

Status of the Timber Wolf - 1985-86

by Richard Thiel

SUMMARY

For the first time, documented evidence of wolf dispersal into the upper peninsula of Michigan was observed when a female wolf moved 142 miles from the Douglas County Study Area to northern Michigan.

A total of 9 wolves, 3 males and 6 females, were captured and collared during various trapping activities conducted in October, 1985 and in May, July, and August, 1986.

The statewide estimate during midwinter, 1985-86, was 16 wolves. Four packs were present, 2 of which produced pups that survived through winter. Based on replies to howls at homesites, 4 pups were present through summer and into fall in the North Central Study Area.

Disease study focused on Canine Parvovirus (CPV) work. Blood serum of 28 wolves captured in Wisconsin since 1981 have been tested for CPV and 71 % tested positive.

In December 1986, two wolves were found dead. One male who died of Canine Distemper, and one female who died of CPV. Both of these wolves were members of the Moose Lake Pack.

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**STATUS OF THE TIMBER WOLF IN WISCONSIN
PERFORMANCE REPORT**

October 1, 1985 to September 30, 1986

CONTENTS

Job 101.1 Monitor wolf activity via telemetry and ground work in northwest and north-central Wisconsin.

Job 101.2 Determine suitable wolf habitat in northern Wisconsin.

Job 101.3 Monitor wolf activity in the Wisconsin- Upper Michigan border area.

JOB 101.1: WOLF ACTIVITY IN WISCONSIN

OBJECTIVE:

Monitor wolf activity in areas with established packs to determine breeding status, numerical and distributional changes.

Live Trapping: Trapping activities were conducted in October, 1985 and in May, July and August 1986. The wolves and coyotes captured are listed in Table 1. Two sibling wolves (081F; 063M) from the 1985 Moose Lake pack (MLP) litter were captured and radioed in the Douglas County Study Area (DCSA). The alpha female (085F) of Lincoln County's Averill Creek pack (ACP) was captured and collared in May, 1986. After monitoring her movements to ascertain the location of ACP summer homesites, a male pup (069M) and yearling female (071F) were captured and collared. The pup's collar slipped about two weeks later.

Douglas County Study Area

Two breeding packs and a pair of wolves whose reproductive status was not determined were present during the period. In addition to these groups, two lone radioed females were monitored in DCSA for a portion of this reporting period.

Moose Lake Pack: Movements of yearling wolf, 039F, were monitored within MLP throughout fall and between 13 and 16 December she died (See Mortality). Track observations of pups in September were confirmed with the capture of wolf 081F in October. On 17 December a sick wolf was encountered and the next day the wolf, the aged alpha male, was found dead (See Mortality). Aerial observations of 081F during winter 1985-86 indicated that one other pup and an adult (presumably the alpha female) were present. In May 081F's sibling, 063M, was captured. Infrequent summer (1986) observations indicated that three wolves, including 081F and 063M, were present in MLP. The loss of the alpha male prior to the breeding season apparently prevented the alpha female from breeding. Pups were probably not produced in MLP in 1986 - the first time since telemetry monitoring (1980) began.

Tripod II pack (TP II). Radioed alpha female 059 was monitored throughout the period. During winter she was accompanied by a larger, darker wolf. By 21 April her movements were confined to a small area, indicating she had denned. Although the site was not determined, it was in the vicinity of a 1981 densite of the former State-line Flowage pack. In late May she began moving and

by June her movements were quite extensive, suggesting that she lost her litter (if one was produced). In August she left Tripod II territory and occupied an area immediately to the south where she remained til the end of the study period.

Lone wolves. Movements of radioed yearling female 061F were monitored until she disappeared in April 1986. Early in the period she occupied a 47 square mile home range on the northwest corner of TP II territory. During this time she was seen twice with another wolf. In December she gradually dispersed to the south but returned to the area she occupied by early April when her signal was lost.

Movements of radioed female 035, captured as a yearling in MLP in May 1984, were monitored throughout the period. She occupied areas to the north and east of TP II, but in April she dispersed east. By 21 May she had entered the upper peninsula of Michigan, temporarily settling into an area south of the Porcupine Mountains. In mid June she dispersed further east into northeastern Gogebic County and the northwest corner of Iron County, Michigan within the Ottawa National Forest. There she established a 171.25 square mile activity area, utilizing a 67.0 square mile core area most frequently. Here she remained until at least 1 October, 1986 when her transmitter expired.

