

Final Report: Bird Point Counts at the Neal Smith National Wildlife Refuge, Summer 2002

Liessa Thomas started gathering bird point count data at Neal Smith NWR 8 years ago as part of her masters thesis at Iowa State University. There has been little data collected over the years documenting avian response to large-scale prairie restoration. Liessa finished her M.S. in 1995; however, data on avian richness and diversity in response to prairie restoration continued to be collected annually. The largest change in the landuse at the refuge over the years has been the conversion of crop land into native prairie plant community. The transition zone between prairie and woodland, savanna, is being developed. For the most part, the remnant grass, woody, and riparian areas have been left undisturbed. There is a length of Walnut Creek going through the refuge that has been channelized.

The methods used to do the point counts are those described in Liessa's thesis. There was one count done at each point. In the past, 3 counts were done at each point, but this method was changed when it was determined little or nothing was gained statistically for the greater investment economically.

A dot or period was placed at the end of the 4 character AOU code on the data sheet when it was recorded during the second half of the survey (5-10 minutes or T2) for each point. Also, an AOU code was created to account for unidentified meadowlarks. It was UNME for "unknown meadowlark".

The counts were done between the dates of June 1st and July 13th, 2002. The counts in the bison confinement were done on 3 dates with the assistance of refuge staff. I would like to thank Paul and Rick for their assistance in taking me around to the points in the confinement and keeping an eye out for roaming buffalo. The bison confinement counts were done on June 24th, 26th, and July 1st.

The surveys were done in the morning starting approximately ½ hour before sunrise (5:30) and concluding no later than 10:00. The weather (rain) caused me to stop the counts on 2 occasions. Heavy morning winds greater than 12 mph may have stopped a planned session from starting, but never interrupted a session already in progress.

There were a total of 61 species of birds recorded in the summer of 2002 (see table). Species associated with edge habitat were the most prevalent with the top 2 species, the red-winged blackbird (RWBL) which appeared on 44 points and totaled 135 birds, and the American goldfinch (AMGO) 45 points and 95 birds both being 'edge' species. The third most common was the Common Yellowthroat (COYE), 39 points, 54 birds also an 'edge' species. There were 13 species that appeared on a single count. They were: American Crow, Barred Owl, Cedar Waxwing, Chipping Sparrow, Eastern Bluebird, European Starling, Lark Sparrow, Purple Martin,

Sharp-Shinned Hawk, Tree Swallow, Tufted Titmouse, Wild Turkey, and Wood Thrush. It is important to note that many of these species were observed traveling between points, and so appearing on a single count does not necessarily mean that all of these species are uncommon on the refuge. Some species observed but not on the counts were Northern Bobwhite, Northern Harrier, and Loggerhead Shrike to name a few.

The breakdown of the 4 major vegetation communities and the number of counts per community were as follows: Herbaceous-32, Riparian-27, Woody-26, and Crop-24 for a total of 109 point counts. Riparian habitats had the highest number of birds observed and the crop areas had the lowest: Riparian-237 birds, Woody-199 birds, Herbaceous-123 birds, and Crop-56 birds. There were 3 points where zero birds were recorded during the survey. They were points, all crop fields, were 53, 100, and 187,

One of the directives of the refuge is to plant and develop native prairie communities. The crop ground is the primary area where this is being implemented and the former crop point becomes a herbaceous point. There were 5 new crop points located on the refuge to keep the sample size for that habitat type near equal to the other 3. There was one new point in the northern third of the refuge (point 185), 2 in the middle third (186 and 187), and 2 in the southern third (183 and 184).

Henslow's sparrows were once again recorded on the refuge. There was one point in the bison confinement (point # 40) and 2 outside the confinement (17 and 66) for a total of 5 birds. Point 66 is just northeast of the Learning Center and a new area for Henslow's this year.

The numbers as compared to last year seem to be very similar with a couple exceptions. First there were fewer Dickcissels and Grasshopper Sparrows on the counts. Most mornings were very warm and perhaps birds were out foraging early before the heat of the day set in. Most of the Meadowlarks seen this year were Eastern Meadowlarks as opposed to last years Western Meadowlarks being more prevalent. Pheasant broods were everywhere starting about mid June. Also saw several Wild Turkeys in the southern and south-central area of the refuge one of which was roosted and made it on a point count (point 87).

REFERENCE:

Thomas, Liessa H., E. E. Klaas. Breeding Birds of a Large-Scale Tallgrass Prairie Restoration in Iowa: Monitoring Abundance and Frequency of Occurrence. Master's Thesis, Iowa State University, Ames. 1999.

2002 NSNWR Bird Surveys, Species Abundance

COMMON NAME	SPECIES	NO. POINTS	TOTAL BIRDS
Red-Winged Blackbird	RWBL	44	135
American Goldfinch	AMGO	45	95
Brown-Headed Cowbird	BHCO	30	54
Common Yellowthroat	COYE	39	54
House Wren	HOWR	33	52
Gray Catbird	GRCA	31	42
American Robin	AMRO	24	35
Northern Cardinal	NOCA	19	32
Dickcissel	DICK	20	29
Mourning Dove	MODO	22	27
Rose-Breasted Grosbeak	RBGR	18	26
Blue Jay	BLJA	15	25
Indigo Bunting	INBU	20	25
Song Sparrow	SOSP	20	22
Common Grackle	COGR	12	17
Downy Woodpecker	DOWO	17	17
White-Breasted Nuthatch	WBNU	12	17
Barn Swallow	BARS	10	15
Black-Capped Chickadee	BCCH	7	14
Northern Oriole	NOOR	11	13
Vesper Sparrow	VESP	11	12
Yellow Warbler	YWAR	12	12
Brown Thrasher	BRTH	10	11
Red-Bellied Woodpecker	RBWO	9	11
Grasshopper Sparrow	GRSP	8	10
Willow Flycatcher	WIFL	6	10
Killdeer	KILL	5	9
Northern Flicker	NOFL	8	9
Eastern Meadowlark	EAME	7	8
Eastern Wood-Peevee	EAWP	8	8
Sedge Wren	SEWR	5	8
Field Sparrow	FISP	7	7
Unknown Meadowlark	UNME	6	7
Yellow-Billed Cuckoo	YBCU	7	7
Bobolink	BOBO	3	6
Hairy Woodpecker	HAWO	5	6
Horned Lark	HOLA	3	6
Eastern Kingbird	EAKI	3	5
Henslow's Sparrow	HESP	3	5
Orchard Oriole	OROR	4	5
Red-Headed Woodpecker	RHWO	5	5
Ring-Necked Pheasant	RNPH	2	4
Red-Eyed Vireo	REVI	3	3
Savannah Sparrow	SASP	2	3
Upland Sandpiper	UPSA	3	3
Great-Crested Flycatcher	GCFL	2	2
Red-Tailed Hawk	RTHA	2	2
Rufous-Sided Towhee	RSTO	2	2
American Crow	AMCR	1	1

Barred Owl	BAOW	1	1
Cedar Waxwing	CEDW	1	1
Chipping Sparrow	CHSP	1	1
Eastern Bluebird	EABL	1	1
European Starling	EUST	1	1
Lark Sparrow	LASP	1	1
Purple Martin	PUMA	1	1
Sharp-Shinned Hawk	SSHA	1	1
Tree Swallow	TRES	1	1
Tufted Titmouse	ETTI	1	1
Wild Turkey	WTUR	1	1
Wood Thrush	WOTH	1	1
No Birds In Count	NONE	2	0

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