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## RECORD DISPERSAL BY A WOLF FROM MINNESOTA

The first long-distance dispersal of a wolf (*Canis lupus*) reported from Minnesota was 196 km (Mech and Frenzel, 1971); dispersals as far as 390 km (Fritts and Mech, 1981) and 432 km (Berg and Kuehn, 1982) were reported subsequently. Elsewhere, these moves are exceeded by one of 670 km in Canada (Van Camp and Gluckie, 1979). The 886-km dispersal from Minnesota reported herein is a new record for wolves anywhere and is apparently one of the longest documented for a terrestrial mammal.

On 17 July 1980, a 29.0-kg male wolf was captured 25 km S, 33 km E of International Falls, Minnesota, eartagged, and radio-collared. Light toothwear indicated the wolf was a yearling or young adult. He was located via aerial telemetry 17 times, from 25 July to 29 December 1980, and was determined to be a member of a territorial pack of at least four adults plus pups. Radio contact with the wolf and his pack was lost between 29 December 1980 and 5 January 1981 when his collar was chewed off. On 23 October 1981, the wolf was shot approximately 35 km E of the town of Carrot River (10 km S, 61 km E of Nipawin), Saskatchewan, Canada. He was alone when killed. Frequent sightings of one or more wolves in the immediate area had been reported in recent months, and a non-tagged male wolf was shot within 2 km of the death site four days later.

The straight-line distance from the last known location in Minnesota to the point of death is 886 km (Fig. 1). The minimum dispersal rate for the wolf was 3.0 km/day. The most direct of possible dispersal paths corresponds roughly to the southwestern edge of forest cover and the northeastern edge of primarily non-forested agricultural areas in Manitoba and Saskatchewan [Fig. 1, boundary primarily according to Rowe (1972), but modified using more recent land use maps]. A path farther to the southwest would have taken the wolf over much open terrain with extensive road networks, increasing greatly his chance of being killed by humans. One more to the northeast would have allowed movement primarily in forest cover with less chance of human-related mortality, but somewhat greater chance of being killed by resident wolves. The actual course taken probably represented a compromise between ease of travel and efforts to avoid both areas of human activity and high wolf density. Another wolf dispersing northwestwardly from Minnesota was killed along the same forest edge line after traveling 432 km (Berg and Kuehn, 1982).

The wolf originated within the recognized distribution of *C. l. lycaon* and traveled at least 886 km to the range of *C. l. griseoalbus* (Hall, 1981), a move that demonstrates the potential for gene flow between populations, and reaffirms the problems in describing subspecies of wolves (Nowak, in press). Movements of this magnitude from the Minnesota population apparently are uncommon, however, for of approximately 610 tagged and released Minnesotan wolves (Mech and Frenzel, 1971; Van Ballenberghe et al., 1975; Mech, 1980; Fritts and Mech, 1981; Berg and Kuehn, 1982), this is the only report beyond 432 km.

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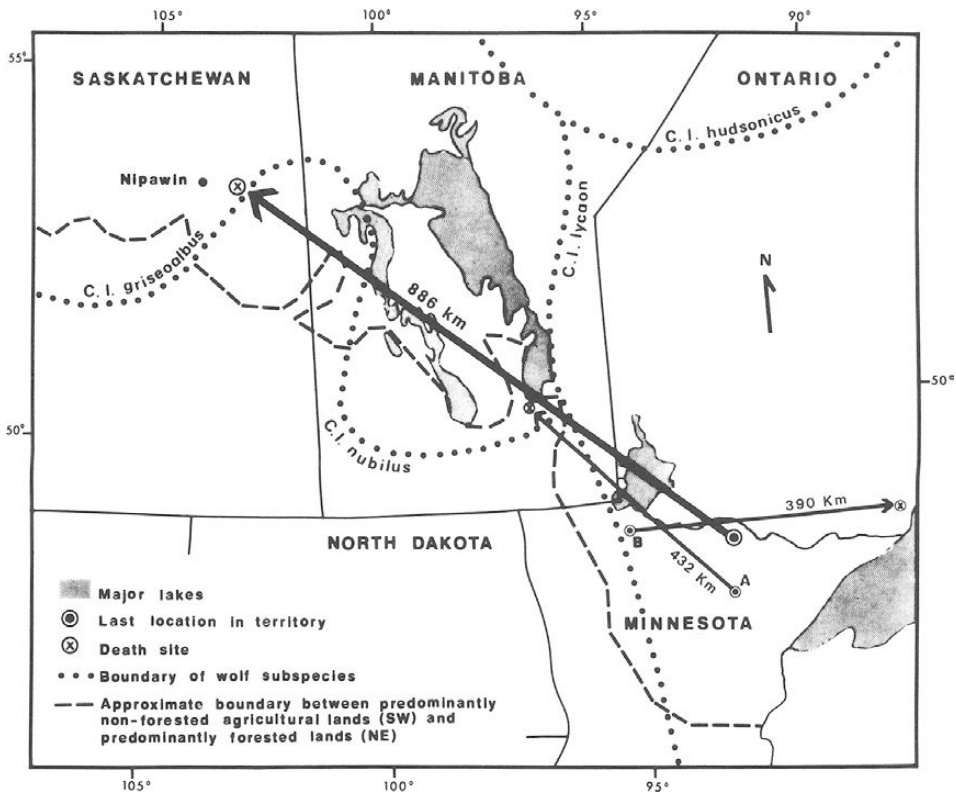


FIG. 1.—Dispersal by a wolf from Minnesota to Saskatchewan. Shortest distance of 886 km between last known location in territory and death site is indicated by heavy solid line. The two longest dispersals from Minnesota prior to this record are included for perspective: A = 432 km (Berg and Kuehn, 1982); B = 390 km (Fritts and Mech, 1981).

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