Title

Bird Communities Associated with the Biocore Prairie Restoration Site-2014 Report

Names of Project Director/Colleagues

Mara McDonald, Ph.D. MASTER BANDER/PI
Matt Hayes SUBPERMITEE AND CO-COORDINATOR
Jackie Edmunds SUBPERMITEE AND CO-COORDINATOR

Primary Objectives of Project

- To follow changes in the bird and mammal species composition with changes in stages of prairie restoration

- To provide a research and teaching resource for natural history studies utilizing live animals to the University, the Madison community, the State of Wisconsin, and the United States Geological Society.

- To promote outreach to the University and Madison community by teaching workshops, leading field trips to the site, helping on the site, and presenting to K-12 schools and community groups.

- To train volunteers in bird banding, species identification, field techniques, data collection and entry, and data analyses.

- To collaborate with
- Dr. Janet Batzli et al., UW-Biocore Program, by training/showing students about bird research.

Dates Station Opened: April 19-October 25, 2014 (14 days opened for banding)

Results and Accomplishments (January 1-December 31, 2014)

Our banding summary is below

Number of Birds Banded (includes recaps):

Biocore Prairie	
Old Prairie	73
New Prairie	23

Number of species: **21**

Number of Banding Days **14**

Number of sites:
Biocore Prairie (Old Prairie (Areas 1a, 1b, 2)/ New Prairie (Area 3);

Number of recaptures: 15 (3 same day recaps)

SPECIES NUMBERS

TABLE 1. The number of individuals banded (excluding recaps) for 2001-2015 for each species. Some, like the American Goldfinch, are consistently high in our banding numbers, although the number of recaptures is low (TABLE 2). Chipping Sparrows are consistently present across years, as are Baltimore Orioles and Black-capped Chickadees. Northern Cardinals, Red-eyed Vireos, Indigo Buntings, and several other species are consistent in the prairies, probably coming from the adjacent woodland. House Wrens are consistent breeders in the prairies; Common Yellowthroats started breeding in the prairies around 2005, and are the most frequently recaptured species. Many of the recaptures are Hatch Year birds. Eastern Phoebes and Eastern Wood-Pewees are few, but show up consistently in our banding from year-to-year. The same trend is true for Red-eyed Vireos, Northern Cardinals, Ruby-crowned Kinglets, and Swamp Sparrows. SEE TABLE 1 attached.

RECAPTURES

TABLE 2. The number of recaptures for each species across banding years. American Goldfinches have low recapture rates, while Song Sparrows and Common Yellowthroats are somewhat consistently higher over years. White-throated Sparrows (WTSP), which pass through in the fall, had a remarkable

recapture rate. These data suggest that wintering sites, where species stopover, are important for migrants. The number of WTSP banded after 2005 falls off as do their numbers due to the succession of the tallgrass prairie. The Old and the New Prairies were both coming of maturity and offered a more diverse habitat. WTSP prefer low grassy areas.

TABLE 2. Number of recaptures by species across years

			NUMBER OF RECAPTURES										
SPECIES	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
AMERICAN GOLDFINCH	1	1	1					1		1			1
AMERICAN TREE SPARROW*		2	1	1									
BALTIMORE ORIOLE**	1	1			1		2			3			
BLACK-CAPPED CHICKADEE	1	6	1	3		1	1	2	3				1
BROWN-HEADED COWBIRD	1												
COMMON YELLOWTHROAT**	1	1		1		2	6 (1 recap 3X)	5 (1 recap 2X)	13	11			6
EASTERN BLUEBIRD**				1									
FIELD SPARROW	1												
GRAY CATBIRD**	3	7	1	2	1	1	1		1	3			1
HOUSE WREN**	1			1		1			5				2
INDIGO BUNTING**	1		1					2 (1 recap 2X)					1
NORTHERN CARDINAL	1				1								
RED-BELLIED WOODPECKER			1										
RED-EYED VIREO**				1									
RED-WINGED BLACKBIRD**						1							
SLATE-COLORED JUNCO	2	2											
SONG SPARROW**	7	6	3	4	2	4	1	5	6	7			1
SWAMP SPARROW									1				
WHITE-BREASTED NUTHATCH*			1										
WHITE-THROATED SPARROW*	1	10	1	4									

TREE SWALLOW**						1							
YELLOW WARBLER									3				
* migrant species ** summer breeder	22	36	11	18	5	11	11	15	32	25			13

TABLE 3. The recapture data for each bird recaptured in 2014. Highlighted data in **Table 3** designates those individuals who are more than 1 year old when recaptured. He net/age/sex data for the original and recapture dates allow us to assess site fidelity. For example, BCCH (Black-capped Chickadee) was first netted as a Hatch year bird in M, yet recaptured 2 years later in Net D in the woodland. The INBU (Indigo Bunting) was netted 7 years apart in the new prairie in adjacent nets.

