

# Foreman's Branch Bird Observatory

## Annual Banding Report

2010



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Tim Sears with Red-Breasted Nuthatch

All opinions in this report are expressly the author's, as are all errors, mistakes and omissions.

## Introduction

Foreman's Branch Bird Observatory (FBBO) was in operation for 162 days in 2010, an increase of 16 days from 2009. We have not operated this number of days since 2007. The increase is due to better weather for banding and the addition of a high school intern for fall and early winter banding. Dates of operation were from January 27, 2010 through December 30, 2010. A total of 18,221 new birds (a new yearly high) were banded and included 138 species (also a new yearly high), 4 identifiable races, 1 hybrid and 1 intergrade. The total new birds banded since 1996 now stands at 168,543. Three new species and two new identifiable races were added to the station's banding list this year. The new species were Mallard, Semi-palmated Plover and Rusty Blackbird; and the new races were the Audubon's race of the Yellow Rumped Warbler and the Bronze race of the Common Grackle. The total number of species banded at FBBO now stands at 167, plus 12 identifiable races, three hybrids, and one intergrade. We also processed 1,731 returns, 2,389 repeats and 10 foreign retraps this year. The total number of birds handled for 2010 was 22,351. The total number of birds processed at the station now stands at 204,479.

The net hours in 2010 were the highest ever for the observatory with 73,682. This is a little over 5,000 more than last year. The reasons for the increase are the same reasons for the increase in our total number of new birds banded and days of operation. Varying numbers of nets and 4-cell Potter traps were used daily, depending on weather and availability of help, ranging from 5 traps and 9 nets to 5 traps and 101 nets. The new birds per one hundred net hours ratio of 24.6 was an increase of 11% over last year. While this is still somewhat below the 30.4 new birds per 100 nets of the last 12 years it is a definite improvement over the last two that were below 22. As discussed in several previous annual reports, the decrease in productivity is most likely attributed to the increase in the number of nets used and length of time per day they were in use. Banding over 100 new birds in a day is considered a very successful day. During 2010 there were 29 days (24 in 2009) where we banded between 100 and 199 new birds, 10 days (5 in 2009) between 200 and 299, 10 days (6 in 2009) between 300 and 399, 3 days between 400 and 499 (2 in 2009), 0 days between 500 and 599 (1 in 2009), and 1 day between 600 and 699 (0 in 2009). The number of days over 100 new birds increased from 38 in 2009 to 53 in 2010. The 617 new birds banded on November 1<sup>st</sup> is the second highest daily total at the observatory.

In addition, 38 species and identifiable forms (races, hybrids, and intergrades) were banded in record high numbers or tied record high numbers this year (see Appendix B). As noted below in the highlights, most shorebird/water-related birds were banded in record high numbers this year due to the optimum water level of the lake. Belted Kingfisher broke the previous record of 13 by one, and Solitary Sandpiper tied its previous record of 23. The banding of 2 Semi-palmated Sandpipers was also a record. Banding 152 Least Sandpipers however broke the previous record (48) by better than a factor of 3. We also had a return of one Least Sandpiper in the spring. This is the third year in a row this individual has been caught here. Considering the distance this individual flies each year, (Arctic breeding grounds to South American wintering area), it seems quite remarkable that it is able to find the same small mud flat on the upper Eastern Shore of Maryland to stopover and feed before migrating on to its breeding grounds. Other highs for the observatory this year were Bobolink 90 (previous high 21) and Indigo Bunting 1153 (previous high 795). Please see the highlights below for additional information about these two highs.

2010 was a year for northern finches to come south. The food crop in southern Canada and New England was scarce this year which led to large numbers of Purple Finches, House Finches and American Goldfinches to migrate further south than usual. While American Goldfinches did not break their record, it was the fourth highest total. Purple and House Finches did break records. Both either doubled or nearly doubled their previous highs, Purple Finches at 209 versus 108, and House Finches at 856 versus 426. Other notable highs were Northern Saw-Whet Owl at 94 up 102% over the previous high of 46, Ruby Throated Hummingbird's new high at 316 versus 245 (up 23%), Eastern White Crowned Sparrow up 36% with a new record of 236 versus 153 in 2003, and Golden Crowned Kinglet with a new high of 192 (up 19%). Its previous high was 156 in 2006.

Vesper Sparrow, a rare breeding bird on the Eastern Shore of Maryland, was once a breeding bird in and near the banding area. However, it disappeared both as a breeder and a banded bird this year. We banded none and heard no singing males in the area. The nearby habitat where they previously nested is still intact, but the habitat in the banding area has changed from vegetable and row crops to switch grass and fallow fields. Vesper Sparrows like bare soil with grass duff to nest in and while the neighboring farm still contains that type of habitat, the banding area does not have enough bare ground anymore. We will continue to monitor the situation to see if there are any changes in the breeding status of this species here. Chipping Sparrows continue their seesaw numbers with numbers down again this year over

last with 266. Previous numbers in 2009 were 341 and 230 in 2008. There may be a two-year cycle in population levels developing here.

We have been following closely the banding numbers of Grasshopper Sparrow, Field Sparrow and Northern Bobwhite since the 2007 report. All three species are experiencing continent-wide declines in their populations. This year one remained close to average in their numbers, but two were down dramatically. Grasshopper Sparrow, with 328 is only slightly below the 8-year average. The other two species experienced 7 year lows; Northern Bobwhite with just one bird banded and Field Sparrow with 445. The Bobwhite decline can be attributed to severe winter weather and predation. We had two blizzards two weeks apart with 2 feet of snow each time. There was not much food or cover available for almost 6 weeks and where it was available, predators were also there looking for food. At the time, Chester River Field Research Station and Maryland DNR were in a cooperative study looking at Bobwhite population dynamics. The study was suspended when it became apparent that there were not enough survivors left to study. We will wait to see if the population rebounds after this terrible winter.

Field Sparrows, after hitting their all time high of 710 in 2007 have been in a steady decline. The 445 banded this year were nearly 100 less than last year's 7-year low. We do not understand why this species is in decline at FBBO because the habitat remains very good for their nesting requirements, namely secondary scrub growth. In areas north of here this type of habitat is in decline as secondary growth is maturing into mature woodlots or developed into housing subdivisions. We will continue to monitor these three species.

Gray Catbird, a very common nesting species at FBBO, appears to be declining in the last two years. From 2006-2008 we banded nearly 800 or more each year. These figures include both breeding and migrating birds. In 2009 this figure decreased to 596 and in 2010 it further declined to 485. It is too early to say if this is truly something to be worried about but the time to study a species is when they are still abundant not when they are in severe decline.

The group of birds known as Forest Interior Dwelling Species (FIDS) that we have continuously discussed since the 2007 report were banded in near normal numbers with the exception of Wood Thrushes. Kentucky Warblers, a species we closely monitor were banded in near normal numbers with 8. Wood Thrushes, on the other hand, have been declining since 2007 when 164 were banded. In 2008 155 were banded, 135 in 2009 and then only 106 this year. Twenty years ago the analysis of the 30-year old Breeding Bird Survey begun by

the U. S. Fish and Wildlife Service and then continued by the U. S. Geological Survey suggested a continent-wide population decline in Wood Thrushes of 40%. Some biologists even predicted that if that rate of decline continued the Wood Thrush would be extinct by 2020. Since then the decline has slowed and state and local governments are supposed to be slowing the loss of forest habitat that is needed by the Wood Thrush. Wood Thrushes are still a common breeding bird across North America but population changes still need to be monitored. Maybe 2011 will see a rebound in their numbers here.

