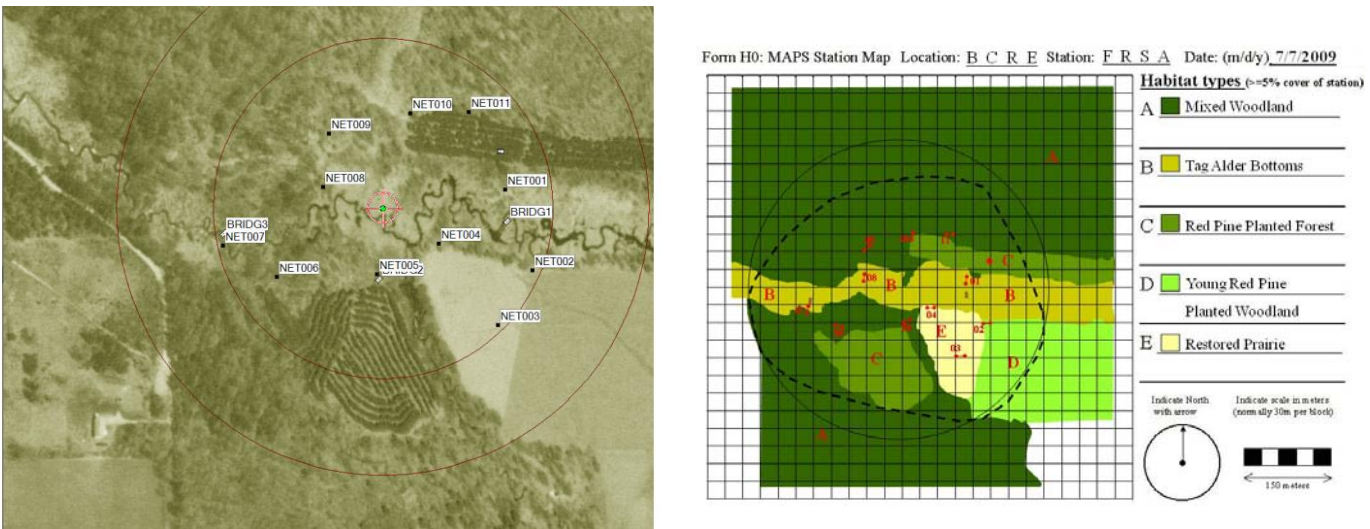


Beaver Creek Reserve
 Henke Farm Field Research Station
 MAPS 2011 Summary Report

The [MAPS](#) (Monitoring Avian Productivity and Survivorship) Program was created by The Institute for Bird Populations ([IBP](#)) in 1989 to assess and monitor the vital rates and population dynamics of over 120 species of North American land birds. There are approximately 500 MAPS sites operated by public agencies and private organizations cooperating to provide long-term data on the productivity, survivorship, and population estimates of local breeding birds. Beaver Creek Reserve has operated a MAPS station at the Henke Farm Field Research Station continuously since 2003.

MAPS sites operate under specific protocols using constant-effort mist netting and banding of local birds in a suitable 20-hectare area during the breeding season. The BCR MAPS site straddles Beaver Creek on the west end of the Henke property. As shown below, the site encompasses five major habitat types. Eleven mist nets have been set up at “random” locations in the 8-hectare center of the area. The specific net locations were chosen to provide good opportunities to catch resident breeding birds in each habitat. Some nets catch more birds than other nets do. Sometimes this is because some habitats have more birds than others do. It may also be because the birds apparently don’t always agree with our assessment on the suitability of these locations as good flight paths.



