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**Predator-prey interactions**

**Wolf predation on moose in Scandinavia – implications for hunting harvest**

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Wolf effects on prey populations are mainly confined to the areas of territorial packs and pairs. One way of estimating the effect of wolf predation on the local moose population is to apply data on wolf kill rates, territory size, and moose density. We analyzed how different factors related to wolves and moose affected the variation in the predation rate (percentage of the moose population killed by wolves) among 19 wolf territories, and how this was related to the size of moose harvest rate at the territory level. Wolf predation rate on moose was not related to moose density, pack size or pack kill rate. Predation rate was most strongly related to the combined effect of territory size and moose density, which together make up the abundance of moose in the wolf territory. Predation rate constituted an average of 7 – 8% of the early summer moose population, ranging from 2 – 12% among wolf territories. Harvest rate was estimated to an average of 15 – 19%. Over an entire year, harvest rate was on average 2.4 – 3.5 times higher than wolf predation rate. Harvest rate was not related to the number of moose in the wolf territory nor to wolf predation rate, indicating that the effects of wolves and hunting were not compensatory. A comparison of the predation rate from wolves and bears on moose in Alaska with the mortality from harvest, wolves, and bears in Scandinavia suggests that moose populations in Scandinavia has lower annual mortality rate.