

WISCONSIN ENDANGERED RESOURCES REPORT 13

STATUS OF THE TIMBER WOLF IN WISCONSIN: PERFORMANCE REPORT

by Richard P. Thiel

SUMMARY

Track and howling surveys, live trapping, and telemetry were used during 1983 and 1984 to determine the status of the timber wolf in northern Wisconsin. Minimum population estimates were 15-16 individuals for the summer of 1983 and 18-22 individuals for the winter of 1983-84. These animals were distributed among 6 packs with the exception of 3 loners. The adult and yearling wolves that were live-trapped averaged 81 lbs for the 3 males and 54 lbs for the 5 females. Three of the packs produced pups, although by May of 1984 only those of the Moose Lake Pack were alive. Telemetry indicated movements in and out of territories (Bear Lake Pack during deer season), possible territory boundary shifts (Bear Lake and State-Line Flowage Packs) and dispersal. The deaths of 1 adult male and 2 pups were verified for this period. Sign of wolves was revealed during surveys of the Upper Peninsula, conducted under contract with Michigan's DNR.

BUREAU OF ENDANGERED RESOURCES
Wisconsin Department of Natural Resources
Box 7921
Madison, WI 53707
608-266-7012

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STATUS OF THE TIMBER WOLF IN WISCONSIN (Study 101)
PERFORMANCE REPORT

July 1, 1983 to September 30, 1984

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Job 101.1: Wolf Distribution and Numbers
Job 101.2: Wolf Activity Monitoring

JOB 101.1: WOLF DISTRIBUTION AND NUMBERS

OBJECTIVE

Determine wolf numbers and distribution in northern Wisconsin.

Breeding 1983

Summer howling data for 1983 were summarized in the previous performance report. Based on howling surveys, and capture and telemetry data in 1983 and 1984, two packs Moose Lake pack (MLP) and Bear Lake pack (BLP) produced pups in the Douglas County Study Area (DCSA), and the Bootjack pack (BJP) in Price-Oneida County produced pups. Pups were apparently not produced by the Averill Creek (ACP) pack in Lincoln County. Survival of pups among packs to mid-winter once again was poor. Although yearling wolves were captured in two pack territories in DCSA in May, 1984, movement data suggest that all belong to the MLP. Pups produced in the BLP, DCSA, and in BJP did not survive beyond fall 1983. Pup wolf M-093 from BJP died of unknown causes by September 1. Fifty percent of the packs producing pups lost them by fall 1983.

Weather Conditions

Warm weather predominated into mid-November, 1983. From late November to mid-December a series of snowstorms tracked across northwestern Wisconsin. Bitterly cold weather plagued the entire state from mid-December to mid-January. Extraordinarily warm temperatures persisted for two weeks in mid-February, creating a sturdy crust strong enough to support wolves by the last week in February. Figure 1 summarizes periodic snow depth readings taken in DCSA during winter 1982-83. Snow depths elsewhere in the state were less than in DCSA.

Winter Track Survey

During the 1983-84 field season track surveys were run in DCSA, Price-Oneida County, Lincoln County, Florence County, and in Washburn, Douglas, Sawyer, Bayfield, Ashland, Lincoln, Oneida, and Langlade Counties (northern Wisconsin).

transects). In addition, surveys were run in Iron and Dickinson Counties, Michigan under contract with the Michigan DNR. Data from that survey are reported under Upper Peninsula Michigan Survey below. Table 1 lists the results of the 1983-84 winter track surveys run on 48 days between November 10, 1983 and March 8, 1984, totalling 701 survey miles, an average of 14.6 miles/day.

Winter 1983-84 Population Trends

The known minimum number of wolves present in the state during mid-winter 1983-84 was 18-22 (Table 2).