Aerial view and Habitat Assessment Form showing Habitat Types of the BCR MAPS Site

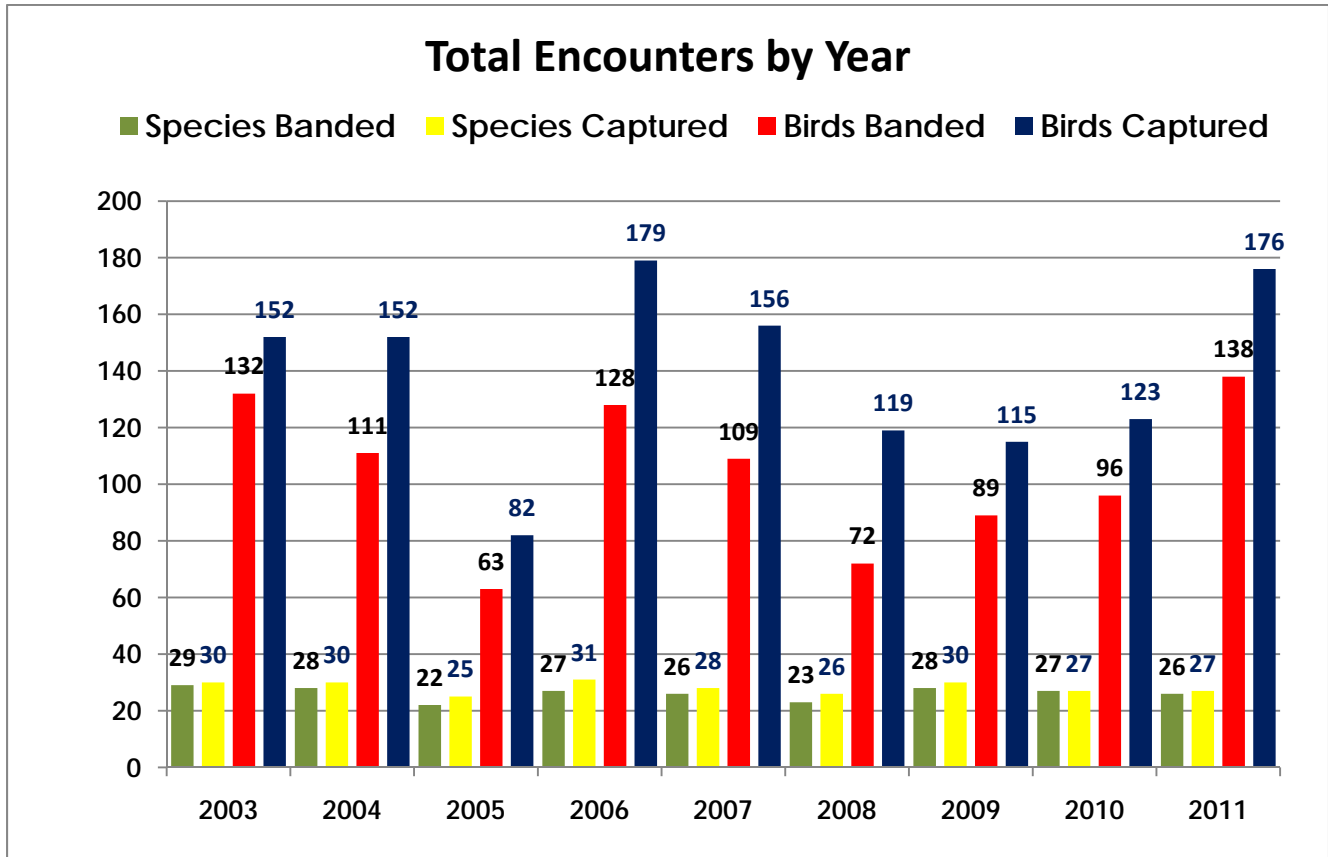
The nets are opened within one half hour of sunrise and closed six hours later on one day in each of seven consecutive ten-day periods starting May 31st. The schedule is designed to start after most spring migration has ended and finish before fall migration has begun. Banding dates in 2011 were: June 2, 16, 24 & 30; July 14 & 21; and August 4.

2011 was our ninth season. When we arrived to open the nets for the first time on June 2, it seemed that we were off to the worst start ever. We had experienced an unusually cold and prolonged spring and were concerned that this would negatively impact early breeding species. At the end of last year we disposed of the battered and bear-damaged screen tent we had used as a base for our banding operations. A new, permanent replacement was under construction, but we had been informed that it wouldn't be on site for another week. We had also just learned that one of our regular banders had strained his back and wouldn't be there. To top it off, as we entered the site we discovered that two of our nets had apparently been knocked down and damaged by a bear. Not to worry. Although a bear was sighted nearby later on, we had no more net damage, by the second session all backs were strong, our brand new banding palace was delivered, and the birds this year were more than cooperative.

