Weight Changes in Wild Wolves, *Canis lupus*, from Ages 2 to 24 Months

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Weights of 118 female and 141 male Minnesota Wolves (*Canis lupus*) aged 2-24 months increased almost linearly from about 8 kg for females and 10 kg for males at 3 months to 30 kg for females and 32 kg for males at 10-12 months and then tended to increase much more slowly in an overall curvilinear trend. Considerable variation was apparent for both sexes during their first year.

Key Words: Wolves, *Canis lupus*, weights, growth, development, Minnesota.

Weight changes in free-ranging Wolves (*Canis lupus*) from 3 to 7 months of age have been documented (Van Ballenberge and Mech 1975), as well as annual changes from 1 to 12 years (Mech 2006). However, weight changes between 7 months and 24 months have not yet been described for wild or captive Wolves. Thus information about the growth and development of wild Wolves remains incomplete. Herein I present information that helps fill that gap.

The study area encompassed some 2060 km² immediately east of Ely in the east-central Superior National Forest (48°N, 92°W) of northeastern Minnesota. Wintertime temperatures below -35°C are not unusual, and snow depths (usually from about mid-November through mid-April) generally ranged from 50 to 75 cm. Temperatures in summer rarely exceeded 35°C. Conifers predominate in the forest overstory interspersed with large stands of Paper Birch (*Betula papyrifera*) and Trembling Aspen (*Populus tremuloides*). Detailed descriptions of the forest vegetation were presented by Ohmann and Ream (1969).

Wolves in the study area feed primarily on Whitetailed Deer (*Odocoileus virginianus*), Moose (*Alces alces*), and Beavers (*Castor canadensis*; Frenzel 1974). The Wolves have been legally protected since 1974, although some have been killed accidentally or illegally by humans (Mech 1977). The Wolf population in the study area has remained relatively stable since about 1975, after dropping following a major deer decline (Mech 2000:23). The study population has long been saturated and in the late 1970s, canine parvovirus infected the population, resulting in a strong decrease in young pup survival ever since (Mech et al. 2008).

The taxonomic identity of the Wolves in this study is uncertain. Nowak (1995) considered them *Canis lupus nubilus* based on skull morphology. However, the population includes animals with the same mitochondrial DNA haplotypes as some Wolves in Alaska and western Canada, as well as animals with Coyote (*Canis latrans*)-like haplotypes also found in eastern Ontario (Lehman et al. 1991). Nevertheless no morphological differences between Wolves of these two...
from 3 to 7 months. However, growth from 4 (65) Finnish captives began leveling off at 3 months (female) and 11.5 months (male) rather than at 12 months for both sexes of Minnesota captive wolves. It is not clear whether the difference in age of leveling off is due to different races or better nutrition of captive wolves.

This study helps complete gaps in data about the weight changes of wild wolves of different ages. In general, the pattern of weight gain in the first two years of age followed a curvilinear relationship. However, more data are still needed on wolves 5-12 years old.

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Literature Cited


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This study helps complete general information about the weight changes of wild Wolves from about 3 months of age to 12 years of age (Mech 2006). Overall, the pattern of weight gain in wolves within the first two years of age followed a curvilinear relationship. However, more data are still needed for both male and female Wolves 5-12 years old.

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