Wolf 035F's radio transmitted for 871 days. In that time she dispersed west into Minnesota, then east into Wisconsin where, during summer 1985, she established an activity area near

the tip of Bayfield peninsula. She traveled a minimum of 241.5 miles and moved a distance of 142 miles from DCSA to her Michigan activity area. This is the first documented evidence of wolf dispersal into the upper peninsula of Michigan.

Other Wolves. During winter 1985-86 occasional tracks of a pair of wolves were located within the territory of the former Bear Lake pack. During this time 035F was also present in the area, though she was never observed with another wolf. Sign of a pair of wolves was located in this area in May, 1986. During late summer and fall 1986 MLP wolf 063M made occasional forays into this area. The identity and fate of the pair observed in winter has not been established.

DCSA Wolf Population Status. Based on the available data, nine wolves were present in DCSA during winter 1985-86. Of these, six were females, and two potential breeding pairs (TP II and the pair observed in Bear Lake area) were present (Table 2). The TP II litter failed; and no information was obtained on the reproductive status of the non-radioed pair.

Mid-winter (1985-86) wolf density estimates for DCSA were one wolf per 32.2 square miles, or 1.2 wolves per 100 square kilometers.

North-Central Study Area.

Bootjack Pack (BJP). Tracks of a single wolf were found within the region occupied by BJP in January and June.

Averill Creek pack (ACP). Tracks of a pair of wolves were found within ACP during winter 1985-86. In June, following the discovery of a homesite, four adult-sized wolves were apparently present. One of these, a yearling female (071), was subsequently captured and collared (Table 1.). Based on replies to howls at homesites, four pups were present throughout summer and into fall. Seven wolves were present in ACP in fall 1986.

Northeast Study Area.

Tracks of a pair of wolves were encountered by US Forest Service personnel near Long Lake on one occasion during winter 1985-86. Tracks of a lone, raised-leg urinating wolf were found by DNR wildlife manager, C. Botwinski, approximately five miles from the Forest Service observation. No wolf sign was encountered by wolf project personnel.

Statewide Wolf Population Estimate, 1985-86.

The Wisconsin wolf population estimate during mid winter, 1985-86 was 16 wolves. Four packs were present during the period; two produced pups in 1985 that survived through winter (MLP - 2 pups; ACP - 1 or 2 pups). Pack size ranged from 2 wolves (TP II, and the pair in Bear Lake) to four wolves (ACP) and mean pack size, 2.75 wolves, continues to decline (Table 3.).

Mortality.

In December, 1986 two MLP wolves were found dead; one was radioed yearling female 039. This wolf, suffering from Canine Parvovirus when captured in May 1985, weighed only 40 pounds. Throughout May-July 1985 she was located at MLP homesites. In late August she began moving within MLP territory. In mid September she localized at a town dump but subsequent movements appeared "normal". On 13 December she was located at an MLP deer kill, but on 16 December she was located at her death site and presumed dead. At death she weighed 33 pounds. Death was ascribed to moderate granulomatous pneumonia, emaciation, and intestinal coccidiosis and hookworm infection.

Another member of MLP, the alpha male, died on 18 December. This wolf was apparently debilitated for several weeks, as evidenced by the localized movements of radioed pup 081F in the vicinity of the eventual death site. Necropsy revealed cause of death due to Canine Distemper. The wolf also suffered from intestinal giardiasis and several canine heartworm were discovered in a pulmonary blood vessel.

Combined annual survival of 35 wolves radio-collared thusfar is 46 percent. Survival rates by season are: spring - 94 percent; summer - 95 percent; fall - 82 percent; winter - 78 percent (Heisey and Fuller 1985).

Disease Work.

Disease study focused on Canine Parvovirus (CPV) work. Blood serum titers from the 4 wolves trapped in 1986 were positive. Blood serum of 28 wolves captured in Wisconsin since 1981 have been tested for CPV and 71 percent tested positive. Hemagglutination-inhibition titers in excess of 1:20 were considered positive (T. Amundson, pers.comm.).