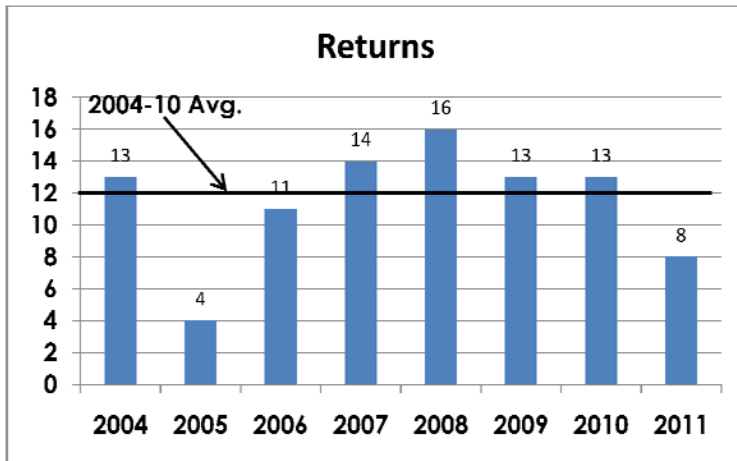
Weather in our area, like much of the country, was considered by many to be abnormal this summer. If so, it didn't seem to affect our banding activities. We did experience a late, cool spring, which apparently delayed migration and probably delayed the start to the breeding season. Conversely, weather throughout June was very pleasant. July brought fairly hot, humid weather and extraordinarily high precipitation. Compared with long term averages however, the temperatures in July were only slightly above normal. Rainfall, on the other hand, was well above average. By the first week of August the rains had ended and temperatures were unusually pleasant. We did have to reschedule one session in June because of rain, but despite the high rainfall in July, we had only two banding sessions scheduled for that month, and both days were warm and dry. Unlike past years, we didn't experience any problems from high water or flash floods, and we didn't have to close early or reschedule due to wind or heat.

As it turned out, 2011 was one of our most productive years. We certainly can't complain about being affected by the weather, and are pleased to report that we actually had a very enjoyable season.

Overall, as shown in the following graph, total captures (176) were well above the previous eight years' average (134.75) and only three below the highest ever. The number of new birds banded (138) was the highest ever. The number of species captured (27) was slightly below average (28.375) while the number of species banded (26) was right at the prior year's average (26.25).



This year's banded birds included our first ever Yellow-bellied Flycatcher and Canada Warbler, bringing our total species banded in the nine years to 50 (including Traill's Flycatcher). In addition, there were 34 recaptures of 9 species this year (prior year's averages 28.25 and 9.625 respectively). The recaptures included only 8 returns (birds banded in prior years) of 4 species (prior averages 12 and 7.43). The graph on the next page shows the number of returns by year. Considering the higher than normal number of total captures and recaptures this year, the low number of returns is unexpected. With data for only 9 years from one site, it is not possible to tell if this is significant, but it may be cause for some concern.



2011 Returns with Year of Banding

- Common Yellowthroat — 2009
 - Common Yellowthroat — 2010
 - Common Yellowthroat — 2010
 - Common Yellowthroat — 2008 (2009, 2010)
 - Gray Catbird — 2009 (2010)
 - Gray Catbird — 2010
 - Golden-winged Warbler — 2010
 - Song Sparrow — 2008 (2010)
- Prior returns are shown in ().*

Captures of warblers this year set an all time record, and were well above average. As stated earlier, they included our first ever Canada Warbler, almost certainly a late spring migrant. Common Yellowthroats again led the list, followed by a record number of Ovenbirds. As shown in the table below, the numbers of Golden-winged and Nashville Warblers captured were all time highs, while the number of Blue-winged tied the previous high. All were well above average.