The following are some of the highlights for the 2010 banding year:

1. Least Tern, the only new species banded at the station in 2009, was banded for the second time in 2010, again due to Mr. Monroe Hudson's daily stroll behind Rose's Department Store at the Kent Plaza Shopping Station. This species has found the gravel roof of Rose's a safe nesting alternative to the disappearing sand bars of the Chesapeake Bay and its tributaries. Occasionally, one of the nestlings wanders too close to the back of the roof, falls into the rain gutter and then slides down the downspout to the alley below. According to the Rose's store manager this happens several times a year, and the young bird is usually found in time and placed back in the colony of 70-90 nesting pairs with the store employees' help. This species is listed as federally endangered throughout most of its range due to loss of nesting habitat. In Maryland it is considered somewhat less rare and listed as threatened.
2. Another second banding for the station was of a Barn Owl on August 16, 2010.
3. Our 13<sup>th</sup> American Kestrel banded on December 30, 2010 was the last new species of 2010. It happened due to the efforts of Dan Small and high school intern Amanda Spears using a new trap made by Dan and capturing this bird by the side of the road where it was hunting for prey from a telephone wire.
4. Mallard, a new species for FBBO and our first duck species, was banded in August. We banded it at the request of a high school student, Ms. Carly Gross, who raised this duck to adulthood after she found its mother dead. After banding, the duck was eventually released back into the wild.
5. Another first species banded was Semi-palmated Plover. We banded three in the spring 1 on May 10<sup>th</sup> and 2 on May 13<sup>th</sup>.

6. The third new species banded in 2010 was Rusty Blackbird banded on November 9<sup>th</sup>. This species of blackbird was once a fairly common late fall migrant in this area but the population has declined by at least 70% over its range in the last 20 years. At this time there seems to be no known cause for this decline.
7. Two other firsts involved races of species we already band here in good numbers. The first was the Audubon's race of the Yellow Rumped Warbler. It was banded on the late spring date of May 30<sup>th</sup>. Late because the last of its cousins had passed through the area 10 days earlier. Audubon's race is the west coast version of our Myrtle Warbler. Audubon's race of the Yellow Rumped Warbler is recognized by its bright yellow throat. The throat is white in the eastern Myrtle race. The second race banded for the first time was the Bronze race of the Common Grackle. Most grackles in this area are of the Purple race characterized by a greenish purple iridescence to their feathers. The Bronze race has a coppery bronze iridescence. The Bronze race winters in this area in small numbers. We banded this one on December 8<sup>th</sup>.
8. Another highlight of the year was an extremely early fall migrant female Bay Breasted Warbler on August 1<sup>st</sup>. Typically we do not see one of these birds until mid-September. This bird also had a brood patch, which indicates that she was nesting just prior to us capturing her. A brood patch is where the skin on the breast has been plucked bare so that the bird can better supply the maximum amount of body heat to incubate eggs or keep young birds warm. A brood patch usually indicates a female, but in some species, like woodpeckers, the male can also have this characteristic. We band very few (sometimes none) of this species in any given year. It is a species of warbler that uses the Spruce budworm caterpillar for food in the Canadian boreal forest during nesting season. Due to the Canadian government's pest control program for spruce budworms (pesticide application in the boreal forest) this once very plentiful bird is now very uncommon. Its life cycle is tied closely to the fluctuations in the population of the budworm. Now with budworm populations always low, so is the population of this warbler.
9. We banded our second and third Semi-palmated Sandpipers on September 1<sup>st</sup> and 2<sup>nd</sup>. We were able to catch good numbers and a variety of species of shorebirds this year due to ideal water levels in the lake on Foreman's Branch.
10. The third Golden Winged Warbler for FBBO was banded on August 30<sup>th</sup>.

11. Sorghum was planted in many places as food plots near the banding area and around the farm this year in an effort to help the population of Northern Bobwhite recover from severe mortality due to heavy snows in early 2010. Other species of birds also took advantage of this food. By placing one net in one of these plots we were able to break our all time record high bandings for Indigo Bunting (1153) and Bobolink (90).

In addition to banding, seasonal bird observations and banding summaries were sent to North American Birds, a publication of the American Birding Association which publishes bird migration patterns, population trends, and unusual and notable sightings of birds for North and Central America and also to Maryland Birdlife, a publication of the Maryland Ornithological Society, which monitors all aspects of birding in the state of Maryland. Our fall banding data was also sent to the Atlantic Flyway Review, a report published by the Eastern Bird Banding Association for their publication, North American Bird Bander. This quarterly journal summarizes bird banding statistics region by region for participating east coast banding stations.

The staff continued organizing, participating in, and compiling the Chesterville Christmas Bird Count in 2010. Christmas bird counts were organized in the early 1900's by the National Audubon Society to take the place of the traditional Christmas day bird hunting. Instead of shooting as many birds as possible, the organizers thought that it would be better to count them. The Christmas Bird Count has caught on in the United States and is now 111 years old. Counts are also done in many countries in North and Central America with thousands of participants. This year's results for the Chesterville count were 90 species of over 64,000 individual birds. Highlights included the Northern Shrike at the Chino Farms grassland and a Black Capped Chickadee near Sassafras.

Chester River Field Research Station (CRFRS), of which Foreman's Branch Bird Observatory is a part, completed its second full year as a non-profit corporation. We now have a website that has information about all of our projects and activities, as well as some of the older annual reports and scientific publications. The website is [www.washcoll.edu/ces/chesterriverfieldresearchcenter/](http://www.washcoll.edu/ces/chesterriverfieldresearchcenter/) Because of the timing of the writing of this report we are able to tell you that major changes will be taking place in 2011 as Washington College's Center for Environment and Society acquired Chester River Field

Research Station in March of that year. Funding, especially in these economic times, remained challenging. Anyone wishing to support our research efforts and the educational opportunities we provide to the public through banding demonstrations and tours at Foreman's Branch can do so by making a tax -deductible donation to Washington College. Please send a note with the donation that the money is to be used at Chester River Field Research Station (CRFRS) or the banding operations at Foreman's Branch Bird Observatory. The donation can be sent to The Center for Environment & Society, the Custom House, 101 S. Water Street, Chestertown, MD 21620.



Jim Gruber and Rachel Field giving a banding demonstration

2010 SUMMARY OF NEW BIRDS BANDED AT  
FOREMAN'S BRANCH BIRD OBSERVATORY

<b>Species</b>	<b>Number of Individuals Banded</b>
Least Tern	1
Mallard	1
Green Heron	6
American Woodcock	1
Least Sandpiper	152
Semi-palmated Sandpiper	2
Greater Yellowlegs	1
Solitary Sandpiper	23
Spotted Sandpiper	8
Semi-palmated Plover	3
Northern Bobwhite	1
Mourning Dove	50
Sharp Shinned Hawk	16
Cooper's Hawk	3
Red Tailed Hawk	1
American Kestrel	1
Osprey	8
Barn Owl	1
Northern Saw Whet Owl	94
Eastern	1

<b>Species</b>	<b>Number of Individuals Banded</b>
Dickcissel	4
Scarlet Tanager	26
Summer Tanager	1
Purple Martin	30
Barn Swallow	32
Tree Swallow	191
No. Rough Winged Swallow	18
Cedar Waxwing	91
Red Eyed Vireo	97
Philadelphia Vireo	3
Warbling Vireo	5
Blue Headed Vireo	16
White Eyed Vireo	39
Black and White Warbler	69
Worm Eating Warbler	6
Blue Winged Warbler	13
Brewster's Warbler (hybrid)	1
Golden Winged Warbler	1
Nashville Warbler	11
Orange Crowned	3

Screech Owl	
Yellow Billed Cuckoo	17
Black Billed Cuckoo	2
Belted Kingfisher	14
Hairy Woodpecker	3
Downy Woodpecker	15
Yellow Bellied Sapsucker	6
Red Bellied Woodpecker	21
Northern Flicker	22
(Intergrade)	1
Whip Poor Will	1
Ruby Throated Hummingbird	316
Eastern Kingbird	19
Great Crested Flycatcher	38
Eastern Phoebe	84
Eastern Wood Pewee	104
Yellow Bellied Flycatcher	13
Acadian Flycatcher	18
“Traill’s” Flycatcher	111
Least Flycatcher	18
Horned Lark	1
Blue Jay	82

Warbler	
Tennessee Warbler	10
Northern Parula	31
Cape May Warbler	3
Yellow Warbler	28
Black Throated Blue Warbler	49
Yellow Rumped Warbler	564
Audubon’s Race	1
Magnolia Warbler	185
Chestnut Sided Warbler	20
Bay Breasted Warbler	4
Blackpoll Warbler	32
Blackburnian Warbler	1
Black Throated Green Warbler	6
Pine Warbler	4
Palm Warbler	
Western Race	20
Yellow Race	172
Prairie Warbler	5
Ovenbird	152
Northern Waterthrush	78
Louisiana Waterthrush	3

