

Potential impact of motorway and express roads upon migratory trails of wolves in Poland

Bogusław Bobek and Marta Wojciuch-Płoskonka

Department of Ecology, Wildlife Research and Ecotourism, Pedagogical University,
Podbrzezie 3, 30 – 054 Kraków, Poland
E- mail: b.bobek@o2.pl

According to official records published by statistical yearbook, population size of wolves in Poland amounted to 702 individuals in 2008. Data on wolf distribution show there are 3 major core areas of the species occurrence. Most numerous ($n = 300$ animals) is wolf population inhabiting Polish part of Carpathian Mnts (A). The second core area is north – eastern part of Poland where about 200 wolves are present (B). The third core area is central – eastern Poland that is inhabited by about 150 animals (C). The remaining wolves are mainly dispersing animals colonizing new ranges mostly in western Poland (D).

Records on wolf distribution and their migratory patterns were obtained using reports on wolves occurrence in hunting districts and National Parks. There are 4 major wolf migratory trails. Population A is dispersing from east to west along south – western part of the country (Trail I) and from east to north along Polish – Ukraine border (Trail II). Individuals from population B are migrating from east to west using northern part of Poland (Trail III) and from east to south along Polish Byelorussian border (Trail IV). Migrating animals using trail I and III have establish small wolf population in western Poland that extended its range to Germany. Dispersing animals using trail II and IV mixed with wolf population C. Cranial measurements of wolves showed that populations C and D are results of hybridization of A and B population.

In Poland, up to year of 2000 there was only one, 75 km motorway. Now under construction there are 3 motorways which total length will be about 2 000 km and several express roads. According to the governmental plan 7 300 km of motorway and express road will be build during this decade. Motorway A-1 (from Gdańsk to Polish Czech border) is constructed accross I and III wolves migratory trails. It probably stop wolf dispersal pattern from east to west. Motorway A – 4 (from Polish – German to Polish Ukraine borders) and A – 2 (from Polish – German to Polish – Belorussian borders) will cut II and IV wolf migratory trail. Heavy traffic of express roads will result in mortality of dispersing wolves.

At this moment it is difficult to predict scale of negative impact of wolf habitat fragmentation in Poland due to new road transportation system. However that is high probability that range distribution of wolves will decrease, mainly in western part of the country.