COMMONNAME	Total	2003	2004	2005	2006	2007	2008	2009	2010	2011
Common Yellowthroat	197	20	24	16	18	26	26	17	25	25
Ovenbird	81	9	9	2	12	8	7	7	12	15
Golden-winged Warbler	53	8	5	3	8	4	6	2	7	10
Chestnut-sided Warbler	33	3	10	5	9	2		2		2
Blue-winged Warbler	25	2	8	2			1	2	2	8
Nashville Warbler	18	1	1			3	4	1	1	7
Black-and-white Warbler	15	3	2		2	4		1		3
Yellow Warbler	9	1	1	1	1	2	2		1	
American Redstart	6		1			2		1	1	1
Northern Waterthrush	2			1				1		
Tennessee Warbler	1							1		
Canada Warbler	1									1
Totals	441	47	61	30	50	51	46	35	49	72

Golden-winged Warblers (GWWA) are of special interest at the BCRE MAPS site. GWWA are listed as a species of special concern by several conservation organizations, and this past year a petition was submitted to add GWWA to the federal endangered species list. Cornell Lab of Ornithology has initiated a specific GWWA [Atlas Project](#) and a [Golden-winged Warbler Working Group](#) has been established to help conserve GWWA. Beaver Creek Reserve is one of only a [few MAPS sites](#) reporting GWWA. When MAPS records were last analyzed by IBP in 2006, the overall number of GWWA encounters was too small to determine statistically meaningful regional between-year changes in the numbers of adults and young captured and in the reproductive index.

In 2011 we captured and banded 7 new Golden-winged Warblers (1 Second Year Male, 1 After Second Year Male, 2 After Hatching Year birds — 1 Male and 1 Female, and 3 Hatching Year birds — 1 Male, 1 Female, and 1 of unknown gender). We also had three recaptures — an ASY Male originally banded in 2010 was recaptured twice, and the AHY Female banded in June was recaptured again in July. This number of captures continues to indicate that the population of Golden-winged Warblers appears stable at our MAPS site. However, we are in the transition zone between the ranges of GWWA and Blue-winged Warblers (BWWA), a species that hybridizes with GWWA (to the detriment of Golden-wings). The eight captures of BWWA indicate that this species is also stable, and may even be

increasing. Although scientists with the Golden Winged Warbler Working Group are doing targeted research in Wisconsin and Minnesota, and banding more GWWA than we are, the long term data we are collecting within the BWWA-GWWA transition zone using constant effort protocols has the potential to make a unique contribution to future GWWA conservation efforts.

The young red pine plantation adjacent to our prairie net site has continued to grow since we began this MAPS station in 2003, and now has become unsuitable for nesting grassland sparrows. These pines also now present a substantial barrier between the small restored prairie within our MAPS station and the larger prairie and pasture areas to the east where we observe many sparrows and other grassland species. Three sparrow species were captured this year. For the sixth straight year, no Clay-colored Sparrows were captured, and this year, for the first time ever, none were even observed in the area. Sparrow captures over the years are shown in the table below.

COMMONNAME	Total	2003	2004	2005	2006	2007	2008	2009	2010	2011
Song Sparrow	237	33	32	18	44	30	17	17	21	25
Chipping Sparrow	32	5	2	3	7	1	2	4	4	4
Field Sparrow	31	11	2	1	2	4	1	6	3	1
Clay-colored Sparrow	6	3	2	1						
Vesper Sparrow	3					1	2			
Savannah Sparrow	2	1							1	
Grasshopper Sparrow	1		1							
Totals	312	53	39	23	53	36	22	27	29	30

In addition to the two new species caught and banded in 2011, we observed three other new species at the site for the first time—Baltimore Oriole, Northern Rough-winged Swallow, and Warbling Vireo. The total number of species seen, heard, or captured at the site during MAPS operations now stands at 92 plus one hybrid. A full breeding status report is included at the end of this summary.

Our three most frequently encountered birds, Song Sparrows, Common Yellowthroats, and Gray Catbirds, were again our most common, in an almost virtual tie with 25, 25, and 24 captures, respectively. Captures of several other species were well above average, and only one species with a prior average of at least 3 birds per year, Black-capped Chickadee, was notably below average. Details of all species captured are shown in the table at the end of this report.

