone, was detected through visual observations. Presumably, change climate is shifting the northern limit of forest, and the bear's pre-historic range is therefore being reinstalled. More intensive studies of the species on the South-North gradient along the Green Belt of Fennoscandia are needed. It would be expedient to organize a special laboratory to gather and process materials from different populations of bear and other large predators of Northwest Russia and to create the database of genotypes. Petrozavodsk (Karelian Research Centre) appears most suitable for this purpose, because specialists and other prerequisites for this important work are available there.

