03-007W

DOUBLE T FISH AND WILDLIFE AREA RAPTOR AND GRASSLAND BIRD SURVEYS, 2003

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PURPOSE OF SURVEYS

These surveys were conducted to determine the presence and rough abundance of species of winter raptors and breeding birds in the grasslands of the newly acquired Double T Fish and Wildlife Area in Fulton County, Illinois.

METHODS

During the winter from Dec. 2, 2002 to Feb. 24, 2003, birds were identified by species and were counted every two weeks along 5 transects totaling about 5 miles. GPS readings were taken of the location of the transects for follow up studies. The counts were taken around noon when raptors would be most active.

During the breeding season of May 10 to July 4, 2002, birds were identified by species and were counted for 5 minutes within 14 circles of100 meter radius. The centers of these circles in the grassland were a minimum of 250 meters apart and were marked with wooden lathes, orange flags and marking tape. GPS readings were taken of the locations to relocate the points for follow up studies. The points are shown on the map in Appendix 1. The counts were conducted in the morning hours when the birds were more active and the counts were repeated every 2 weeks for a total of 4 counts.

RESULTS

Table 1 Double T Winter Raptor Survey Dec.2, 2002 to Feb. 24, 2003 See page 2.
Table 2 Double T Winter Raptor Distribution Dec. 2, 02 to Feb. 24, 03 See page 3.
Table 3 Double T Breeding Bird Survey May 16-June 27, 2003 See page 4.
Table 4 Double T Breeding Bird Distribution May 16, 2003 See page 5.
Table 5 Double T Breeding Bird Distribution June 2, 2003 See page 6.
Table 6 Double T Breeding Bird Distribution June 11, 2003 See page 7.
Table 7 Double T Breeding Bird Distribution June 27, 2003 See page 8.

ANALYSIS

The numbers of winter raptors using the grasslands were small and smaller than expected as shown by only one Red-tailed Hawk being seen during the 7 visits. Most of the raptors found were probably migrating through the area as there were few repeat sightings indicating a winter feeding territory. The possible exception is the 2 sightings of the state threatened Bald Eagle which has a huge territory.

An excellent variety of grassland bird species was found at Double T in 2003. This is due to both the good size of the grasslands and to the varied structure of its plant

TABLE 1 DOUBLE T WINTER RAPTOR SURVEY DEC 2, 02 - FEB 24,03

Species	De	2 De	16 De	24 Ja	13 Ja	27 Fe	10 Fe	24	
Canada goose					72		100	290	462
Mallard			5	65	1	1			72
Am. black duck				2					2
N. pintail				1					1
Common goldeneye				1					1
Ring-necked duck					2				2
Common merganser								31	31
Red-tailed hawk					1				1
Bald eagle			1		1				2
Northern harrier			3				1		4
Ring-neck Pheasant		1							1
Northern shrike			1						1
Horned lark		5		1	6	20	6	21	59
E. meadowlark						4			4
W. meadowlark		1							1
Total		7	10	70	83	25	107	342	644
									644

TABLE 2 DOUBLE T WINTER RAPTOR DISTRIBUTION DEC 2, 02 - FEB 24,03

	Species	1	2	3	4	5	
12.02.02	Ring-necked pheasant			1			1
	Horned lark					5	5
	W. meadowlark		1				1
12.16.02	Mallard				5		5
	Bald eagle			1			1
	Northern harrier		1		1	1	3
	Northern shrike	1					1
12.27.02	Mallard				65		65
	Am. black duck				2		2
	Common goldeneye				1		1
	Northern harrier				1		1
	Horned lark					1	1
1.13.03	Canada goose				72		72
	Mallard				1		1
	Ring-necked duck				2		2
	Bald eagle				1		1
	Red-tailed hawk	1					1
	Horned lark			6			6
1.27.03	Mallard					1	1
	Horned lark		20				20
	E. meadowlark			4			4
2.10.03	Canada goose				100		100
	Northern harrier		1				1
	Horned lark			6			6
2.24.03	Canada goose		40		250		290
	Common merganser		31				31
	Horned lark	9		12			21
	Total	11	94	30	501	8	644
							644

