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DOVE BANDING, 1975

by Jim Nissen

The following report is a summary of the 1975 dove banding effort on the Cannon District of the Mark Twain National Wildlife Refuge. The over-all operation could be labelled unsuccessful in view of the fact the 300-bird quota was was not reached. However, looking at the situation optimistically, 245 doves were banded so the effort will be termed "partially successful".

AREA DOVE POPULATION

Late summer dove movements were not conducive to a successful banding operation. Good concentrations of doves could be found using the refuge in late May and early June. When wheat harvesting commenced on surrounding farms in late June and early July, the majority of the doves left and centered their daily activities around the harvested wheatfields. Once these fields were "turned-under", some of the birds returned to use the refuge wheatfields and others left for parts unknown. By mid-to-late August, the few doves using the area left to feed in cornfields that had been cut for silage.

DOVES BANDED

A total of 245 doves were banded. The breakdown according to age and sex includes the following:

211	Hatching-Year Unknowns (HY-U)
16	Hatching-Year Females (HY-F)
4	Hatching-Year Males (HY-M)
9	After Hatching-Year Females (AHY-F)
5	After Hatching-Year Males (HY-M)
245	TOTAL

TRAPS

Twenty-two Kniffin modified funnel traps were used. Each trap measured 24 by 24 by 8 inches and was constructed of 1- by 2-inch weld-wire. Twelve of the twenty-two traps were without a weld-wire bottom; the remaining ten had this type of bottom.

For comparative purposes, a record was kept concerning the number of doves caught in each of the two respective trap types. To minimize biasness, both type of traps were represented on each banding site. 181 (74%) were trapped in the open-bottom traps; 57 (23%) in the closed-bottom; and 7 (3%) were not recorded.

With a 3 to 1 difference in success in favor of the open-bottom variety, it would be advantageous to remove the bottoms from the remaining ten traps.

DAILY ROUTINE

Trapping began July 3 without the aid of a preliminary baiting period. Traps were baited with Proso millet and were checked twice a day; once in the morning about 0800 to 0830, and again in the evening at 1830 to 1900 hours. The evening period was the most successful as 64% of the doves were trapped at this time, compared to 36% in the morning (Table 1).

Following the initial trap placement, additional sites were prepared once the doves' daily patterns were determined about the refuge.

AGE-SEX	MORNING	EVENING
HY-UNK	79	132
HY-F	4	12
HY-M	1	3
AHY-F	3	6
AHY-M	1	4
TOTAL	88 (36%)	157 (64%)

Table 1. Age and sex classes of doves trapped during the morning and evening feeding periods.

