



Permit 2001-9

Bird Communities Associated with the Biocore Prairie Restoration Site

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Objectives of project

- To follow changes in the bird 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.
 - Dr. Janet Huie, Carthage College, on collection of ticks associated with Lyme Disease (new objective as of 8/02).

Dates station opened: April 2-November 12, 2005 (26 days opened for banding)

Results and accomplishments in 2005

Changes in bird communities studied

Number of birds netted: 287

Number of species: 45

We continue to collect data from banded birds. This year we had 18 recaptures from nine species. Eight of the species from which we recaptured individuals were from migratory species. Most of the recaptured birds were first banded in 2005. However, there are exceptions: A Black-capped Chickadee was first banded in September 2004 and recaptured in June 2005; another was banded 13 months earlier; a Common Yellowthroat was first banded in May 2004 and recaptured in September 2005; a Song Sparrow was banded 10 months before. The record recapture, though, was an American Tree Sparrow, first banded in April 2002 and recaptured in 2004 and April 2005.

These recapture records become truly significant the longer there is between the first banding and the last recorded banded, as they provided longevity data. They are also significant for showing the return of individuals to the same areas during migration, supporting the growing idea that migrant birds return to the same areas year after year, even on migration. This return of migrating birds increases the importance of maintaining the Picnic Point-Lakeshore Nature Preserve as areas of importance to birds (Table 1).

Migrants were delayed in showing up in the Biocore area this year and other banding stations in the east saw late arrivals, as well. This year we picked up three new species- Eastern Towhee, Northern Waterthrush, and Swainson's Thrush. In addition, we netted another Overbird, this time in the Biocore Prairie (Table 2).

The number of birds per net-hour differed between Biocore Prairie and our Control Grassland by an order of 8.8 fold, with Biocore averaging 1.46 bird/net-hour and the Control averaging 0.16 bpnh. These results are consistent with the 2004 differences we observed both mistnetting birds and point-census counts.

Table 1. Number of recaptures across species for 2004.

COMMON NAME	NUMBER OF RECAPS	
	2004	2005
American Goldfinch	1	
American Tree Sparrow*	1	1
Black-capped Chickadee	1	3
Common Yellowthroat*		1
Eastern Bluebird*		1
Gray Catbird*	1	2
House Wren*		1
Indigo Bunting*	1	
Red-bellied Woodpecker	1	
Red-eyed Vireo*		1
Song Sparrow*	3	4

White-breasted Nuthatch*	1	
White-throated Sparrow*	1	4
* migrant species		

Table 2. Species banded in one year and not the other.

COMMON NAME	2003	2004	2005
American Redstart	X		X
American Robin		X	
Blue Jay	X		
Brown Creeper		X	
Cedar Waxwing		X	X
Chestnut-sided Warbler	X		
Downy Woodpecker	X	X	
Eastern Kingbird		X	X
Eastern Towhee			X**
Fox Sparrow	X	X	
Hermit Thrush		X	
House Sparrow		X	
Least Flycatcher	X		X
Mourning Warbler	X		X
Northern Rough-winged Swallow	X		
Northern Waterthrush			X**
Orange-crowned Warbler	X		X
Ovenbird		X**	X
Philadelphia Vireo			X
Red-bellied Woodpecker		X	X
Red-breasted Grosbeak	X	X	
Red-winged Blackbird	X		
Swainson's Thrush			X**
Swamp Sparrow	X		X
Tennessee Warbler		X	X
Warbling Vireo		X	X
White-breasted Nuthatch		X	
Wilson's Warbler	X	X	X
Yellow-bellied Flycatcher	X		
Yellow-shafted Flicker		X	

Research and teaching resource

The Biocore Prairie Bird Banding Station serves as a resource for natural science researchers and teachers on and off campus in biology, zoology, microbiology, plant pathology, wildlife ecology, and environmental studies.

1. We have worked with Dr. Evelyn Howell (Department of Landscape Ecology), Dr. Ann Burgess (former Director, Biocore Program), and Dr. Janet Batzli (Director, Biocore Program) to integrate the bird banding opportunities into the Biocore curriculum. In addition, Biocore 301 students were given the option to obtain extra credit by observing and writing about the activities in the Banding Station. Several of the Biocore students took advantage of extra credit with us.
2. We are collaborating with Dr. Janine Clemmons (former graduate student and currently Honorary Fellow in the Department of Zoology) on her long-term studies of banded Black-capped Chickadee populations on Picnic Point. This population was originally banded by Dr. Jack Hailman and his students more than 20 years ago for behavioral and vocal studies.
3. We continue to work with Dr. Janet Huie, Carthage College, to collect - ticks for the study of Lyme Disease virulence across Wisconsin.
4. Kendra Johnson and I submitted a paper of her project on the difference in bird species diversity between the Biocore Prairie and a control grassland as a paper to The Condor. We are waiting to hear from reviewers.

Workshops:

One workshop on banding techniques was held in winter, 2005.

Outreach

May 21, 2005

Madison Audubon Field Trip;

September 10, 2005

Madison Audubon Field Trip

Our volunteer base continues to grow. We have attracted several very good students and others who come with some banding experience, and certainly, an interest in banding. My priorities are to train and obtain permits for these several expert volunteers early next season.

Future directions of project

- Continued collaboration with Dr. Janine Clemmons on following Black-capped Chickadee populations in Picnic Point.
- Continued collaboration with Dr. Janet Huie on Lyme Disease.
- Measuring differences in plant diversity between the restored prairie and the control site.
- Madison Audubon Society Field Trips scheduled for May and September, 2006.
- Training and permitting of several of our successful volunteers.
- We will continue to welcome visitors to our site and to encourage more individuals to volunteer. We also intend to welcome Biocore students to our site as part of their extra credit coursework. Next season, we hope to move our “control” nets to the adjacent field that is just being planted with prairie seed this year. The advantage of doing this is that we will be

observing changes in bird communities from the beginning of the prairie plantings and the sites will be closer to our base of operations. We feel we have adequate data from the old field site. We also hope to host a summer student for a research project again.