European Starling	29
Bobolink	90
Brown Headed Cowbird	229
Red Winged Blackbird	481
Eastern Meadowlark	4
Orchard Oriole	113
Baltimore Oriole	43
Rusty Blackbird	1
Common Grackle	75
Bronze Race	1
Purple Finch	209
House Finch	856
American Goldfinch	1362
Pine Siskin	43
Savannah Sparrow	126
Grasshopper Sparrow	344
White Crowned Sparrow	236
Gambel's Race	1
White Throated Sparrow	2031
American Tree Sparrow	2
Chipping Sparrow	266
Field Sparrow	445
Dark Eyed Junco	846

Kentucky Warbler	8
Connecticut Warbler	18
Mourning Warbler	3
Common Yellowthroat	702
Yellow Breasted Chat	50
Hooded Warbler	4
Wilson's Warbler	5
Canada Warbler	23
American Redstart	137
House Sparrow	11
Northern Mockingbird	130
Gray Catbird	485
Brown Thrasher	139
Carolina Wren	76
House Wren	63
Winter Wren	17
Brown Creeper	26
White Breasted Nuthatch	9
Red Breasted Nuthatch	12
Eastern Tufted Titmouse	79
Carolina Chickadee	53
Golden Crowned Kinglet	192
Ruby Crowned Kinglet	451

Song Sparrow	1386
Lincoln's Sparrow	51
Swamp Sparrow	279
Fox Sparrow	103
Eastern Towhee	113
Northern Cardinal	301
Rose Breasted Grosbeak	5
Blue Grosbeak	203
Indigo Bunting	1153
<b>Total Species:</b>	<b>138</b>
<b>Additional Races:</b>	<b>4</b>
<b>Hybrids:</b>	<b>1</b>
<b>Intergrades:</b>	<b>1</b>
<b>Total New Birds Banded:</b>	<b>18,221</b>
<b>Total Returns:</b>	<b>1,731</b>
<b>Total Repeats:</b>	<b>2,389</b>
<b>Total Foreign Retraps:</b>	<b>10</b>
<b>TOTAL BIRDS HANDLED:</b>	<b>22,351</b>

Blue Gray Gnatcatcher	7
Wood Thrush	106
Veery	50
Gray Cheeked Thrush	22
Swainson's Thrush	22
Hermit Thrush	191
American Robin	242
Eastern Bluebird	154
	4

## 2010 NEST BOX SUMMARY

We monitored 102 nest boxes on Chino Farms from 31 March through 6 September 2010. 81% of boxes were used with a total of 127 nests of 7 bird species (House Wren, Carolina Chickadee, Eastern Bluebird, Tree Swallow, Carolina Wren, Great-crested Flycatcher and Tufted Titmouse) in 83 boxes. All but Great-crested Flycatcher fledged young. We banded 302 nestlings, including 127 bluebirds, 138 swallows, 15 chickadees, 3 Carolina Wrens, 10 House Wrens and 9 titmice. We captured 23 adult Tree Swallows, 13 of which were already banded, 9 of which were returns. We also recorded 4 returns and 3 repeat Eastern Bluebirds.

### Eastern Bluebirds

The Bluebirds on Chino Farms began constructing nests in mid-March and the last bird left the nest on 6 September. We recorded our earliest egg date as well as the latest fledge date. Productivity was high, with the number of fledged chicks well above average despite lower hatch success due to depredation and abandonment. There was no obvious sign that the massive snowfall of winter 2010 affected the bluebird population as it did other wintering birds such as quail. The continued availability of boxes combined with a seemingly robust population contributed to another successful year of productivity.

	<b>2010</b>	<b>Average 2000-2009</b>
Total number of boxes	102	66.3
Number of boxes used	47	23.78
Percent of boxes used	46%	34%
Number of nests	61	46.75*
Number of eggs/clutch	1-5 [4.33]	4.11*
Number of young hatched/nest	1-5 [2.67]	3.01*
Number of young	1-5 [2.13]	2.62*

fledged/nest		
Number of boxes that fledged chicks	33	17
Total number of eggs laid	264	132.8
Total number of eggs hatched	163	88.4
Total number of chicks fledged	130	70.9
Hatching success: n hatched/n laid	62%	66.57%
Fledging success: n fledged/n hatched	80%	80.20%
Earliest egg laid	24-Mar	10-Apr
Earliest hatch	11-Apr	16-Apr
Earliest fledge	29-Apr	11 May**
Latest egg laid	4-Aug	29 Jul**
Latest egg hatched	20-Aug	11 Aug**
Latest fledge	6-Sep	26 Aug**

Parentetical numbers in the 2010 column are averages.

\* Although nest data exists dating from 2000, those data do not account for multiple nests in one box and so the total number of nests in a given season is unknown. As a result, averages of eggs or young per nest have been calculated based solely on data from 2006 onward.

\*\* These dates weren't recorded prior to 2006 so the averages are only from 2006 onward.

### Tree Swallows

In 2010 the Tree Swallows breeding season lasted from mid-April through late July. It was another good year for swallows with productivity above the 10-year average. As stated in the bluebird discussion, this is in part due to the increased number of boxes available on the farm.

	<b>2010</b>	<b>Average 2000-2009</b>
Total number of boxes	102	66.3
Number of boxes used	43	18.7
Percent of boxes used	42%	22.6
Number of nests	47	20.1
Number of eggs laid/clutch	6-1 [4.85]	4.73
Number of young hatched/nest	0-6 [3.49]	3.04
Number of young fledge/nest	0-6 [2.98]	2.65
Number of boxes that fledged chicks	32	13.3
Total number of eggs laid	228	92.9
Total number of eggs hatched	164	68.7
Total number of chicks fledged	140	58.2
Hatch success: total hatched/total laid	72%	74%
Fledgling success: n fledged/n hatched	85%	85%
Date earliest egg laid	26-Apr	30-Apr
Date earliest egg hatch	12-May	13-May
Date earliest fledge	31-May	10-Jun **

Date latest egg laid	21 Jun	19-Jun **
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Parentetical numbers in the 2010 column are averages.

\*\* These dates weren't recorded prior to 2006 so the dates given are averages from 2006 onward.

### Other Species

As mentioned five other bird species utilized the nestboxes this season. There were 5 chickadee nests that fledged 15 chicks and one Carolina Wren nest that fledged 3 chicks. One pair of House Wren nests nested twice in the same box and each nesting attempt fledged 5 chicks for a total of 10. There were also 4 titmouse nests that fledged 11 chicks. A pair of Great-crested Flycatchers did build a nest and lay 5 eggs, but it was depredated. Although not mentioned in past years, the boxes do host non-avian species. There are mice which we evict, but there are also flying squirrels which we let stay. This year there were 3 boxes with squirrels in them.



Nestling Eastern Bluebirds

## RESEARCH

In 2010 Foreman's Branch Bird Observatory continued many of the same research projects that have been conducted since 2008. The projects continued this year were the grasslands restoration project headed by Dr. Douglas E. Gill Vice-President and Scientific Director of CRFRS, maintenance of the banding database, collection of ticks from birds for the Lyme disease study at Yale, Northern Saw Whet Owl banding, and Osprey nestling banding. Also, the nest box monitoring study begun in 2000 continued. An in-depth Northern Bobwhite study was begun in cooperation with Maryland Department of Natural Resources. Brief descriptions of each are found below.

### Northern Saw-whet Owl Banding

2010 was a fantastic year for Northern Saw-whet Owls on Chino Farm. We ran nets for 31 nights and captured a record 94 new owls. This was more than double the previous high record. We also handled 17 repeats and 6 foreign recaps (discussed in the summary of returns and recoveries section). The Saw-whet irruption cycle is generally every 4-5 years and the next big year was not expected until 2011 or 2012, so we were pleasantly surprised to hear reports of high owl numbers from some banding stations north of us. Sure enough, as the migration progressed, we too got more than we expected. However, David Brinker, the founder of Project OwlNet ([www.projectowl.net](http://www.projectowl.net)), told us that the data on a continental scale were not representative of a full irruption and he predicts that a typical and more widespread irruption will still arrive in fall 2012. Time will tell.