As shown below, the breakdown by age and sex changes somewhat from year to year.

Percentages of Captures

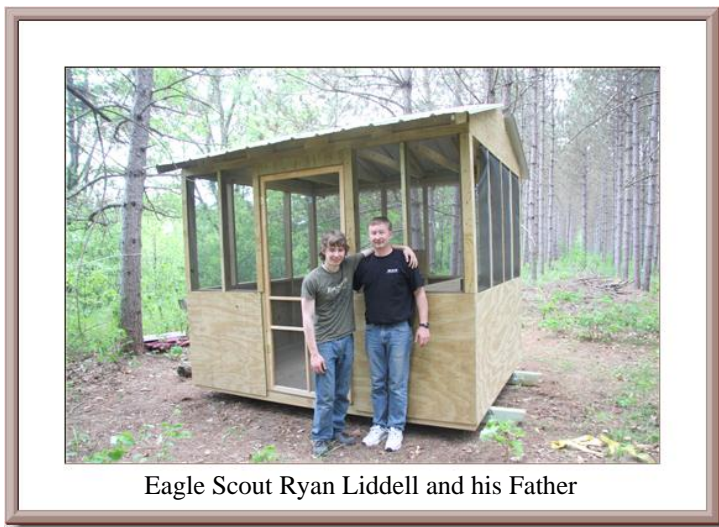
By Age

By Sex

Year	Total	AHY	ASY	HY	L	SY	U	F	M	U
2003	147	51	16	25	0	6	1	27	45	28
2004	146	39	23	12	1	23	2	34	46	20
2005	75	57	15	17	3	8	0	25	51	24
2006	172	56	11	21	0	11	1	38	38	24
2007	147	33	31	16	0	20	0	37	46	17
2008	112	30	47	7	3	13	0	42	47	11
2009	110	32	26	18	1	23	0	35	50	15
2010	117	56	19	16	1	8	0	39	44	17
2011	172	41	20	17	0	21	1	36	41	23

We want to give special thanks to Eagle Scout Ryan Liddell, his troop, and his father, for the new banding house. It is a big improvement to our site and is greatly appreciated by the banders.

Banders licensed by the [USGS Bird Banding Laboratory](#) oversee the operation of each MAPS session. Volunteers assist with recording data on the banding sheets, carrying birds from the nets, taking photos, releasing birds, and perhaps placing a band on a bird's leg. Volunteers require training for some activities, and there is no guarantee they will do more than observe on their first day. When opportunities allow, volunteers will be shown how to identify species and determine the age, gender, and other physical attributes of the birds. Trained volunteers are most helpful at the start of each session to help open nets, and there are typically more birds captured in the early morning than later in the day.



Eagle Scout Ryan Liddell and his Father

This year's visitors included ABA Young Birder of the Year, Rachael Butek along with her mother Frances and brother Jacob. Another visitor was John Jenks from Wild Rose, who monitors a Kestrel nest box there for us. We also welcomed frequent visits from Bill and Pat Henke, and the annual visit from the Henke's grandchildren and their parents.

Visitors are always welcome, and the likelihood of having an opportunity to see birds close up is quite high, especially early in the day. However, visitors must be aware that processing of the birds needs to be done rapidly, especially on hot days and while the parent birds are incubating or feeding young in the nest, so it may not always be possible to view birds up close for long. More than anything else, banders are responsible for the safety and welfare of the birds they study. This means that stress and risks of harm to the birds need to be minimized. Access to the banding area is restricted and numbers may be limited, so anyone wishing to visit must make arrangements beforehand by calling the Reserve in advance.

This year's banding participants were Alice Droske, Jeanette Kelly, Rick Koziel, Jim McCrady, Jim Murphy, Joe Palzkill, Judy Schwarzmeier, and Bruce Steger. Thanks to Alice and Judy for reviewing this report. Errors remain mine – **Bruce Steger**.