Results of an analysis of 81 timber wolf scats collected in Wisconsin are: 33 fall 1985 scats, 5 positive (15 percent); 25 winter 1985-86 scats, 7 positive (28 percent); and 23 spring 1986 scats, 17 positive (74 percent). Analysis of summer 1986 samples have not been completed. Hemagglutination titers in excess of 1:20 were considered positive (T. Amundson, pers. comm.).

Job 101.2 Suitable Wolf Habitat in Northern Wisconsin

OBJECTIVE: Identify potential wolf habitat in Wisconsin.

A cursory survey of Townships 36 and 37 North, Range 17 East in northwestern Marinette County, and in Townships 36 and 37 North, Range 16 East, and Township 37 North, Range 15 East was conducted during winter 1985-86 (Map 1.). This area has marginal road densities (roads equivalent to US Forest Service types A,B,C) and a moderate level of human recreational activity was noted. Over-winter deer densities were not appraised. Human impacts, based on the existing road network and levels of human activity, are probably below critical levels. The adequacy of prey base must be analyzed before a final analysis of this area's suitability

can be determined.

No other habitat surveys were conducted during the period.

Job 101.3 Monitor Wolf Activity along the Michigan-Wisconsin
Border

No work was conducted on this job.

Literature Cited

Heisey, D.M. and T.K. Fuller 1985. Evaluation of survival and cause-specific mortality rates using telemetry data. J. Wildl. Mgmt. 49(3):668-674.

| <u>Wolf #</u> | <u>Date</u> | <u>Age</u> | <u>Sex</u> | <u>Wt (lbs)</u> | <u>Pack</u> | <u>Study Area</u> |
|---------------|-------------|------------|------------|-----------------|-------------|-------------------|
| 081 | 10/13/85 | P | F | 34 | MLP | DCSA |
| 063 | 05/20/86 | Y | M | 58 | MLP | DCSA |
| 085 | 05/16/86 | A | F | ? | ACP | DCSA |
| 069 | 07/23/86 | P | M | 27 | ACP | DCSA |
| 071 | 07/25/86 | Y | F | 60 | ACP | DCSA |

Table 1. 1985-86 timber wolf capture data.

| <u>Pack</u> | <u>Adult</u> | | <u>Yearling</u> | | <u>Pup</u> | | <u>Unknown</u> |
|-------------|--------------|---------------|-----------------|---------------|-------------|---------------|----------------|
| | <u>Male</u> | <u>Female</u> | <u>Male</u> | <u>Female</u> | <u>Male</u> | <u>Female</u> | |
| MLP | 0 | 1* | 0 | 0 | 1(063) | 1(081) | 0 |
| BLP | 1* | 1* | 0 | 0 | 0 | 0 | 0 |
| TP II | 1* | 1(059) | 0 | 0 | 0 | 0 | 0 |
| Loner | 0 | 1(035) | 0 | 1(061) | 0 | 0 | 0 |
| TOTAL | 2 | 4 | 0 | 1 | 1 | 1 | 0 |

Sex ratio: 3M/6F

Table 2. Age-sex composition of 1985-86 DCSA wolf population.

| <u>Year</u> | <u>1979-80</u> | <u>1980-81</u> | <u>1981-82</u> | <u>1982-83</u> | <u>1983-84</u> | <u>1984-85</u> | <u>1985-86</u> |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| # Packs: | | | | | | | |
| | 5 | 5 | 4 | 5 | 5 | 5 | 4 |
| X Group Size:* | | | | | | | |
| | 5.1 | 4.2 | 3.9 | 2.5 | 2.27 | 2.75 | 2.0 |
| X Pack Size: | | | | | | | |
| | 5.1 | 4.2 | 6.25 | 3.4 | 3.3 | 3.8 | 2.75 |

*Group = each wolf observation is included whether the observation was of one individual or more than one wolf. For instance in 1985-86: 8 groups of wolves were observed, including 4 > 1 wolf, and 16 wolves were counted, giving a X group size of 2.0 wolves.

Table 3. Variation in social group size in the Wisconsin wolf population, 1979-80 through 1985-86.