

LONGEVITY IN WILD WOLVES

L. DAVID MECH

U.S. Fish & Wildlife Service, Patuxent Wildlife Research Center Laurel, MD 20708
Mailing address: North Central Forest Experiment Station, 1992 Folwell Ave.,
St. Paul, MN 55108

No definitive information is available about longevity in wild wolves (*Canis lupus*). Goodwin and Ballard (1985) estimated some individual Alaskan wolves to be as old as 10 years. Young (1944:179) summarized available information on longevity in captive wolves as follows: 30 wolves had an average longevity of 9+ years; one female lived 13.5 years; a wolf of unknown sex lived to be 14 years; one male lived 16.3 years; and a male and female lived 16 years. In addition, Goodwin and Ballard (1985) mentioned two 13-year-old captive wolves, and a captive female wolf I kept lived to be 13 years old.

My records from wild wolves in northeastern Minnesota (Table 1) are based on animals live trapped (Mech, 1974) as pups, aged by canine-tooth replacement (VanBallenberghe and Mech, 1975), and followed for known periods by radiotracking. They suggest that in Minnesota wild wolves may reach at least 13 years of age. This conclusion accords with records from captive animals, because better fed and protected individuals would be expected to live a few years longer.

It is noteworthy that wolf 5176 apparently produced pups even when 10 years old. Wolf 5429 bore pups when at least 8 years old and had corpora lutea when at least 9 years old. Wolf 2407 was last known to have produced pups when at least 7 years old (and probably 8); from at least 8 years old (and probably 9) through at least 12.7 years (and probably 13.7 years) she did not produce pups that survived into summer. However, she traveled with at least two different males during her nonproductive years. Male 5132 apparently sired pups when at least 10.8 years old.

From these data and those from captive wolves, it appears that reproductive age in wild wolves probably extends to about 11 years.

The records listed herein are from 165 wolves captured from 1968 through 1977 and radiotracked during that period and afterwards. Most (101) of those animals were lost to the study when their signals disappeared;

TABLE 1.—*Longevity records for wild wolves in northeastern Minnesota.*

Wolf no.	Sex	Year born	Last known alive	Known minimum age ¹	Fate
2407	F	≤1970 ²	3 Jan 1983 ³	12.7	unknown
5132	M	≤1973 ⁴	11 Dec 1984 ⁵	11.6	unknown
5176	F	1974	2 Nov 1985	11.5	killed by wolves
5429	F	≤1974	21 Apr 1983	9.0	starved, possibly human-caused
5448	M	1976	21 Nov 1985	9.5	killed by humans
5962	M	1970	2 Jun 1980 ⁵	10.1	unknown

¹ In years. Underlined ages are known.

² Probably born in 1969 or earlier because she was not a pup, and her nipples were apparent and pigmented when captured on 10 October 1971.

³ Date radio signal last heard.

⁴ Probably born in 1972 or earlier because he weighed 33 kg and had testes 2.4 cm by 1.3 cm when captured on 14 August 1974.

⁵ Animal identified visually in the field.

the remaining 39% died or were killed before 9 years of age. No precise conclusions regarding the percentage of wolves living at least 9 years can be reached from these data because of the large sample of animals whose signals disappeared.

This study was funded by the U.S. Fish and Wildlife Service and the U.S. Dept. Agric. North Central Forest Experiment Station. I thank J. J. Renneberg and M. E. Nelson for assistance with the field work and L. L. Rogers and V. VanBallenberghe for the original capture of one of the wolves.

LITERATURE CITED

- GOODWIN, E. A., AND W. B. BALLARD. 1985. Use of tooth cementum for age determination of gray wolves. *J. Wildl. Mgmt.*, 49:313-316.
- MECH, L. D. 1974. Current techniques in the study of elusive wilderness carnivores. *Proc. Internat. Congr. Game Biol.*, 11:315-322.
- VANBALLENBERGHE, V., AND L. D. MECH. 1975. Weights, growth, and survival of timber wolf pups in Minnesota. *J. Mamm.*, 56:44-63.
- YOUNG, S. P. 1944. *The wolves of North America.* (Part I). Dover Publ., New York, 385 pp.

Submitted 1 October 1986. Accepted 29 January 1987.