Total Captures

Species	Total	2003-2010 Average	2011	2010	2009	2008	2007	2006	2005	2004	2003
Song Sparrow	237	25.5	25	21	17	17	30	44	18	32	33
Common Yellowthroat	197	22.125	25	25	17	26	26	18	16	24	20
Gray Catbird	114	13	24	8	12	14	17	12	3	14	10
Ovenbird	81	9	15	12	7	7	8	12	2	9	9
Rose-breasted Grosbeak	57	6.625	12	3	5	7	8	12	1	5	4
Golden-winged Warbler	53	5.625	10	7	2	6	4	8	3	5	8
Indigo Bunting	49	5.5	5	2	1	6	13	6	8	3	5
Black-capped Chickadee	43	4.5	2	7	2	1	5	13	1	5	7
American Goldfinch	41	5	6	3	7	5	8	2	4	5	1
Chestnut-sided Warbler	33	3.75	2		2		2	9	5	10	3
Chipping Sparrow	32	3.375	4	4	4	2	1	7	3	2	5
Field Sparrow	31	2.5	1	3	6	1	4	2	1	2	11
Veery	28	2.875	1	4	5	2	4	3	1	3	5

Traill's Flycatcher	27	3.25	10	4	1	2	3	4		2	1
Blue-winged Warbler	25	2.875	8	2	2	1			2	8	2
Red-eyed Vireo	18	2	2		5		1	5	2	1	2
Nashville Warbler	18	2.125	7	1	1	4	3			1	1
Black-and-white Warbler	15	1.5	3		1		4	2		2	3
Eastern Bluebird	14	1	2		3	1		1	1		6
Ruby-throated Hummingbird*	14	1.625	2		1	4	2	2	2		1
Cedar Waxwing	13	1.625	3	2	2	2	1	2		1	
Scarlet Tanager	12	1.5	2	2	3	1		1	1	2	
Eastern Towhee	10	1		2		1		2		3	2
Yellow Warbler	9	1		1		2	2	1	1	1	1
Brown-headed Cowbird	6	0.625		1				1		3	1
Clay-colored Sparrow	6	0.375							1	2	3
Downy Woodpecker	6	0.5		2			1	1			2
American Redstart	6	0.75	1	1	1		2			1	
Black-billed Cuckoo	6	0.75	1	2		1		2			
Blue Jay	5	0.5		1			2	1			1
Alder Flycatcher	4	0.5			1		1		2		
Eastern Phoebe	4	0.25			1			1			2
Least Flycatcher	3	0.375				2	1				
Vesper Sparrow	3	0.375				2	1				
White-breasted Nuthatch	3	0.375		1	2						
Wood Thrush	3	0.375						1		2	
Yellow-billed Cuckoo	3	0.375						1	1	1	
Swainson's Thrush	3	0.25	1				1				1
Eastern Kingbird	2	0.25						1		1	
Hermit Thrush	2	0.125			1						1
Northern Waterthrush	2	0.25			1				1		
Savannah Sparrow	2	0.125		1							1
Tree Swallow	2	0.25						2			
Eastern Wood-Pewee	1	0.125				1					
Grasshopper Sparrow	1	0.125								1	
House Wren	1	0.125			1						
Northern Cardinal	1	0.125								1	
Purple Finch	1	0.125							1		
Red-breasted Nuthatch	1	0.125		1							
Ruffed Grouse*	1	0.125							1		
Tennessee Warbler*	1	0.125			1						
Canada Warbler	1	0.125	1								
Yellow-bellied Flycatcher	1	0.125	1								
Species	53	28	27	27	30	26	28	31	25	30	30
Birds	1254	137.75	176	123	115	119	156	179	82	152	152

* Captured but not banded

Note: Totals include 2 sparrows that escaped at the net without being identified as to species. Species totals include Traill's Flycatchers.