In a non-irruption year, we catch very few Saw-whets which makes it hard to give demonstrations to visitors. A long and chilly night in the banding lab doesn't always pan out for those who have made the trip, so it was exciting in 2010 to have owls on hand to show guests. We provided 12 visitors with an up close and personal experience with a Saw-whet Owl.

### Tick Sampling

We continued collecting ticks from birds for Dr. Maria Diuk-Wasser of Yale University, whose lab is studying the role of migratory birds in the dispersal of *Borrelia burgdorferi*, the bacteria that causes Lyme Disease. We have yet to hear what percent of the 2009 ticks may have tested positive and neither have we learned what species of ticks we collected in 2010. We checked 1390 birds of 78 species and 945 of them carried no ticks. Of the 445 that did have ticks, over 70% had 2 or fewer ticks. Twelve birds had 10 or more ticks. The species that had the most ticks were Grasshopper Sparrow, White-throated Sparrow, Common Yellowthroat, Indigo Bunting and Brown Thrasher.

### Grasslands Project

The grasslands study primarily uses Grasshopper Sparrows and Dickcissels as an indicator species for the project. It is the second longest running study at Chester River Field Research Station after Foreman's Branch migratory bird banding. The study's primary researcher is University of Maryland Professor, Dr. Douglas E. Gill. CRFRS field ecologist Dan Small coordinated the field research effort again this year assisted by CRFRS's other field ecologist Maren Gimpel. Rachel Field and Amanda Spears were the interns from Washington College's Center for Environment and Society this summer. They assisted in the fieldwork and data collection. Also assisting in other projects in the grasslands were CRFRS interns Emily Ross and Daniel Brizuela. Blood sampling continued to be one of the main focuses of this summer's fieldwork. These samples have enabled Dr. Gill's research team to obtain Grasshopper Sparrow DNA to do paternity studies of the breeding population. Results on the DNA analysis are pending. A new addition to the study this year was radio tracking the movements of nesting females.

The banding effort of the project in 2010 netted 810 new birds of 39 species and processed another 223 returns and 204 repeats. The total number of new birds banded was below the 5-year average by approximately 300 birds.

A more in depth summary of the 2010 results can be found on the CRFRS website [www.washcoll.edu/ces/chesterriverfieldresearchstation/](http://www.washcoll.edu/ces/chesterriverfieldresearchstation/)

### Banding Station Database Project

This ongoing project continues with some data analysis in process. The projects with Orchard Orioles and Barn Swallows continued. A short paper is in the works on the Orchard Orioles. Woodpecker molt is now being looked at by Dan Small to see if the current aging criteria could be expanded to allow the accurate aging of some woodpeckers to 4 years of age.

### DNR Northern Bobwhite Study

The Northern Bobwhite study continued through the winter and spring of 2010 but was suspended after that time due to the reasons discussed above. Bob Long, Maryland DNR's quail biologist, may revive the study in a few years if the population recovers to a sufficient level. At this time no official paper has been written by DNR and any paper written will most likely depend on the revival of the study.

### Osprey Nestling Banding

Bill Snyder, FBBO volunteer bander, continues to lead the Osprey nestling banding effort. Nest success in 2010 was better than the last two years with 8 chicks banded out of 6 nests checked. To date, 74 Osprey chicks have been banded. The Osprey banding day had 10 visitors watching or assisting on two different dates.



## EDUCATION

This year had the largest number of banding demonstrations at FBBO eclipsing the record highs of last year. There were 56 formal and informal banding demonstrations (35 in 2009) and 250 people visiting this year (164 in 2009). Most of the people who visited the Observatory had a general interest in birds or ecology. A large number of people came with their families. 2010 had seven larger groups visit for banding demonstrations. This included two college classes; Dr. Munson's Washington College class on Birds of the Chesapeake Bay Region and Dr. Lowell Adams University of Maryland class on Field Data Collection Techniques. Also visiting were Delaware's Brick Mill Middle School TAG Ecology class, a field trip from the Maryland Ornithological Society's Convention (held at Washington College in 2010), the Caroline Bird Club, representatives from the American Bird Conservatory and Washington College's Wilderness Adventure Club. Everyone was able to see the banding process up close, take close-up pictures of live birds and ask many questions about the banding process. Many were taught how to properly hold and release a live bird without harming it.

### Internships

In cooperation with Washington College's Center for Environment & Society (CES), CRFRS and FBBO again hosted an intern for spring banding. Dan Danko, an Environmental Studies major, was this year's intern. Dan had just completed Washington College's Chesapeake Semester in the fall of 2009. Rachel Field, also an Environmental Studies major, returned to the Grasslands Restoration project for a second summer as an intern. Amanda Spears, a senior at Queen Anne's County High School, joined Rachel as an intern in the Grasslands. Both gained a lot of good experience in various field data collecting techniques. Two University of Maryland students, Emily Ross and Daniel Brizuela, also interned under Dr. Gill during the summer field season in the Grasslands. Amanda Spears returned in the fall as a migratory banding intern at FBBO through a program sponsored by her school, Queen Anne's County High. She spent 4 mornings a week assisting with the banding operations and was a great asset to the station. The Grassland and spring banding internships are slated to continue every year. The cooperative venture between CRFRS and CES has been very helpful and we look forward to the continued success of this program.

## SUMMARY OF RETURNS AND RECOVERIES

### Returns

A return is either a resident bird banded at Foreman's Branch Bird Observatory and recaptured at FBBO in the following calendar year, or a migratory bird, summer nesting bird, or winter resident bird, banded, and then recaptured more than ninety days after its original banding date.

During 2010 there were 1,731 returns, 10 foreign retraps and 28 recoveries of 63 species at Foreman's Branch. After researching the age record files at the U. S. Geological Survey it was determined that several of our banded birds had set age records for their species for North America. FBBO banded birds now hold the age record for the following nine species: Eastern Wood Pewee, Field Sparrow, Grasshopper Sparrow, Eastern White Crowned Sparrow, Swamp Sparrow, Dickcissel, Indigo Bunting, Blue Grosbeak, and Hermit Thrush. One of the new records was for a couple of nesting Indigo Buntings and will be detailed below. As banding continues at this location perhaps some other birds will establish new age records for their species as well.

In the following summaries of returns and recoveries, when age is given in years and months, it is based on an average hatching date for all birds in North America of June 1<sup>st</sup>.

Some notable returns for 2010 include:

1. Least Sandpiper - band number 1601-87416 – was banded on May 6, 2008 as an at least one-year old female. This is the second time this Least Sandpiper has returned to the observatory. We find it quite remarkable to have such a long distance migrant visit the same small mudflat on the lake three years in a row. Least Sandpipers nest on the arctic tundra and winter in South America. This bird must find our lake's spring mudflats a good stopover area to feed and rest before its next flight north. Last year we encountered this bird on May 12<sup>th</sup>, and caught her this year on May 11<sup>th</sup>. This time she was at least 2 years 11 months old.
2. Eastern Wood Pewee – band number 2260-51982 - was banded on May 18, 2003 as an at least one year old of unknown sex. This bird was recaptured twice this year. The first time was on the exact same date as her original banding date, May

18<sup>th</sup>, and the second time on August 15<sup>th</sup>. On the last date of capture this bird was sexed a female with a brood patch. A brood patch is the bare skin on the breast and belly of a female bird (in this species) used to incubate eggs and keep young birds warm until they have grown in all of their feathers. Pewees are a fairly common small insect eating bird in Maryland. They nest in eastern North America and winter in Central America. At the time of her last capture this bird would have been at least 8 years two months old, the oldest known Eastern Wood Pewee in North America.