TABLE 3: Comparison of Recap Records for 2014

			BIOCORE	PRAIRIE				
RECAP DATE	SPECIES	BAND NUMBER	ORIGINAL CAP DATE	NET/AGE/ SEX	RECAP DATE	RECAP NET/ AGE/ SEX	AGE	
	BCCH	2280-72749	8/4/12	M/HY/U	10/25/14	D/AHY/U	2	
	COYE	2410-77753	7/21/12	G/SY/M	9/27/14	M/AHY/M	2	
	AMGO	2410-77920	8/16/14	M2/AHY/F	8/16/14	M2/AHY/F	UNKNOWN	
	AMGO	2410-77920	8/16/14	M2/AHY/F	8/16/14	M2/AHY/F	UNKNOWN	
	SOSP	1811-98821	7/26/14	A/HY/U	7/26/14	I/-/U	<1 YEAR	
	COYE	2410-77765	5/18/13	M2/AHY/F	7/26/14	M2/AHY/F	1	
	HOWR	2280-72646	7/26/14	A/HY/U	7/26/14	A/-/U	<1 YEAR	
	COYE	2410-77998	5/8/13	G1/AHY/M	7/5/14	M2/AHY/M	1	
	COYE	2410-77998	8/3/13	G1/AHY/M	5/31/14	G/AHY/M	1	
	COYE	2280-72703	5/21/11	A/SY/M	7/5/14	M2/AHY/M	3	
	INBU	1821-54234	6/3/07	B1/ASY/M	6/28/14	M2/AHY/M	7	
	HOWR	2410-77913	6/21/14	A/AHY/F	6/21/14	A/-/-	UNKNOWN	
	GRCA	1801-55761	9/20/13	M/AHY/M	5/31/14	M/AHY/M	1	
	GRCA	1801-55761	9/20/13	A/ASY/M	5/31/14	M/AHY/M	1	

	COYE	**2280-72653**	**6/23/12**	**I/HY/U**	**5/31/14**	**G/AHY/M**	**2**	

TABLE 4. Recaptures by species and age for 2014. Ages of recaptured species are distributed about equally among the age classes.

SPECIES	SAME YEAR	1 YEAR	1.5 YEARS	2 YEARS	2.5 YEARS	3 YEARS	7 YEARS
AMGO	1						
BCCH				1			
COYE				1			
COYE		1					
COYE		1					
COYE						1	
COYE		1					
COYE					1		
GRCA			1				
HOWR	1						
HOWR	1						
INBU							1
SOSP	1						
TOTAL	4	3	1	2	1	1	1

Research/teaching resource

We continue to work with Dr. Susan Paskowitz, Department of Entomology, to collect ticks, although we have encountered few in the last several years. Our catch rate is the opposite of what one would expect because Dr. Paskowitz has found an increase in ticks.

We continue to look for students/others who would like to do detailed analyses of the bird communities. To date, two censuses have been done-2004 and 2007- revealing some very interesting patterns. The in-depth censuses help us understand better how the community evolves. We plan to census again this year to observe comparative species diversity and abundance. We will include the Old Field again, as its structure has changed considerably in the last decade.

We analyzed the recapture data from the last 10 years for Song Sparrows (SOSP) and Common Yellowthroats (COYE). We noted that SOSP were the most frequently banded species, but had the lowest recapture rates. COYE did not start using the prairie until about 2005, but have the highest recapture rates. Using MARK, a software program developed for analyzing population dynamics using recapture data, our analysis suggested that COYE young stayed in the prairie and returned again the following years, whereas SOSP young disappeared. We don't believe SOSP are dying at high rates, but are likely moving to other sites. We'd like to study this more closely. Our proposal for 2016 is to observe habitat use by the two species to determine if SOSP young disperse or actively avoid the nets.

We also intend to increase the number of net sites in the New and Old Prairies.

Outreach, Teaching and Research

May, 2014 Field Day
Sponsored by Madison Audubon Society and
Friends of the Lakeshore Nature Preserve

September 13, 2014 Canceled due to weather

Personnel Involved

Volunteers at the station (Bold-face type designates permitee).

Pat	Becker
Cal	Bruce
Willa	Cal
Erin	Crey
Jackie	**Edmunds**
Megan	Fitzpatrick
Tori	Fuller
Tyler	Garwood
Sherry	Gatzler
Kris	Halmon
Matt	**Hayes**
Jeremy	Hemberger
Caliope	Jordahl

Kimberly	Kelly
Sandra	Kinzer
Stephanie	Kolwaczyk
Cody	Lane
Matt	Ledger
John	Letlebos
Quinn	Langdon
Makie	Matsumoto-Hend
Mara	**McDonald**
Casey	Menick
Adam	Mohr
Ryan	Monarty
Trish	O'Kane
Alice	Ogden-Nussbaum
Molly	Parren
David	Peris
Monique	Picon
Kathryn	Prince
Kelsey	Rayment
Daniel	Rodriguez
Henry	Schmit
Megs	Seeley
Frances	Shepherd
Miton	Thomas
Scott	Westler
Holly	Westler
Caroline	Zelinka

Lakeshore Nature Preserve Sites Involved

Biocore Prairie Restoration Site Area 1a, 1b, and 2 (Old Prairie) and Area 3 (New Prairie).

Future Directions of Project

We intend to continue collecting data on species diversity in the prairies versus old field when we can, train and mentor students, and band birds that come through our site. We also intend to begin to analyze our recapture data for population dynamics of several species.