TRAP SITES

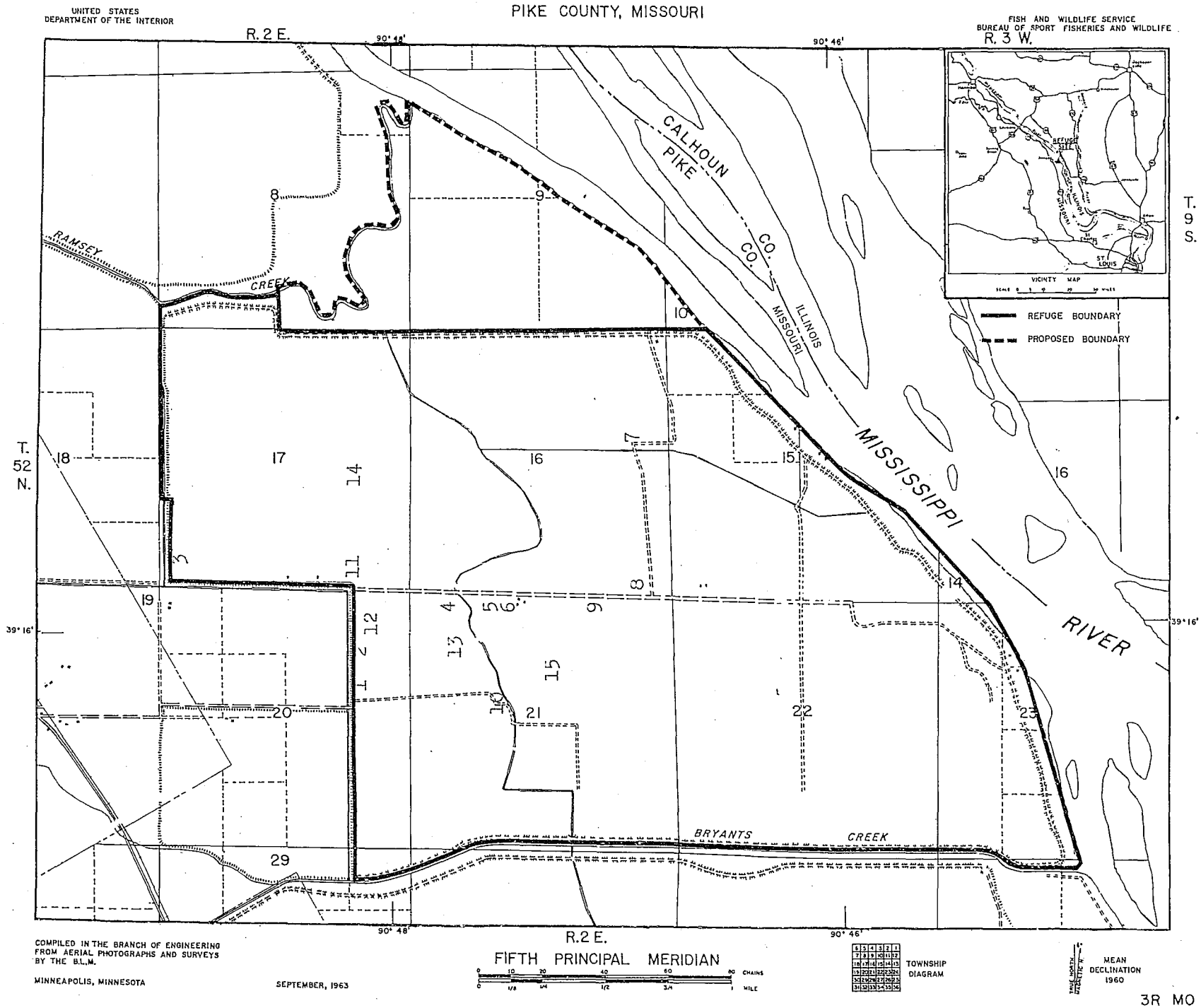
The number of doves trapped at each site was also recorded (Table 2). Trap site locations are described in Table 2 and marked on the accompanying map of the refuge (Page 4).

SITE NUMBER	SITE DESCRIPTION	NUMBER DOVES TRAPPED
1	Beanfield edge along road	0
2	Beanfield edge along road	38
3	Around grain bin foundations	0
4	Wheat stubble edge along road	0
5	Beanfield edge along road	16
6	Road around house foundation	37
7	Beanfield edge along road	2
8	Wheat stubble edge along road	0
9	Drive-way to beanfield	1
10	Cornfield edge along road	63
11	Edge of pond along road	29
12	Middle of wheat stubble field	2
13	Middle of wheat stubble field	16
14	On road between millet ponds	0
15	"Woodie banding site" in middle of wheat stubble field	41
	TOTAL	245

Table 2. Site description and number of doves trapped and banded.

RETRAPS

A total of eighteen doves, all hatching-year, were retrapped in 1975. The time lag between the initial trapping and banding and the subsequent retrapping ranged from zero (both events took place on the same day) to fourteen days. Of the eighteen, seventeen were trapped and retrapped in July. Thus, it appears that while the refuge population is more stable in July than in August, there is still a fairly rapid turnover of doves using the area.



Map showing location of the various banding sites. For a description of each location, see table 2, page 3.