Douglas County Study Area. A minimum total of 7-8 wolves were present in four areas (Moose Lake, Bear Lake, Tripod, and State-line Flowage packs) during the summer, 1983. During mid-winter 1983-84, 13-14 wolves were counted in DCSA. The only area inadequately surveyed was State-line flowage pack (SFP) territory. We suspect that socio-spacial changes have occurred in the western portion of DCSA within the past year, principally within SFP territory. Therefore, the mid-winter count is probably conservative. The movements of BLP wolf F-029 and MLP wolf M-031 were monitored during winter 1983-84. The collar of the latter wolf was chewed off in late February.

Lincoln County. Wildlife technician, Pat Rominski, saw tracks of a single wolf in the central portion of ACP territory in early June, 1983. An intensive live-trapping program conducted in mid-July failed to produce any wolves. Tracks of one, and on two occasions, possible two wolves were observed during winter 1983-84. Warden Don Manthei reportedly saw tracks of two wolves in ACP territory in March, 1984.

Price-Oneida County. The movements of wolves F-099, F-097, and F-095 were monitored throughout the period. Early in the period no wolves in BJP were observed associating with one another. From late January through the end of winter wolves F-099 and F-097 traveled together with an uncollared wolf. Throughout much of the period Wolf F-095 remained outside the BJP territory and in late February she dispersed.

Florence County. The movement of the Loafer wolf, M-077, were monitored from May 6, 1983 through January 11, 1984. On July 18, 1984, USFS biologist, Tony Rinaldi, saw a wolf which he thought was uncollared within the area occupied by Loafer. Later during the same day he literally ran Loafer off a state highway as the radio-tracking plane circled overhead! Tracks of three different sized wolves were discovered in the mud of firelanes on April 24, 1984 in western and southwestern Florence county. One of these was within Loafer's home range and appeared to be his.

The evidence indicates that at least three wolves are present in Florence County, using a shared area(s) but apparently without associating with one another.

JOB 101.2: WOLF ACTIVITY MONITORING

OBJECTIVE

Monitor wolf activity by live-trapping and radio-tracking wolves in Wisconsin.

Live Trapping

Trapping activities were conducted in October-November, 1983, and April and May, 1984. The species capture list is presented in Table 3.

Capture and social affiliation data are presented in Table 4 for ten wolves captured in 1983 and 1984. A male and female pup; four females and one male yearlings; and two male and one female adult wolves were caught and collared. Weights ranged from 58 to 102 pounds (\bar{x} = 81 pounds) for three males and 43 to 65 pounds (\bar{x} = 54 pounds) for five females, exclusive of the two pups.

Douglas County Study Area

Three new wolves were caught in 1983 and four in 1984. Capture efficiency continues to be greatest in May; one wolf was caught per 32 trap nights in 1984.

Moose Lake Pack. Wolf M-031 apparently restricted his activity to a local garbage dump from mid-November to early January, and then rejoined the pack which consisted, in total, of eight wolves. His modified collar (Telonics reinforced with dental acrylic) was chewed off by February 28, 1984. Two yearling female wolves (035, 037) were captured in mid-May, 1984 within MLP territory. The 1983 MLP pup cohort consisted of at least three females, including 035 and 037, and 033, captured as a pup in August, 1983. A yearling female, caught in northwestern SFP territory on 25 May 1984, drifted east into MLP territory in June and may be a fourth female produced in 1983 (Table 4). In addition a dead, unsexed pup was discovered on a firelane near the homesite in July, 1983.

Bear Lake Pack. Wolf F-029 was captured in May, 1983. Replies to human imitated howls indicated that pups were produced that summer but none survived by fall. Female 029 was constantly observed with another wolf throughout fall 1983 and winter 1984 up until at least May 1. Although definitely paired, radio locations obtained in April-May, 1984 do not indicate that F-029 denned. From late November to February 2 F-029 and her associate vacated their territory and were found within a 16.5 square mile area immediately west of BLP territory. The timing coincided exactly with the end of the nine-day deer gun season and a special two-month Chippewa Indian deer season. The majority of hunting effort in DCSA during the special Indian season occurred within the Bear Lake deer yard (T. White pers. comm.). Within five days following the special season closure the pair of wolves returned to BLP territory concentrating their activity in the Bear lake deer yard.

