



type as an entity of one forest type with the same species composition, population density and habitat conditions of game animals, exploited with equal intensity, requiring and suitable for the same management activities. By management activities we mean the set of activities planned and implemented in the hunting estate.

The regional scheme of hunting land types should be worked out with regard to the whole set of conditions and distinctions of each specific region of Russia; for forest hunting land – with regard to the regional scheme of forest types produced within forest management inventories. Working out of the regional scheme of hunting land types is a precondition for wise, science-based management of game resources in the region, as it promotes understanding of the complex relationships between game populations and plant communities. Development of regional schemes of hunting land types would also help generate integrated methodological basis for the inventory of hunting lands, identify patterns in the dynamics of hunting land types, and promote the quality of hunting management planning in general.



EUROPEAN AND AMERICAN MINK (*MUSTELA LUTREOLA* AND *M. VISON*), AND OTTER (*LUTRA LUTRA*) IN DARWIN BIOSPHERE RESERVE AND EASTERN PART OF VOLOGDA REGION

Yu.A. Shemyakina

Cherepovets State University, Cherepovets, Russia

The studies were conducted in Darwin reserve and in the eastern part of Vologda Region in 2007-2010. More than 160 km of the river network were surveyed twice a year, with the abundance estimated by the tracks/10 km method. Simultaneously, faeces were collected (ca. 360 samples). In the reserve, minks tend to settle at small rivers and



streams. At large rivers, they mainly stick close to the river mouth. Relative abundance of minks in the Central forestry district in 2009 was quite high – 5 tracks/10 km, in 2010 – 8.4 tracks/10 km, with the animals actively colonizing Rybinskoye reservoir shore. The rise in track-leaving activity is presumably due to immigration of American Mink from adjacent territories. The status of this species in the reserve is not clear yet because of the protection regime. Otter lives on larger waterbodies. The investigated species are more abundant in the eastern part of Vologda Region. Thus, 202 otters and 742 minks were registered there in 2008. According to the surveys, otter and minks (American mink dominating) are close neighbours on most waterbodies.



INTRODUCING TOOLS IN GOOSE MONITORING IN SPRING STOPOVERS

S.A. Simonov, M.V. Matantseva

Institute of Biology, Karelian Research Centre of RAS, Petrozavodsk, Russia

Research into the behaviour of game birds congesting in great numbers in spring stopovers is of high practical interest. It is mostly done through optics-aided visual registration of birds, which are normally distanced from the observer. Communicative signals are also recorded from a distance using gun microphones and parabolic dish microphones. In most cases, presence of the observer within the objects' field of vision modifies the birds' natural behaviour. To avoid the observer impact effect, we have designed a remotely controlled system to deliver equipment to the group of birds in the field. The base of the system is radio-controlled cross-country chassis. A solid model of a sitting bird (a Bewick swan model was used in the first experiment in May 2010) covers the chassis on the top. A platform fitted with a photo and a video camera and a digital voice recorder was placed