RECAPTURES

There were no recaptures of doves either banded on the refuge in previous years, or foreign doves -- birds banded on other areas.

TRAPPING-RELATED MORTALITY

Only two known deaths resulted from the 1975 banding operation, neither of which were caused by over-crowded conditions in the trap!

On July 16, an AHY-M was found dead in a trap at site 7. While the exact cause of death was not determined, it could be attributed to a number of things. Among them are dehydration from the high temperature, trap-related stress, etc.

The second dove, also an AHY-M, was killed on July 23 by the pack of dogs that ran for a brief period of time on the refuge.

DISEASE

Nothing major to report. An AHY-M trapped on August 26, and a AHY-F trapped on August 29 had toes frozen off.

OTHER SPECIES TRAPPED

BIRDS

- Bobwhite quail (Colinus virginianus)
- Brown-headed cowbird (Molothrus ater)
- Red-winged blackbird (Agelaius phoeniceus)
- Cardinal (Richmondena cardinalis)
- Common grackle (Quiscalus quiscula)
- Loggerhead shrike (Lanius ludovicianus)
- Eastern meadowlark (Sturnella magna)
- American goldfinch (Spinus tristis)
- Brown thrasher (Toxostoma rufum)

MAMMALS

- Cottontail rabbit (Sylvilagus floridanus)
- Opossum (Didelphis marsupialis)

WEATHER VERSUS TRAPPING SUCCESS

Table 3 shows the relationship between weather and trapping success. During 1975, the twenty-one 90°+ days resulted in 133 doves trapped and banded; fourteen days where the maximum temperature ranged from 79 to 89° produced 88 doves; and 24 doves were trapped on the seven days when the maximum temperature was not recorded.

Summer students in previous years have noticed that the highest trapping succes was attained on rainy days with cool nights, and the lowest on hot, dry days. 1975's results ran just the reverse of this observation.

RECOMMENDATIONS

1.) Get a summer student that knows how to catch doves!

2.) If at all possible, begin trapping when the birds are concentrated on the refuge in late May and early June.

3.) Pre-bait for a minimum of two weeks or until a significant number of doves begin using the bait.

4.) If conditions similar to 1975's prevail in future years, an effort might be directed towards trapping and banding doves off the refuge.

DATE	TEMPERATURE MAX.	TEMPERATURE MIN.	PRECIPITATION	NUMBER OF DOVES TRAPPED
7-7	---	65	---	3
7-8	92	65	---	5
7-9	87	65	---	2
7-10	84	60	---	12
7-11	82	50	---	10
7-14	85	45	---	12
7-15	93	46	---	6
7-16	91	62	---	2
7-17	97	65	---	4
7-18	---	68	---	7
7-21	94	65	---	20
7-22	90	60	---	18
7-23	101	71	.40	8
7-24	89	70	---	8
7-25	---	60	---	8
7-28	98	--	---	2
7-29	97	68	---	14
7-31	93	70	---	1
8-1	---	70	---	0
8-4	91	50	---	10
8-5	98	61	.08	3
8-6	86	62	---	12
8-7	82	57	---	15
8-8	87	55	---	5
8-11	98	64	---	1
8-12	103	67	---	6
8-13	81	74	---	5
8-14	86	67	.80	1
8-15	---	70	---	2
8-18	92	66	.40	3
8-19	95	65	.04	2
8-20	94	68	---	5
8-21	97	70	---	8

DATE	TEMPERATURE MAX.	MIN.	PRECIPITATION	NUMBER OF DOVES TRAPPED
8-22	96	70	----	1
8-23	98	71	----	12
8-24	97	72	----	2
8-25	79	71	1.70	0
8-26	86	65	----	2
8-27	89	65	----	4
8-28	85	67	.28	0
8-29	--	69	.69	3
8-30	--	63	----	1
			TOTAL	245

Table 3. Daily weather information as related to number of doves trapped and banded.