3. Blue Grosbeak – band number 1931-08993 – was banded on September 2, 2004 as a hatching year (less than one year old) bird of unknown sex in the grasslands about 1 mile west of the migratory station. This bird was determined to be a male during a later recapture. We caught this him again in 2010 on July 27<sup>th</sup>. Blue Grosbeaks are summer nesting birds in this area. Their preferred habitat is fallow fields, scrubby areas, or grasslands with some small shrubs nearby. They winter in Mexico and Central America. This bird was 6 years one month old on the 27<sup>th</sup> making him the oldest known Blue Grosbeak in North America.
4. Indigo Bunting – band number – 1821-14555 – was banded on May 15, 2002 as a second year (almost 1 year old) female. She is another bird banded in the grasslands like the Blue Grosbeak above. Indigo Buntings, like habitat similar to the Blue Grosbeak and winter in the same geographical area of Mexico and Central America. We recaptured this bird on July 26<sup>th</sup> of 2010 making her 8 years one month old. At the risk of sounding like a broken record, this recapture made her the oldest known Indigo Bunting in North America.
5. Dickcissel – band number 1931-09173 – was banded as a nestling in the grasslands on August 3, 2005 of undetermined sex. This bird was recaptured the next year, was determined to be a female and color banded with a unique set of colors so that we could recognize her without having to catch her. She has returned every year since. Sometimes we catch her, but most times we just read the color combination of her bands to identify her. The last time we sighted her, (June 28, 2010), she was 5 years and almost one month old, the oldest known Dickcissel in North America. Because this bird is the first known nestling Dickcissel to return to its natal area, a paper is being written about our experience with her. Publication is pending.

6. Brown Thrasher – band number 612-74435 – banded on May 15, 2001 as a female, at least two years old. We highlighted this bird last year in this section as our oldest banded bird still living. She returned this year on April 5, 2010 and retains the honor of our oldest banded bird of almost eleven years (10 years 10 months). The North American record remains 11 years 11 months. If she returns in May of 2011 she will tie the age record. We hope to see this old friend next year.
7. Wood Thrush – band number 1781-15727 - was banded on May 16, 2002 as a second year female. She has returned each year to Foreman’s Branch to breed and raise her young. Wood Thrushes winter in Central America. It takes about two weeks to migrate from here to the wintering grounds in the fall and then two weeks to migrate back again in the spring. For a bird that weighs only 45 grams (approximately an ounce and three quarters), it is a remarkable feat to have accomplished this round trip 10 times. She is one of a handful of FBBO birds that are now over eight years old and is tied with several others as our second oldest bird at 8 years 11 months.

There were no new species for the Foreman’s Branch Bird Observatory return/recovery list. The species count remains at seventy-four species plus two identifiable races and one intergrade. The following table summarizes the returns for 2010:

2010 Returns Summary Table  
Recoveries

Species	Minimum Known Age in Years								Total
	1	2	3	4	5	6	7	8+	
Least Sandpiper			1						1
Mourning Dove	3	6	4	3	1				17
Sharp Shinned Hawk				1					1
Osprey	1								1
No. Saw Whet Owl	7	1							8
Belted Kingfisher			1						1

<b>Species</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8+</b>	<b>Total</b>
Hairy Woodpecker		3							3
Downy Woodpecker	2	3	2		1			1	9
Yellow Bellied Sapsucker				1					1
Red Bellied Woodpecker	3		2	1				1	7
Northern Flicker			2	1					3
Ruby Throated Hummingbird	4	5							9
Eastern Kingbird	1	2	1	1					4
Great Crested Flycatcher			1	1	1	1			4
Eastern Phoebe	1								1
Eastern Wood Pewee	1	1							2
Acadian Flycatcher			1						1
Blue Jay	5	6	5	3	4				23
Brown Headed Cowbird	2	25	11	5	5	2			50
Red Winged Blackbird	2	19	34	19	13	14	1	11	113
Orchard Oriole	3	2	8	5	9	2	1	3	33
Baltimore Oriole	1	1	2	5	1	1		1	12
Common Grackle		1		1		1			3
Purple Finch	1	1	1						3
House Finch	11	23	5	5	1	1			46
American Goldfinch	44	83	47	24	14	6	5	3	226
Savannah Sparrow	3		1						4
Grasshopper Sparrow	19	20	10	8	10	1	1	1	70

<b>Species</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8+</b>	<b>Total</b>
White Crowned Sparrow	24	8	12	1					45
White Throated Sparrow	177	39	27	19	11	2	3	1	279
Chipping Sparrow	13	3	1		1			1	19
Field Sparrow	35	34	17	5	4	5	1		101
Dark Eyed Junco	26	8	1	1					36
Song Sparrow	18	7	15	3	1		2		46
Swamp Sparrow	1								1
Eastern Towhee	4	7	5	1	5				22
Northern Cardinal	25	15	14	12	6	1	4	2	79
Blue Grosbeak	1	6	4		1	1	1		14
Indigo Bunting	41	28	16	9	15	5	5	3	122
Dickcissel					1				1
Barn Swallow		4	1	2	1				8
Tree Swallow	2	4	3	1	2				12
Cedar Waxwing			1						1
Northern Shrike		1							1
Red Eyed Vireo			1						1
White Eyed Vireo	2	2		1	1				6
Yellow Rumped Warbler	1								1
Kentucky Warbler				1					1
Common Yellowthroat	29	19	13	11	4			2	78
Yellow Breasted Chat		1	1		2	2			8

<b>Species</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8+</b>	<b>Total</b>
Northern Mockingbird	10	14	3	2	2	1			33
Gray Catbird	19	14	13	11	4	1	2		64
Brown Thrasher	1	6	8	2		3		1	21
Carolina Wren	3	2	1	2					8
White Breasted Nuthatch	1	1							2
Tufted Titmouse	13	4	3	9		1			30
Carolina Chickadee	10	6	3	5	2		1		27
Golden Crowned Kinglet	1								1
Ruby Crowned Kinglet		2							2
Wood Thrush	5	4	1	5	1	1		1	18
Veery					1				1
Hermit Thrush	9	1		2					12
American Robin	1	1							2
Eastern Bluebird	9	6	5	1					21

### Recoveries

A recovery is one of our birds that is found, handled or processed at a location, (10' latitude/longitude block), different from the original place of banding, or a resident bird that is found dead more than thirty days after it was originally banded in the same 10' block. A foreign retrap is a bird banded by another bander in a different 10' block and recaptured here at Foreman's Branch Bird Observatory. A foreign retrap is a type of recovery. All ages of the following birds are determined by using an average hatching date of June 1<sup>st</sup> for North America.

In 2010 there were 28 recoveries and/or foreign retraps of thirteen species. The following is a summary of those 21 birds:

1. Mourning Dove (5 recoveries) – summarized below:

Mourning Doves are mostly resident birds in the banding area. They sometimes wander 15 to 20 miles away, but compared to other migratory birds this is just a local trip.

- A. Band number 1583-62296 banded as an after hatching year bird (at least one year old) male on April 30, 2009. This bird was shot by a hunter on Chino Farms 3 miles east of Chestertown, MD in December 2009. Because it was reported in early 2010 this dove did not make it into the 2009 report. At the time it was shot he was at least 1 year 6 months old.
- B. Band number 1343-53222 banded as a male almost 1 year old on May 1, 2007. It was also shot and killed during the 2010 hunting season by a hunter near Millington, MD. Millington is approximately 7 miles east of Foreman's Branch. This bird was at least 3 years 9 months old when shot.
- C. Band number 1693-71108 banded on May 19, 2009, as a male at least one year old. It was found dead on McGinnes Rd. approximately ½ mile south of the banding area by Mr. Albert Coleman. This dove had been killed by a car. At the time it was found dead in February 2010, this bird was at least 1 year 8 months old.
- D. Band number 1693-71187 was banded on August 24, 2010 as a hatching year male. It was shot by a hunter 8 days later, September 1, 2010, 6 miles northwest of Crumpton, MD on a farm in Kent County, MD. That location is approximately 5 miles north of FBBO. At the time it was killed it was 3 months old.
- E. Band number 1583-62247 was banded on September 7, 2008 as a hatching year female. This dove was shot by a hunter on November 6, 2010 in Limerick, PA. Limerick is approximately 80 miles northwest of Foreman's Branch. This is the longest distance a Mourning Dove has been recovered away from FBBO. At the time this bird was shot it was 2 years 5 months old.

2. Osprey – band number 928-07272 – was banded in a nest at Chesapeake Farms as nestling of undetermined sex on June 18, 2010. It was found dead by a hunter 5 miles south of Rock Hall, MD on October 21, 2010. The hunter said that the bird could have died much earlier than that date because he only found a leg with the band still attached. No other remains were found. The cause of death was not apparent. We can speculate that perhaps this bird became the prey of a Great Horned Owl while it was still flightless in the nest. This species of owl is known to take young Ospreys from the nest to feed themselves or their young. The banding location is approximately 5-6 air miles from where the leg and band were found, well within a Great Horned Owl's hunting territory. At the time the band was found the bird would have been 4 months old, but more than likely it died well before that.
3. Northern Saw Whet Owl (8 recoveries) – summarized below:

These small owls breed in the boreal forest of Canada and winter from New England to the Gulf coast. See the research section for a full description of this project.