BCRE FRSA MAPS Breeding Status as of 9/1/2011

Species	Years		2011	2010	2009	2008	2007	2006	2005	2004	2003
	Present	Breeding									
Mourning Dove	9	9	B	B	B	B	B	B	B	B	B
Downy Woodpecker	9	9	B	B	B	B	B	B	B	B	B
Red-eyed Vireo	9	9	B	B	B	B	B	B	B	B	B
Blue Jay	9	9	B	B	B	B	B	B	B	B	B
American Crow	9	9	B	B	B	B	B	B	B	B	B
Black-capped Chickadee	9	9	B	B	B	B	B	B	B	B	B
Eastern Bluebird	9	9	B	B	B	B	B	B	B	B	B
Veery	9	9	B	B	B	B	B	B	B	B	B
Gray Catbird	9	9	B	B	B	B	B	B	B	B	B
Golden-winged Warbler	9	9	B	B	B	B	B	B	B	B	B
Yellow Warbler	9	9	B	B	B	B	B	B	B	B	B
Chestnut-sided Warbler	9	9	B	B	B	B	B	B	B	B	B
Black-and-white Warbler	9	9	B	B	B	B	B	B	B	B	B
Ovenbird	9	9	B	B	B	B	B	B	B	B	B
Common Yellowthroat	9	9	B	B	B	B	B	B	B	B	B
Eastern Towhee	9	9	B	B	B	B	B	B	B	B	B
Chipping Sparrow	9	9	B	B	B	B	B	B	B	B	B
Field Sparrow	9	9	B	B	B	B	B	B	B	B	B
Song Sparrow	9	9	B	B	B	B	B	B	B	B	B
Rose-breasted Grosbeak	9	9	B	B	B	B	B	B	B	B	B
Indigo Bunting	9	9	B	B	B	B	B	B	B	B	B
American Goldfinch	9	9	B	B	B	B	B	B	B	B	B
Traill's Flycatcher	9	8	B	B	B	B	B	B	B	B	T
Alder Flycatcher	9	8	B	B	B	B	B	B	B	B	T
White-breasted Nuthatch	9	8	B	B	B	B	B	B	B	B	T
Brown-headed Cowbird	9	8	B	B	B	B	B	B	B	B	L
Great Crested Flycatcher	9	8	T	B	B	B	B	B	B	B	B
Eastern Wood-Pewee	9	7	B	B	B	B	B	B	B	T	T
Ruffed Grouse	9	7	B	B	B	B	B	B	B	L	T
Tree Swallow	9	7	T	B	B	B	B	B	B	B	T
Blue-winged Warbler	9	7	B	B	B	B	B	T	B	B	L
Pileated Woodpecker	9	6	T	B	B	B	B	L	L	B	B
Ruby-throated Hummingbird	9	4	B	L	L	B	T	L	B	T	B
Red-shouldered Hawk	9	3	T	B	T	B	T	T	T	T	B
Red-winged Blackbird	9	1	T	T	T	T	T	T	B	T	T
Sandhill Crane	9	0	T	T	T	T	T	T	T	T	T
Clay-colored Sparrow	8	7	-	B	B	B	B	B	B	B	L
Cedar Waxwing	8	7	B	B	B	B	B	B	L	B	-
American Robin	8	6	B	B	B	B	T	B	B	T	-

B => Breeding confirmed in MAPS area

L => Likely breeding in MAPS area

T => Transient (Local breeding but probably not in MAPS area)