State-line Flowage Pack. Movements of F-025 were monitored until late May, 1983. Her transmitter became intermittent and only one other location was obtained from her. On June 23, 1983, when she was last located, howl replies indicated that she was accompanied by one other wolf. During the previous winter she was with another wolf on three of six occasions when visuals were obtained. Tracks of one and possibly two wolves were twice observed within F-025's home range in August, 1983. Movement data of F-025 during April-May, 1983 did not suggest that she denned.

The region into which BLP wolf, F-029, and her associate moved into in December, 1983 - January, 1984 was within F-025's home range. The spacial relationships of these two wolves in comparison to the known 1980-81 territory of SFP wolves F-1191 and M-1193 are depicted in Figure 2. The fact that F-025 and her associates utilized the eastern portion of SFP territory, within the home-range of F-025, exclusively for two months in winter suggests that a socio-boundary shift has occurred within the area occupied by SFP wolves in 1980-82.

Tripod Pack. Sign of a single wolf was found within an overlap zone between TP and SFP territories in May, 1983. In February, 1984, Minnesota forester Jim Ludwig found sign of three wolves within the TP territory. On May 12, 1984, wolf M-051 was captured within TP territory.

North Central Study Area

Bootjack Pack. Two wolves were captured near a BJP homesite on July 27, 1983 (Table 4). Yearling female, 095, remained in BJP territory until mid-November, 1983 and then dispersed to the east, settling into an activity area from November 21 to at least December 12 east of the Willow flowage in Oneida County. Similarly, sibling F-099 (caught a year earlier) frequented the north shore of the Willow flowage by December, while adult female 097 restricted her movements to the eastern half of BJP territory. The three wolves were always seen alone.

In January, female 095 was located between West and Bass Lakes, and McCord south of the Willow Flowage. During this period sibling F-099 wandered between central BJP territory and the Willow Flowage, while adult F-097 remained in an area just northwest of the flowage. During the latter portion of January F-099 and F-097 reunited and were accompanied by an uncollared wolf.

In early February F-095 returned to central BJP territory just as F-099 was returning to the Willow Flowage from a similar journey. The trio, consisting of F-09, F-097 and the uncollared wolf, remained in the area northwest of the flowage. By mid-month F-095 was at least casually interacting with the trio.

In early March the trio returned to their territory and F-095 dispersed south into Lincoln County. She was located in the central, south, and east edges of ACP territory before contact was lost in mid-March. On her last location she was observed standing near a barn.

Wolves F-097 and F-099 were never observed near the Willow Flowage prior to December, 1983, with 167 combined locations accumulated. Based on locations obtained prior to December the BJP territory was 103.75 square miles.

Averill Creek Pack. Tracks of one wolf were observed in ACP territory in December and early February. One and possibly two wolf tracks were found in late February and early March. On the latter occasion one of the two tracks could have been made by BJP disperser, F-095.

Northeast Study Area

Florence County Loners (FCL). Movements of male wolf, 077, were monitored until January 11, 1984. In late January we determined that M-077's transmitter prematurely malfunctioned, and noted his presence until at least May 10, 1984. In 49 relocations obtained, M-077 restricted his activity to a 33 square mile area. On April 24, 1984, different sized tracks of single wolves were noted in three areas in western Florence County. Taken in conjunction with the numerous reports and the known range of M-077, we feel that at least three different lone wolves are present in the northeast corner of the Nicolet National Forest. One is a known male (M-077), another is probably a male (larger track than M-077, see Table 4 - and "high" scent marks), and the sex of the third is unknown.

