mechanism that enables the male to mate repeatedly is not totally clear yet, but it is becoming obvious that the female who has come into estrus turns on this reproductive mechanism every time.

GENETIC DATA FOR 13 STR LOCI IN NORTHERN EUROPEAN BROWN BEAR (*URSUS ARCTOS*) AND APPLICATION OF DNA PROFILES FOR CONSERVATION GENETICS

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The use of non-invasive sampling of hairs and scats in wildlife genetics opens the possibility for sampling and analyzing living populations of brown bears (*Ursus arctos*). The aims of this study have been to develop a quality assured approach for genetic assignment of individual identity of brown bears and to generate a population database that can be used for research, conservation management and forensics. Non-invasive genetic sampling was performed by collection of scats and hairs in the field during the time period from 2004 to 2008. Hair traps were applied to collect hairs from bears in selected geographical areas in 2007 and 2008. Genotypes from 13 STR loci were determined for 232 Norwegian bears. Initial analysis of the entire sample indicated a high level of substructure, and the sample was divided in four geographically different populations consisting of 206

individuals for further validation of the markers. Ten STRs (G1D, G10L, Mu05, Mu09, Mu10, Mu15, Mu23, Mu50, Mu51 and Mu59) conformed to Hardy-Weinberg equilibrium expectations with only minor deviations, while the remaining three STR loci (G1A, Mu26 and G10B) were subjected to further molecular analysis. The average estimate of population substructure for Norwegian bears using 10 STRs (F_{ST}) was determined to be 0.1, while the estimate for inbreeding (F_{IS}) was -0.02. Accounting for the F_{ST}-value, the average probability of identity (PI_{ave}) was 5.67 x 10^{-10} and the average probability of sibling identity (PI_{sib}) was 1.68 x 10^{-4}. Accreditation in accordance with the international standard ISO17025 was achieved for the described laboratory approach in 2009. We suggest that this approach and STR markers should also be considered to be used for other populations of brown bears in Northern Europe in order to ensure a common quality of the data as well as to facilitate exchange of information in conservation genetics.

SOME RESULTS OF THE EXPERIMENTS TO PREVENT THE DAMAGES CAUSED BY BEAVERS, HARES, RABBITS OR VOLES

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The experiment areas were in Satakunta in Western Finland on the European beaver distribution and in Kymenlaakso in Eastern Finland on Canadian beaver distribution. Some experiments were done in the few farm yards and in the apple gardens to test the impact of the glue on hares.

In the experiment areas the base part of the trees were handled with the test glues over the level of expected snow cover. Some trees, which