In addition, we will proactively deposit our long term data with several groups who have requested them.

TABLE 1. Number of individuals in each species across the years.

COMMON NAME	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOT
cadian Flycatcher							1			2					3
merican Goldfinch	20	18	30	22	13	8	18	73	5	2	16	52	12	20	32
American Redstart		2	6		3	1	1	1	1	2		1		1	1
American Robin		6		1			2	3	3	3	2	2	4	4	3
erIcan Tree Sparrow	14	3	3	10	4		1				2	2	14		5
Baltimore Oriole		9	5	2	13	4	6	5	3	13	12	7	4	5	8
k-capped Chickadee	6	3	7	3	9		4	3	3	6	4	15	3	1	7
Blue Jay			1				1			2					4
k-and-White Warbler							1	1		2					4
e-gray Gnatchatcher									1						1
ue-winged Warbler							1			1					2
Brown Creeper	1			1											2
wn-headed Cowbird		5	3	2	3	1	3	1		1		1			2
Brown Thrasher		1	1	2	3	1	1	5		1					1
Cedar Waxwing		5		7	2	4		4		1			1	1	2
stnut-sided Warbler			1				1								2
Chipping Sparrow		14	4	14	29	2	3	1		4	2	2	1		7
Common Grackle										1					1
mmon Yellowthroat		5	11	10	15	3	13	12	18	22	10	10	8	5	15
nnecticutt Warbler	1														1
Downy Warbler		3	1	4				1	1		1		3		1
Eastern Bluebird			3	5	2	1		1	44	32	38	2	1	1	13
Eastern Kingbird		3		1	1				1						7
Eastern Phoebe	2	2	2	1	1	1	1		1	4	1	2			1
Eastern Towhee					1										1
stern Wood Pewee		1	2	4	1		1	2				1			1
European Starling		1				9									1
Field Sparrow		2	1		3	1	9	2	1		1	1			2
Fox Sparrow	2		1	2					1		1				7
den-crowned Kinglet		1													1

COMMON NAME	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOT
Gray Catbird	6	25	19	25	24	12	16	22	19	16	14	10	7	18	23
ay-cheeked Thrush			2							1					3
at Crested Flycatcher		1	1	5											8
Hairy Woodpecker		1										1			2
Hermit Thrush	1			5			2			2	3			3	1
House Finch		4	6	5		1	2	1							1
House Finch		1		1		1		2					1		6
House Wren		10	9	13	12	5	8	16	7	11	9	4	4	7	11
Indigo Bunting		14	6	8	7	6	8	4	3	1	1	1	1		6
Killdeer		1													1
Least Flycatcher		3	2		1	1	4			1		1		1	1
Lincoln Sparrow	2	1	7	5	5		2	2		5					2
Magnolia Warbler		1	2	1	1	2	2	1	2			2		1	1
Mourning Warbler			1		1										2
Myrtle Warbler	1	2			2		1	1				3			1
Nashville Warbler	2	14	3	1	3	3	4		1						3
Northern Cardinal	3	4	2	5	4	2		3	5	2	2	3			3
rthern Roughwinged Swallow		1	1									1			3
rthern Waterthrush					1**										0
nge-crowned Warbler		1	2		4				1						8
Orchard Oriole											1				2
Ovenbird				1**	1										1
Philadelphia Vireo		1			1										2
Purple Finch														1	1
-bellied Woodpecker		1			1	1									3
Red-eyed Vireo		2	2	4	3	1	1	2	3	1	1	2	1	5	2
e-breasted Grosbeak			1	1									2		4
d-winged Blackbird		4	2			2	8	2	1	6	8	1	4		3
by-crowned Kinglet	3	5	3	14	5		1	1		2	1	1			3
avannah Sparrow		1	4	5	1		3			1		2			1
Sedge Wren							1								1

COMMON NAME	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOT
late-colored Junco	20	12	12	10	3						3		1	1	6
Song Sparrow	5	31	29	40	48	21	50	29	29	28	28	15	15	17	39
Swainson's Thrush					1**		1	2		1					6
Swamp Sparrow	1	1	6		1	1	23	5	1	4	11				5
ennessee Warbler	1	17		5	2		1	2				1			2
Trail's Flycatcher									1						1
Tree Swallow		2	4	5	4		4		4		1	2	1		2
Warbling Vireo		1		1	4				1			1	1	2	1
estern Palm Warbler	2	9	1	1	5	1	4	1		1	2	5			3
te-breasted Nuthatch		1		2							1			1	5
ite-crowned Sparrow		1	3	1											5
ite-throated Sparrow	18	13	49	37	29		14	5	1	2	7	1		1	17
Willow Flycatcher								1				1			2
Wilson Warbler			2	1	2		1				2	1			9
ow-bellied Flycatcher			2				1								3
ellow Palm Warbler	2		2				3								7
llow-shafted Flicker				1				1							2
Yellow Warbler		2	6		9	1	4	4		6	5	1		1	3
TOTAL	113	272	273	293	286	97	237	222	162	190	190	158	89	97	27