Upper Peninsula Michigan Survey

Winter track surveys were run on 195 miles of road driveable by truck on seven days in Iron and Dickinson Counties for an average of 27.9 miles/day. Additional surveys were run on snowmobiles on four days (no mileage tabulated). Workers encountered probable sign of a raised-leg urinating (RLU) wolf in the Big Wheel area of northwest Dickinson County on January 3 and February 21, 1984. Wildlife Biologist, Jim Hammill (pers. comm.), observed the fresh track of a large canid in the same area on April 28, 1984. The consistent sign observed in this remote area was likely made by a wolf. Height of RLU's on snowbanks indicate it to be a male. This area is 40 miles northeast of M-077's home range (see NEW above).

The American Can Corporation land holdings north of Amasa; Ottawa National Forest, Iron County; Peavy Pond area; and Michigamme Flowage were surveyed, but no sign was found. However, tracking conditions were poor during the survey periods. Each of the areas surveyed is remote, and are the source of many wolf reports.

Mortality

A 79-pound adult male timber wolf was trapped and clubbed to death in late October, 1983. Reports indicate it was taken in the vicinity of Hwy 8 between Tomahawk and Rhinelander, most likely in Oneida County. A probable pup wolf was recovered from a firelane near an MLP homesite in DCSA in July; it probably was struck and killed by a vehicle. Pup M-093, BJP, was found dead of unknown causes in early September.

DNR and Citizen Wolf Reports

Figure 3 shows the distribution of questionable and reliable wolf reports received from all sources in 1983, excluding the DCSA and Lincoln County wolf areas. Four wolves were reported in 3 observations for a mean of 1.3 wolves per reliable observation within areas occupied by wolves. One reliable report involving a single wolf was obtained adjacent to an area occupied by wolves. We received 18 other observations involving 29-31 wolves for a mean of 1.6-1.7 wolves per observation.

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Table 1. Winter 1983-84 Track Survey Summary

<u>Location</u>	<u>Total Miles</u>	<u>Total Days</u>	<u>Bobcat</u>	<u>Coyote</u>	<u>Timber Wolf</u>	<u>Unknown Canid</u>	<u>Dog</u>	<u>Otter</u>	<u>Fisher</u>	<u>Fox</u>	
Northern Wisc. x mi/day = 9.5	133.1	14	0 -	18 13.5	0 -	2 1.5	9 6.8	2 1.5	1 0.75	1 0.75	Total Tracks/100 mi
Lincoln County x mi/day = 32.25	193.5	6	0 -	25 12.9	4-6 2-3	4 2.0	6 3.0	0 -	0 -	0 -	Total Tracks/100 mi
Douglas County x mi/day = 13.9	124.9	9	2 1.6	10 8.0	1 0.8	1-2 0.8-1.6	3 2.4	4 3.2	0 -	1 0.8	Total Tracks/100 mi
Price-Oneida Co. x mi/day = 15.3	152.7	10	1 0.6	19 12.4	3 2.0	0 -	3 2.0	2 1.3	1 0.6	0 -	Total Tracks/100 mi
Florence County x mi/day = 10.7	96.8	9	1 1.0	26 26.9	8 8.3	0 -	1 1.0	0 -	2 2.0	0 -	Total Tracks/100 mi

Total Miles = 701.0

Total Days = 48

x mi/day = 14.6

Table 2. Wisconsin's Wolf Population, Winter 1983-84

Area/Pack	Number of Wolves	
	Summer 1983	Winter 1983 - 1984
Douglas County Study Area (DCSA)		
Moose Lake pack (MLP)	2+*	8
Bear Lake pack (BLP)	2-3*	2
State-line Flowage pack (SFP)	2	?
Tripod pack (TP)	1+	2-3
TOTAL	7-8+	12-13
North-Central Study Area		
Bootjack pack (BJP)	5+*	4+1
Averill Creek pack (ACP)	1	1-2
TOTAL	6+	5-6+1
North-Eastern Study Area		
Florence County	2	1-2
GRAND TOTAL	15-16+	18-22