  - A. Band number 854-15974 was banded at FBBO as a second year female on November 9, 2010, and was recaptured on November 14<sup>th</sup>, approximately 25 miles south at Atkins Arboretum near Ridgely, MD. This is the location of another Saw Whet Owl banding operation. At the time of this birds initial capture and recapture 5 days later it was 1 year 5 months old.
  - B. Band number 854-15990 was banded one night later on November 10, 2010, also as a second year female. It was recaptured at Atkins Arboretum. It only took one day to reach that location on November 11<sup>th</sup>. This bird was also 1 year 5 months old.
  - C. Band number 854-15970 was banded on November 20, 2009, as a hatching year female. It was recaptured by Scott Weidensaul, another owl bander, on November 6, 2010 2 miles north of Friedensburg, PA. This is a little over 100 miles due north of the banding station. This bird was also 1 year 5 months old at that time.
  - D. Band number 924-36365 was banded on October 30, 2009, at another Maryland Saw Whet Owl banding station north of FBBO, Turkey Point in

Elk Neck State Park, MD. It was banded as a second year female. We recaptured it one year and one day later on October 31, 2010. FBBO is approximately 30 miles south of Turkey Point. This bird was 2 years 5 months old.

- E. Band number 924-04992 was banded at Adkins Arboretum on October 22, 2010 as a hatching year male. We recaptured him November 15, 2010. This is possibly a case of reverse migration as Adkins is 25 miles south of Foreman's Branch. It is possible that he overshot his intended destination, reversed course and we captured him again on his way back north. This bird was 5 months old when last processed at FBBO.
- F. Band number 924-29626 was banded in Cape May, New Jersey on November 1, 2010, as a hatching year female. This Saw Whet was recaptured 4 times at Foreman's Branch during the month of November, 10<sup>th</sup>, 14<sup>th</sup>, 17<sup>th</sup> and 19<sup>th</sup>. Cape May is approximately 60 miles east southeast of FBBO. She could have taken several possible routes to reach FBBO. She could have flown back north around the Delaware Bay and then south again to reach Foreman's Branch. She could have flown due south across Delaware Bay and made landfall near Cape Henlopen, Delaware and then flown back north (like the previous bird in E. above) to reach us, or flown the most direct route by flying east across Delaware Bay. None of these routes are what we would expect these birds to fly. The expected route would be to fly across Delaware Bay to Cape Henlopen, then proceed further south along the coast to a wintering area. Ending up at Foreman's Branch is not the expected destination. It shows that we have a lot more to learn about migration. This bird was 5 months old when last handled.
- G. Band number 1014-08083 was banded as a hatching year female on October 8, 2010, 25 kilometers southeast of Picton, Ontario, Canada. We recaptured her almost one month later on November 7, 2010. Picton is approximately 375 miles north northeast of Foreman's Branch. This bird was 5 months old.
- H. Band number 1014-08953 was another owl banded 25 kilometers southeast of Picton, Ontario. This bird was also a hatching year female

banded on October 30, 2010. We recaptured her twice at FBBO. First was November 15<sup>th</sup> and then again on November 18<sup>th</sup>. This bird was also 5 months old.

4. Northern (Yellow Shafted) Flicker – band number 1573-08439- banded as a male bird at least one year old on September 16, 2008, by Mr. Jim Smith at Rock Point Bird Banding Station in Dunnville, Ontario, Canada. Dunnville is just a few miles west of Buffalo, NY on the north shore of Lake Erie. This bird is an old friend to us. Readers of the 2008 and 2009 reports may remember him. We captured this bird at the observatory twice in the fall of 2008. The first time on October 14<sup>th</sup> and the second time on November 21<sup>st</sup>. We recaptured him two times in 2009. The first time on February 2, 2009, (so we know he spent the winter here since this date is not during their migration period), and the second time on October 22, 2009. The second date indicates he was back here for his second winter and FBBO is his wintering grounds. In 2010 we again encountered this bird twice, once in the spring on March 7<sup>th</sup> before he returned to Canada and once in the fall on November 20<sup>th</sup> after he returned to FBBO for his third winter. Please see the 2008 and 2009 reports for a more complete history of this bird. At the time of his recapture to (starting his third winter with us) this bird was 3 years 5 months old. Rock Point Bird Banding Station, Canada is 300 miles northwest of the observatory.
5. Blue Jay – band number 1222-77467 – was banded on November 27, 2006, as a bird at least one year old of undetermined sex. It was found dead under a window at FBBO on February 19, 2010. At the time there was snow on the ground and this bird was not far from a feeding station. It was probably startled by a squirrel or predator (hawk) while feeding at a bird feeder and flew into the window killing itself. Blue Jays are both migratory and resident birds here. Unfortunately we cannot determine if this was a migratory or resident bird as it was never recaptured between the time of its banding and its death. At the time it died it was at least 4 years 8 months old.
6. Red Winged Blackbird – band number 1292-53814 – was banded on March 2, 2010 as an after second year (at least two years old) male. A cat killed this bird in Ovid, New York on April 30, 2010. Terry Le Boyce, the cat's owner, reported the band to the U.S.G.S. Bird Banding Laboratory. Most of the Red Winged

Blackbirds we band are residents but this one was a migrant. Red Wings breed throughout eastern North America. It was probably on or near its breeding grounds in New York at that time it was killed by the cat in April. Ovid, NY is located in the finger-lakes region of New York between Cayuga and Seneca Lakes. It is approximately 250 miles northwest of Foreman's Branch. This bird was at least 2 years old when it was killed. This bird and the Blue Jay above, as well as one of the Mourning Doves described above, each died by one of the three most common ways non-game birds are found and reported to the banding lab (death by cats, striking a window and hit by a car).

7. Common Grackle – band number 1603-58543 – was banded on March 26, 2009, and found dead on the road one mile south of Chestertown, MD on May 17, 2010. It was originally banded as an at least one-year old female. The location where this bird was found is 3 miles west of FBBO. While some grackles banded here are migratory, the date this bird was found would suggest that it was a resident breeding bird. At the time it died this bird was at least one year 11 months old.
8. Purple Finch – band number 2551-21383 – was banded on October 27, 2010, as a hatching year bird of undetermined sex. One of almost 200 Purple Finches banded that fall, it was found dead on December 24, 2010 in Oilville, Virginia by Mark Carson. Purple Finches breed mostly in New England and Canada, but they also breed on the higher mountain ridges of the Appalachians. Most of the birds we band originate from the New England and Canadian breeding areas. This bird was migrating through the observatory when banded. It was probably on its wintering grounds in Virginia when it died. Oilville is located a few miles northwest of Richmond, Virginia and is approximately 150 miles southwest of the observatory. It was just 6 months old when found.
9. American Goldfinch – (5 recoveries) – This species is the second most commonly banded bird here at the observatory. We have residents that are here all year long, summer breeding birds that migrate south for the winter, through migrants that are here for a short time while migrating north or south, and wintering residents that breed in the north. Sometimes it is hard to discern what category they fit into when banded. Recoveries can sometimes help. We will try to do that with the following birds.