M => Migrant

BCRE FRSA MAPS Breeding Status as of 9/1/2011

Species	Years	Years	2011	2010	2009	2008	2007	2006	2005	2004	2003
	Present	Breeding									
Scarlet Tanager	8	6	B	B	B	B	T	B	B	L	-
Yellow-billed Cuckoo	8	4	T	-	B	T	L	B	B	T	B
Red-bellied Woodpecker	8	4	-	T	B	T	B	T	T	B	B
Nashville Warbler	8	2	B	T	T	T	B	-	T	T	T
Yellow-shafted Flicker	8	1	T	T	-	T	B	T	L	T	T
Northern Cardinal	7	7	-	B	B	B	B	B	B	B	-
Black-billed Cuckoo	7	4	B	B	L	B	T	B	-	T	-
Eastern Phoebe	7	3	-	-	B	L	B	B	T	L	L
American Redstart	7	1	B	T	L	T	T	T	-	T	-
Common Raven	7	1	T	T	T	B	T	T	T	-	-
Barred Owl	7	0	T	T	T	T	-	T	-	T	T
Canada Goose	7	0	T	T	T	T	T	T	-	T	-
Killdeer	6	0	T	-	-	T	T	-	T	T	T
Great Blue Heron	6	0	-	-	T	T	T	T	T	T	-
House Wren	5	4	B	B	B	B	-	-	-	T	-
Red-breasted Nuthatch	5	3	T	B	B	T	B	-	-	-	-
Belted Kingfisher	5	0	T	T	-	T	-	-	-	T	T
Red-tailed Hawk	5	0	-	-	T	T	T	-	T	T	-
Mallard	5	0	T	T	-	T	-	-	T	T	-
Barn Swallow	5	0	T	T	T	-	-	T	-	T	-
Wood Thrush	5	0	T	T	-	-	-	T	T	L	-
Eastern Kingbird	5	0	-	-	T	-	T	L	T	L	-
Wild Turkey	4	1	-	-	B	T	T	-	T	-	-
Vesper Sparrow	4	1	T	-	-	B	T	-	L	-	-
Wood Duck	4	0	-	-	-	T	-	-	T	T	T
Hairy Woodpecker	4	0	T	-	-	-	T	T	-	T	-
American Woodcock	3	2	-	-	L	-	-	-	B	B	-
Green Heron	3	0	-	-	-	-	-	T	-	T	T
Swainson's Thrush	3	0	M	-	-	-	M	-	-	-	M
Northern Harrier	3	0	-	-	T	-	T	-	-	T	-
Tufted Titmouse	3	0	T	-	L	-	-	T	-	-	-
Broad-winged Hawk	2	0	-	-	-	-	-	T	-	-	T
Savannah Sparrow	2	0	-	T	-	-	-	-	-	-	T
Hermit Thrush	2	0	-	-	M	-	-	-	-	-	M
Northern Waterthrush	2	0	-	-	T	-	-	-	T	-	-
House Sparrow	2	0	-	-	-	-	-	T	L	-	-
Least Flycatcher	2	0	-	-	-	L	T	-	-	-	-
Turkey Vulture	2	0	-	-	T	-	T	-	-	-	-
Chimney Swift	2	0	T	-	T	-	-	-	-	-	-

B => Breeding confirmed in MAPS area

L => Likely breeding in MAPS area

T => Transient (Local breeding but probably not in MAPS area)

M => Migrant

BCRE FRSA MAPS Breeding Status as of 9/1/2011

Species	Years	Years	2011	2010	2009	2008	2007	2006	2005	2004	2003
	Present	Breeding									
Blue-gray Gnatcatcher	2	0	T	T	-	-	-	-	-	-	-
Yellow-throated Vireo	1	0	-	-	-	-	-	-	-	T	-
Brown Thrasher	1	0	-	-	-	-	-	-	-	T	-
Grasshopper Sparrow	1	0	-	-	-	-	-	-	-	L	-
European Starling	1	0	-	-	-	-	-	-	T	-	-
Purple Finch	1	0	-	-	-	-	-	-	T	-	-
Brewster's Warbler	1	0	-	-	-	-	-	T	-	-	-
Common Grackle	1	0	-	-	-	-	T	-	-	-	-
Myrtle Warbler	1	0	-	-	-	T	-	-	-	-	-
Tennessee Warbler	1	0	-	-	M	-	-	-	-	-	-
Warbling Vireo	1	0	T	-	-	-	-	-	-	-	-
Northern Rough-winged Swallow	1	0	T	-	-	-	-	-	-	-	-
Baltimore Oriole	1	0	T	-	-	-	-	-	-	-	-
Yellow-bellied Flycatcher	1	0	M	-	-	-	-	-	-	-	-
Canada Warbler	1	0	M	-	-	-	-	-	-	-	-

B => Breeding confirmed in MAPS area

L => Likely breeding in MAPS area

T => Transient (Local breeding but probably not in MAPS area)

M => Migrant