* pups produced

Table 3. Species Captured and Unit Effort

DCSA Species	Sept-Nov 1983*		April-May 1984	
	7TN	TN/Capture	129TN	TN/Capture
Timber wolf			4	32
Dog			-	-
Bobcat			1	129
Red Fox			1	129
Raccoon			-	-
Skunk			-	-
Porcupine			1	129
Snowshoe hare			-	-
Black bear			1	129
Raven			-	-
FLORENCE COUNTY			112TN	TN/Capture
Timber wolf			-	-
Dog			-	-
Bobcat			-	-
Coyote			2	56
Raccoon			1	112
Skunk			3	37
Porcupine			-	-
Snowshoe hare			1	112
Black bear			-	-
Raven			-	-

* Incomplete

Table 4. Capture and Social Dynamics Data on Ten Timber Wolves Captured in 1983 and 1984.

Study Area/Pack	Wolf Number	Sex	Age	Wt. (lbs.)	Capture Date	No. Locations	Occupied Area (mi ²)	Fate/Remarks
DCSA								
Moose Lake (MLP)	031	M	Y	58	05-18-83	83	59.75	Collar chewed off by Feb. 28, 1984
	033	F	P	17	08-02-83	2	--	Collar chewed off
	035	F	Y	57	05-12-84	2	--	Monitoring
	037	F	Y	49	05-14-84	2	--	Monitoring
Bear Lake (BLP)	029	F	A	65	05-12-83	97	ND*	Monitoring
Tripod (TP)	051	M	A	84	05-12-84	2	--	Monitoring
State-Line Flowage (SFP)	053	F	Y	56	05-25-84	1	--	Monitoring
NCSA								
Bootjack (BJP)	095	F	Y	43	07-27-83	55	ND*	Dispersed and was lost by _____
	093	M	P	19	07-27-83	8	--	Dead by September 1, 1983
NEW								
Florence Co. Loners	077	M	A	102	05-06-83	49	33	Radio malfunctioned after January 11, 1984. Still in area as of May, 1984.

*Not Determined

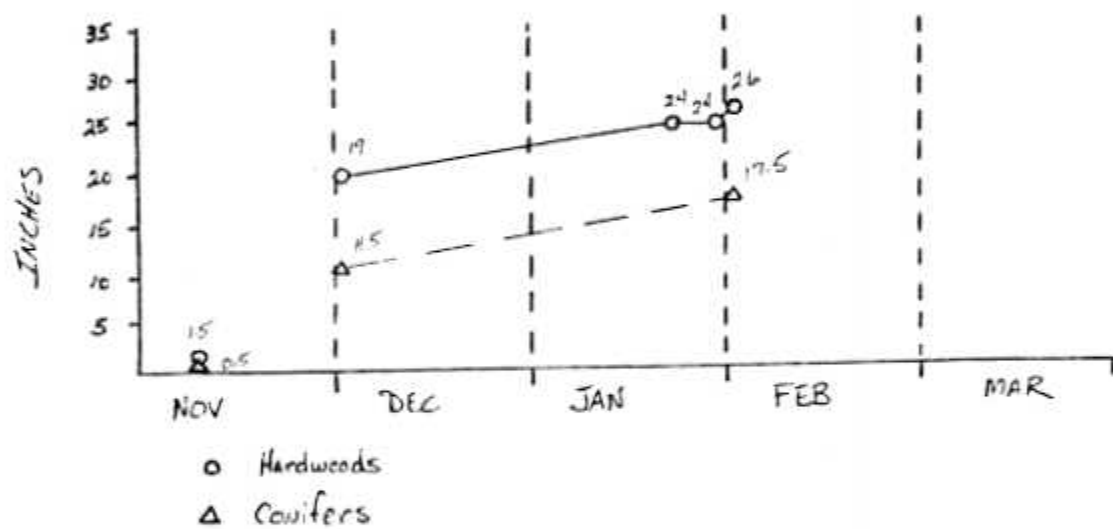


Figure 1. Snow depth readings in DCSA, winter 1983-84.