TABLE 3 DOUBLE T BIRD SURVEY May 16-June 27, 03

Species	Ma 16	Jn 2	Jn 11	Jn 27	
Mallard	1	2			3
Northern bobwhite	1				1
Killdeer	1	5	3	1	10
Upland sandpiper		4	3		7
Black tern		1	1		2
Mourning dove	2			2	4
Willow flycatcher			1		1
Warbling vireo	1				1
Sedge wren			1	1	2
American robin		1			1
Yellow warbler	1	1			2
Common yellowthroat	1	1	1	1	4
Savannah sparrow	2				2
Henslow's sparrow				2	2
Song sparrow	4	2	3	3	12
Dickcissel		11	17	15	43
Bobolink	18	11	13	9	51
Red-winged blackbird	78	74	54	42	248
Eastern meadowlark	6	11	12	8	37
Common grackle		1	3	5	9
Brown-headed cowbird		1			1
Am. Goldfinch		2		1	3
Total	116	128	112	90	446
					446

TABLE 4 DOUBLE T BIRD DISTRIBUTION MAY 16, 2003

Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Mallard												1			1
Northern bobwhite														1	1
Killdeer											1				1
Upland sandpiper															0
Black tern															0
Mourning dove				2											2
Willow flycatcher															0
Warbling vireo							1								1
Sedge wren															0
American robin															0
Yellow warbler								1							1
Common yellowthroat				1											1
Savannah sparrow						1	1								2
Henslow's sparrow															0
Song sparrow				1							1	1		1	4
Dickcissel															0
Bobolink		3	2			3	2	1	3		2			2	18
Red-winged blackbird	6	4	9	6	10	4	6	5	4		8	7	2	7	78
Eastern meadowlark			1			1						1	1	2	6
Common grackle															0
Brown-headed cowbird															0
Am. Goldfinch															0
Total	6	7	12	10	10	9	10	7	7	0	12	10	3	13	116
															116

TABLE 5 DOUBLE T BIRD DISTRIBUTION jUNE 2, 2003

Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Mallard												2			2
Northern bobwhite															0
Killdeer				2								2	1		5
Upland sandpiper		1					2					1			4
Black tern												1			1
Mourning dove															0
Willow flycatcher															0
Warbling vireo															0
Sedge wren															0
American robin					1										1
Yellow warbler				1											1
Common yellowthroat				1											1
Savannah sparrow															0
Henslow's sparrow															0
Song sparrow	1			1											2
Dickcissel				1		1	1	2	2	1	1			2	11
Bobolink			2				3	1	1	2	1			1	11
Red-winged blackbird	9	2	8	6	5	1	4	10	3	3	4	6	5	8	74
Eastern meadowlark		3	1			1			1	1	1	2	1		11
Common grackle											1				1
Brown-headed cowbird											1				1
Am. Goldfinch				2											2
Total	10	6	11	14	6	3	10	13	7	7	9	14	7	11	128
															128

TABLE 6 DOUBLE T BIRD DISTRIBUTION JUNE 11, 2003

Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Mallard															0
Northern bobwhite															0
Killdeer											1	2			3
Upland sandpiper											1				1
Black tern															0
Mourning dove															0
Willow flycatcher				1											1
Warbling vireo				1											1
Sedge wren															0
American robin				1											1
Yellow warbler				1											1
Common yellowthroat															0
Savannah sparrow															0
Henslow's sparrow															0
Song sparrow				1						1	1				3
Dickcissel	2	2	1		1	1	2	1	2	2	1	1	1		17
Bobolink		1	1		1	2	1	2		1			3	1	13
Red-winged blackbird	6	7	6	4	7	4	1	5	2		4	2		6	54
Eastern meadowlark			1		1	1	1		1	2	1	2	1	1	12
Common grackle				1			1				1				3
Brown-headed cowbird															0
Am. Goldfinch															0
Total	8	10	9	10	10	8	6	8	5	6	10	7	5	8	110
															110

TABLE 7 DOUBLE T BIRD DISTRIBUTION JUNE 27, 2003

Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Mallard															0
Northern bobwhite															0
Killdeer							1								1
Upland sandpiper															0
Black tern															0
Mourning dove						2									2
Willow flycatcher															0
Warbling vireo															0
Sedge wren								1							1
American robin															0
Yellow warbler				1											1
Common yellowthroat															0
Savannah sparrow															0
Henslow's sparrow		1					1								2
Song sparrow				1			1			1					3
Dickcissel		1	1	1	2		1	2	2	1	1	1	1	1	15
Bobolink		3	1			1		1	2					1	9
Red-winged blackbird	4	2	2	1	5	5	3	1	2	3	2	3	5	4	42
Eastern meadowlark			1			1	1	2			2			1	8
Common grackle	2			3											5
Brown-headed cowbird															0
Am. Goldfinch														1	1
Total	6	7	5	7	7	9	8	7	6	5	5	4	6	8	90
															90

