## PROCESSING OF WINTER TRACK COUNT DATA AT THE REGIONAL LEVEL, AND ITS DISTINCTIONS IN 2010

**L.V. Blyudnik**
*Institute of Biology, Karelian Research Centre of RAS, Petrozavodsk ,Russia*,

*E-mail:* leo.bljudnik@onego.ru

Winter track counts (WTC) is one of the principal methods for estimating the resources of game mammals and sedentary game birds. Owing to years of experience of WTC implementation and primary material processing in Republic of Karelia we managed to evaluate the confidence level and quality of the work.

The paper considers the new "Manual on organization, implementation and processing of the data of winter track counts of game in Russia" (2009) prepared by the State Information Analysis and Control Centre for Game and Their Environment (Tsentrokhotkontrol'). Positive, arguable, and erroneous provisions of the "Manual" are analysed relying on examples from WTC practices in Karelia in 2010.

## ESTIMATING MORTALITY IN WILLOW PTARMIGAN (*LAGOPUS LAGOPUS*) USING THE RESULTS OF COUNTS OF LIVE BIRDS AND DEAD BIRD REMAINS IN SOBTYENAN RIVER WATERSHED (WESTERN SIBERIA)

**V.G. Borshchevskiy**

*Moscow, Russia. E-mail: megra@mail.ru*

The transect count of Willow Ptarmigan, its snow burrows and dead bird remains was carried out in northern taiga of Yamalo-Nenetsky

Autonomous District (right-side bank of the Ob' River) in May-June 2000. The combined length of the transects was 300 km; 86 live birds and 29 remains were accepted for further computations; 158 km and 85 burrows were used in estimations of the ptarmigan winter abundance (spring count of snow burrows).

The results show the bird population density tripled between mid-winter (~January) and June: from 2.8 to 8.4 birds/km$^2$, which contradicts current ideas about the timing of Willow Ptarmigan breeding and migrations in the region. Additional analysis of materials on dead bird remains enables adequate interpretation of survey data. It is most likely the density of native ptarmigans late in the autumn of 1999 was low – ~ 1.5 birds/km$^2$. Starting in November, their abundance gradually decreased to go presumably beyond 0.5 birds/km$^2$ by late February, 2000. This reduction was fully due to predator impact, which is estimated at similar levels for different groups of carnivores: 53% of the dead ptarmigans assumed to have been killed by predaceous mammals, and 47% – by raptors. In January-March (mainly in March) many migrating ptarmigans appear in the territory, and the number of raptors following them probably also grows. No further movements of the ptarmigans have been detected. All or nearly all immigrant ptarmigans stayed in the study area. Together with native birds they were recorded in the area in May-June: both as live birds (8.4 birds/km$^2$), and as remains formed from March to June (8.7 pcs/km$^2$). The main cause of ptarmigan mortality in March-June (70% of the remains counted) was killing by raptors.