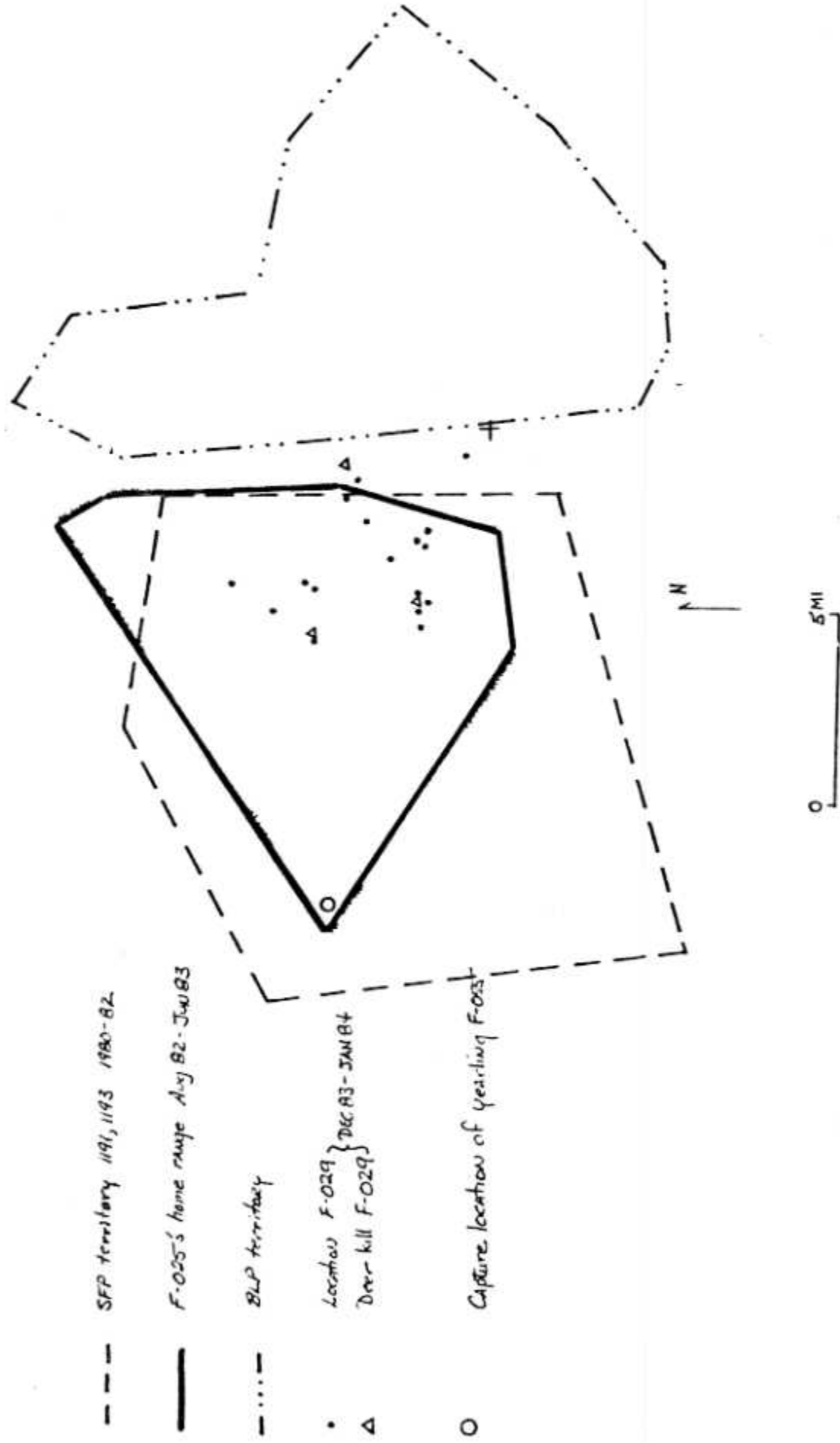


Figure 2. Spatial relationships of wolf F-025, SFP territory, and the winter "trespass" of BLP wolf F-029 and her associate.