community. The numbers of birds were down about 25% from the survey in 2002 including a drop of 12% for Red-winged Blackbirds which still make up about half of the breeding birds counted. Good numbers of area sentive (requiring large areas) species such as Bobolink, Upland Sandpiper, and Henslow's Sparrow were still present. It can be seen from Table 3 that Dickcissels and Henslow's sparrows arrived in the area later than most of the species which were on territories by the middle of May. The number of calling Sedge wrens dropped to only one in the survey area. The structure of the plant community included grasses and legumes as well as some of the stalks of last years plants although there appeared to fewer legume plants such as Sweet Clover than the previous year.

The distribution of the grassland bird's territories was widely spread over the 14 sample points at the beginning of the season. Toward the end of the season, the narrower areas #4, 11, 12, and 13 had relatively fewer birds. The Red-winged blackbirds had fledged and left while the Bobolinks had formed flocks of adults and immatures in several areas with higher Bobolink densities.

More wetland birds were seen this year with the creation of new shallow wetland areas. The state endangered American Bittern that was flushed from an older wetland in the center of the T's in May was probably a migrant passing through the area. Some ducks, Killdeer and other shorebirds were seen in the new wetland areas. A pair of state threatoned Pied-billed Grebes as well as a single state endangered Black Tern were seen using the new shallow wetland north of the center road in June.

A few comments are needed about the near absence of some species. The only raptor seen in the area during the entire study period was a Cooper's Hawk hunting along a line of trees. Few of the more common short grass bird species were found in the count circles such as Grasshopper Sparrow and Horned Larks. Although some of these species were present along the roads, a small number of these more common grassland birds were also seen using some of the crop fields with stubble but few were seen in the count centers in the taller grass.

ENDANGERED AND THREATENED SPECIES.

A total of seven state endangered or threatened bird species were seen in the Double T area although some were not recorded in the count areas. The Bald Eagle (state threatened) was recorded in the winter raptor survey. The Northern Harriers in the winter count is only threatened in Illinois as a breeding bird. The three wetland birds Pied-billed Grebe, Black Tern and American Bittern were seen but were probably not breeding. The following two grassland birds, Upland Sandpiper (endangered) and Henslow's Sparrow (threatened), are breeding in the area.

Upland sandpipers were heard every day of the survey. Their calls can be heard from a long distance and appeared to be coming from the NW, the S and the SW.

Nine different birds were calling during 1 count day. Upland Sandpipers were seen feeding in several of the planted sunflower strips. The nesting areas appears to be in taller grass along the higher ridges as the bird's behavior was to circle and then drop rapidly into the grass on the ridges. No nest was found by accident or was searched for by the researcher.

Henslow's sparrows have been making a come back in Southern Illinois. They arrived at Double T in late June and established wide spread territories.

RECOMMENDATIONS

1. Keep the current larger grassland habitat areas the same since there are great results now for the grassland bird populations. Cut and treat isolated trees such as Cottonwood and Mulberry within the larger grassland areas. Over time, these trees will reduce the value of the grasslands to birds (Jim Herkert-private communication) as they will fragment the size of the grasslands and provide perches for raptors. These trees also appear to be used by Red winged Blackbirds which are competing with the Bobolinks.

2. Maintain the current low disturbance level in the grasslands during the bird breeding season. The fishermen appear to stay near the lake shores.

3. Make some grassland habitat units larger by planting grasses and forbs on some of the adjacent interior crop fields. The highest priority area for grassland habitat restoration is the north part of the larger field between the two Tee's as this would provide a corridor between the grasslands which currently have the highest density of grassland birds. Seeding a wide band in the north part of this field with native plants or legume pasture then left uncut would add to the amount and quality of the habitat for grassland birds.

4. With the state endangered Upland Sandpipers using the planted sunflower strips for feeding during breeding season, it is imperative that they have left the area before Dove hunting season begins to reduce the possibility of scaring them from the area or hunters mistaking the sandpipers for doves.

APPENDIX I BIRD SURVEY SAMPLE POINTS 2002

West Part
DOUBLE T SWFA

Illinois Department of Natural Resources