- A. Band number – 2300-92052 – was banded on February 24, 2004 as a male at least two years old. It was found dead of unknown causes at a feeding station near the observatory on March 11, 2010. This bird was recaptured and processed many times during its lifespan. All capture dates (10 times over the years) were in the winter and early spring, which would lead us to believe that it was a winter resident. The feeding station where he was found was less than one mile from FBBO. At the time it died this goldfinch was 7 years 9 months old.
- B. Band number – 2300-92679 - banded as a female at least one year old on September 7, 2004. She was killed by a vehicle on a road in Crumpton, MD, in June of 2010. She was found by Mark Churchill. She was not recaptured after being banded. This bird was certainly a summer breeding bird since the date she was banded and the date she was found are within the possible breeding time for this species but that is about all we can determine about her. Crumpton is approximately 5 miles east of the observatory. She was at least 7 years old when found dead.
- C. Band number – 2470-78309 – was banded as a hatching year male on November 21, 2006. On March 20, 2010 he was found dead near Millington, MD by Richard Lorenz. It was not recaptured at FBBO after banding so it is difficult to determine if this bird was a year-round resident or a wintering bird. Millington is approximately 7 miles east of FBBO. This bird was 3 years 9 months old.
- D. Band number – 2620-33260 – was banded as a hatching year female on November 24, 2009. Amy Manship found this bird dead after it flew into a window on January 29, 2010 near Greensboro, MD. Like the previous goldfinch it is hard to determine whether it was a wintering bird or a resident. At the time of its demise it was just 7 months old. Greensboro is approximately 15 miles southeast of the observatory.
- E. Band number – 2510-94792 – was banded by Mr. Bill Hilton of Hilton Pond Center for Piedmont Natural History near York, South Carolina as a second year male on January 21, 2009. This bird was on its wintering grounds at the time it was banded. It was recaptured at Foreman’s Branch on March 30, 2010 as it was migrating back north. Bill Hilton is a fellow

bander and is better known for his work with Ruby Throated Hummingbirds both in the United States and on their wintering grounds in Costa Rica and Belize. At the time we caught this goldfinch it would have been 10 months old. York, South Carolina is approximately 410 miles southeast of the observatory.

10. Northern Cardinal – band number 1981-30636 – was banded as a second year male on April 21, 2010. It was found dead under a window approximately 1 mile southeast of the observatory near a bird feeding station on November 20, 2010 by Mr. Al Abend. Most cardinals banded at Foreman’s Branch stay very close to the banding area and do not wander more than 2 or 3 miles away. At the time of its death this bird was 1 year 5 months old.
11. Common Yellowthroat – band number 2590-41164 – was banded at Foreman’s Branch on May 4, 2010. It was at least two years old and sexed male by its bright yellow throat and black mask. It was found dead by Mr. Mark Caron on July 6, 2010 in Lincoln, Maine. At the time it was banded this yellowthroat was migrating north to its breeding grounds. Lincoln, Maine was probably its breeding area. At the time it was found dead this bird was at least two years one month old. Lincoln, ME is approximately 575 northeast of FBBO.
12. Veery – band number 1591-77404 – was banded by Mr. Gerald Farrell in Lewiston, New York on May 17, 2006 as a second year male. At the time it was banded this bird was probably on or very near its breeding grounds. He was recaptured on September 2, 2010 at FBBO. At that time this Veery would have been on the first leg of its journey south to its wintering grounds in Central America. Small migratory birds, like this Veery, travel in 300-500 mile increments, mostly at night, to reach their migratory destinations. Lewiston, NY is located just north of Niagra Falls on the United States-Canadian border. It is approximately 310 miles north of the observatory (one night’s flight away). It was 5 years 3 months old when we recaptured it.
13. American Robin – band number 1232-98197 – was banded at FBBO as a hatching year bird of undetermined sex on August 28, 2008. It was found dead by Joshua Homyack in Kingstown, MD on August 18, 2010. This bird was probably a locally breeding robin. At the time of its banding it would have left its natal area or breeding grounds and joined other local robins in a larger flock.

Robins form these flocks in late summer to forage for food before migrating south in September and October. Some robins winter in this area but they are usually birds from nesting areas further north. Kingstown is 3 miles west of Foreman's Branch and this bird was 2 years 2 months old at the time it died.



Yellow Shafted Flicker

### Acknowledgments

We would like to thank everyone who helped at FBBO throughout the year. A bird banding operation the size of Foreman's Branch Bird Observatory could not exist without assistance from a large number of people. The list of people who make this possible is long and we hope we did not leave anyone out. As always, we start with our hosts, Drs. Harry Sears and Sharon Bushnell, and the Sears Family Foundation. Your continued support of the station is extremely important and it would not exist without you. Next, to Evan Miles, manager of Bluestem Farms, thanks for your support, advice, and equipment as needed. To Henry Davis, thank you for the hard work of habitat maintenance and the dozens of other jobs you perform for the observatory throughout the year. Special thanks goes to Dr. Doug Gill for your continued support and work on all the projects here at Chester River Field Research Station and FBBO.

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PHOTOGRAPHIC SECTION





Indigo Bunting



Blue Grosbeak



Eastern Wood Pewee

Appendix A

A Fifteen-Year Summary

Of All Species Banded At Narnia (1996-1997)

And Foreman's Branch Bird Observatory (1998-2010) 1996-2010

<b>SPECIES</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>TOTAL*</b>
Least Tern	0	0	0	0	0	1	1	2
Mallard	0	0	0	0	0	0	1	1
Canada Goose	0	0	1	0	0	0	0	1
Great Egret	0	0	0	0	1	0	0	1
Green Heron	4	2	1	1	2	8	6	28
American Woodcock	1	2	4	13	6	2	2	40
Least Sandpiper	48	6	9	7	6	31	152	261
Semi-Palmated Sandpiper	1	0	0	0	0	0	2	3
Greater Yellowlegs	7	0	8	1	4	1	1	24
Lesser Yellowlegs	0	0	1	0	1	0	0	3
Solitary Sandpiper	17	9	19	23	9	16	23	127
Spotted Sandpiper	3	6	16	14	10	16	8	77
Killdeer	0	0	0	0	1	0	0	1
Semi-palmated Plover	0	0	0	0	0	0	3	3
Northern Bobwhite	0	0	0	6	78	31	1	116
Mourning Dove	28	30	45	96	77	50	50	495
Northern Harrier	0	0	1	0	0	0	0	1
Sharp Shin. Hawk	8	5	11	18	15	13	16	139
Cooper's Hawk	3	2	1	1	1	1	3	21
Red Tailed Hawk	0	1	1	2	2	0	1	9
Red Shoulder. Hawk	0	0	1	0	0	0	0	2
Broad Wing. Hawk	0	0	0	0	0	0	0	1
American Kestrel	0	0	2	0	0	1	1	13
Osprey	4	8	5	7	8	5	8	74

<b>SPECIES</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>TOTAL*</b>
Com. Barn Owl	1	0	0	0	0	0	1	2
Barred Owl	1	0	0	0	0	0	0	1
No. Saw-Whet Owl	0	2	0	45	9	14	94	168
E. Screech Owl	1	0	0	9	1	0	1	20
Great Horned Owl	0	2	0	0	0	0	0	2
Yellow Bill. Cuckoo	7	12	10	2	1	2	17	71
Black Billed Cuckoo	1	0	2	0	0	0	2	7
Belted Kingfisher	3	8	13	11	8	6	14	77
Hairy Woodpecker	7	7	9	6	4	7	3	87
Downy Woodpecker	14	15	32	23	22	10	15	251
Yellow Bellied Sapsucker	5	2	1	7	6	4	6	50
Pileated Woodpecker	0	0	0	0	0	1	0	2
Red Bellied Woodpecker	12	22	15	15	22	23	21	218
Northern Flicker	15	22	26	32	25	21	22	260
(Intergrade)	0	0	3	3	2	1	1	11
Whip-Poor-Will	0	0	0	2	1	0	1	7
Common Nighthawk	0	0	1	0	0	0	0	1
Ruby Throated Hummingbird	105	86	175	201	225	245	316	1870
Calliope Hummingbird	0	0	1	0	0	0	0	1
Eastern Kingbird	17	24	21	16	29	32	19	286
Great Crested Flycatcher	25	23	22	34	30	30	38	318
Eastern Phoebe	60	26	75	77	87	71	84	808
Olive Sided Flycatcher	0	0	0	0	0	0	0	2
E. Wood Pewee	52	107	91	80	72	77	104	943
Yellow Bellied Flycatcher	4	11	13	7	12	10	13	120
Acadian Flycatcher	10	11	15	22	16	23	18	171

<b>SPECIES</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>TOTAL*</b>
Willow Flycatcher (Western)	0	0	1	0	0	0	0	1
“Traill’s” Flycatcher	59	80	103	103	106	102	111	907
Least Flycatcher	6	9	8	9	13	9	18	129
Horned Lark	5	0	0	0	2	0	1	13
Blue Jay	25	91	76	115	118	110	82	977
American Crow	0	0	0	0	0	0	0	1
European Starling	21	17	6	26	9	41	29	292
Bobolink	12	0	1	8	8	21	90	145
Brn. Head. Cowbird	138	145	173	166	210	287	229	1900
Red Wing. Blkbird.	284	587	717	672	698	1515	481	6658
Eastern Meadowlark	0	0	0	1	0	0	4	5
Orchard Oriole	63	119	105	106	131	101	113	1301
Baltimore Oriole	15	67	90	64	34	34	43	472
Rusty Blackbird	0	0	0	0	0	0	1	1
Common Grackle	41	82	46	66	46	210	75	1089
Bronze Race	0	0	0	0	0	0	1	1
Purple Finch	20	20	6	49	108	44	209	572
House Finch	120	219	184	235	327	144	856	3083
Common Redpoll	0	0	0	0	0	0	0	1
American Goldfinch	928	612	664	1114	1,069	1303	1362	13,811
Pine Siskin	0	0	0	6	9	55	43	128
Vesper Sparrow	4	2	1	2	1	3	0	52
Savannah Sparrow	292	122	158	346	170	133	126	1992
Grasshopper Spar.	578	432	329	236	349	233	344	3627
Le Conte’s Sparrow	0	0	0	0	0	0	0	1
Seaside Sparrow	0	1	0	0	0	0	0	1
White Crowned Sparrow								
(Eastern)	64	92	68	124	91	72	236	1174
(Gambel’s)	1	1	2	0	2	0	1	17

<b>SPECIES</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>TOTAL*</b>
White Throated Sparrow	1290	1443	2128	1891	1390	1735	2031	18,431
(Zonotrichia hybrid)	0	0	0	0	0	0	0	1
Am. Tree Sparrow	2	5	11	1	0	0	2	23
Chipping Sparrow	269	371	158	469	230	341	266	4771
Clay Color. Sparrow	1	1	0	0	1	0	0	8
Field Sparrow	600	577	669	710	544	542	445	6408
Dark Eyed Junco								
(Slate Colored)	334	334	353	689	429	445	846	7065
(Oregon)	1	1	0	0	0	0	0	3
(Cismontanus)	0	3	0	0	0	0	0	6
Song Sparrow	941	828	958	1062	1025	1166	1386	10,458
Lincoln's Sparrow	63	30	33	39	34	29	51	418
Swamp Sparrow	323	226	328	334	245	266	279	2757
Fox Sparrow	21	23	30	99	65	36	103	558
Eastern Towhee	91	122	165	138	146	114	113	1380
Northern Cardinal	227	238	306	235	235	182	301	2878
Rose Br. Grosbeak	1	7	7	7	3	13	5	68
Blue Grosbeak	204	64	69	87	77	114	203	1335
Indigo Bunting	795	615	500	663	442	492	1153	6939
Dickcissel	2	19	13	26	15	24	4	133
Scarlet Tanager	20	19	19	27	26	11	26	233
Summer Tanager	0	1	1	2	0	0	1	6
Purple Martin	1	0	10	4	4	32	30	85
Barn Swallow	40	64	65	69	51	61	32	419
Tree Swallow	36	13	108	184	211	183	191	1013
Bank Swallow	3	2	38	2	1	0	0	53
Northern RoughWinged Swallow	29	32	29	67	65	37	18	325
Cedar Waxwing	73	25	81	63	73	88	91	598
Northern Shrike	0	0	0	1	0	1	0	3
Red Eyed Vireo	84	43	103	78	89	76	97	911
Philadelphia Vireo	0	2	1	0	1	5	3	12
Warbling Vireo	8	1	1	1	9	1	5	28

<b>SPECIES</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>TOTAL*</b>
Yellow Thr. Vireo	0	0	0	2	0	0	0	4
Blue Headed Vireo	7	2	13	5	3	7	16	73
White Eyed Vireo	37	25	41	32	32	27	39	427
Blk. & Wt. Warbler	32	52	68	69	97	95	69	679
Prothonotary Warb.	0	1	0	0	2	0	0	8
Worm Eating Warb.	0	2	1	8	2	7	6	38
Blue Wing. Warbler	4	4	11	5	6	4	13	62
(Lawrence's Warb.)	0	0	0	0	0	0	0	1
(Brewster's Warb.)	0	1	1	0	2	0	1	5
Golden Wing. Warb.	0	1	0	0	0	1	1	3
Nashville Warbler	8	8	24	12	3	14	11	154
Orange Crn. Warb.	2	1	4	0	0	0	3	13
Tennessee Warbler	4	3	9	7	2	6	10	71
Northern Parula	11	20	26	20 12 9	31	168		
Cape May Warbler	0	0	6	2	3	3	3	44
Yellow Warbler	18	26	36	28	24	14	28	150
(Amnicola race)	0	0	1	0	1	1	0	3
Black Throated Blue Warbler	34	29	84	65	85	41	49	740
(Carins' Race)	0	2	0	1	0	0	0	3
Yel. Rump. Warb.	275	191	444	480	739	332	564	5834
(Hooverii Race)	0	0	0	0	0	1	0	1
(Audubon's Race)	0	0	0	0	0	0	1	1
Magnolia Warbler	48	100	209	84	116	105	185	1589
Cerulean Warbler	0	0	0	0	0	0	0	1

<b>SPECIES</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>TOTAL*</b>
Chestnut Sided Warbler	7	8	29	14	7	14	20	160
Bay Breast. Warb.	0	0	3	2	0	0	4	16
Blackpoll Warbler	9	15	20	9	16	13	32	238
Blackburnian Warb.	1	2	3	0	0	2	1	16
Black Throated Green Warbler	3	13	15	9	8	5	6	122
Pine Warbler	6	3	4	3	11	6	4	68
Palm Warbler								
(Western)	24	41	29	60	45	25	20	463
(Yellow)	62	38	104	203	121	114	172	1261
Prairie Warbler	7	0	3	15	9	2	5	62
Ovenbird	63	122	135	102	108	65	152	1279
No. Waterthrush	31	48	61	59	80	39	78	578
La. Waterthrush	1	3	2	2	1	0	3	16
Kentucky Warbler	11	19	16	14	3	9	8	131
Connecticut Warb.	13	6	10	15	10	10	18	137
Mourning Warbler	4	6	7	4	5	2	3	63
Common Yellowthroat								
(Eastern)	850	942	940	882	790	714	702	8987
(Northern Plains)	0	0	0	0	1	0	0	4
Yellow Breast. Chat	47	52	55	63	45	25	50	612
Hooded Warbler	2	3	2	5	2	1	4	25
Wilson's Warbler	6	4	7	6	5	6	5	57
Canada Warbler	19	30	21	31	25	21	23	261
American Redstart	51	91	115	118	128	94	137	1025
House Sparrow	0	14	2	4	14	13	11	85
No. Mockingbird	114	113	177	156	184	206	130	1561
Gray Catbird	721	733	845	800	807	596	485	7507
Brown Thrasher	53	89	105	137	152	105	139	1165
Carolina Wren	60	75	123	117	88	80	76	1018
House Wren		68	75	79	96	71	63	849
Winter Wren		35	33	45	42	31	17	437
Sedge Wren	0	1	0	0	0	0	0	1

<b>SPECIES</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>TOTAL*</b>
Marsh Wren	0	0	1	0	2	1	0	7
Brown Creeper	8	10	12	10	10	13	26	142
White Breasted Nuthatch	5	7	8	9	6	5	9	76
Red Breasted Nuthatch	5	9	4	31	4	3	12	133
Tufted Titmouse	48	30	67	45	55	64	79	729
Black Capped Chickadee	0	2	1	0	0	0	0	6
Carolina Chickadee	26	29	62	37	39	36	53	588
Golden Crowned Kinglet	88	66	156	85	89	136	192	1373
Ruby Crowned Kinglet	444	350	1088	377	400	721	451	6408
Blue-Gray Gnatcatcher	6	5	9	6	2	10	7	82
Wood Thrush	114	115	160	164	154	135	106	1611
Veery	27	17	43	38	75	54	50	521
Gray Cheek. Thrush	13	13	40	32	12	21	22	247
Bicknell's Thrush	1	1	0	2	0	1	0	17
Swainson's Thrush	13	10	39	20	39	39	22	321
Hermit Thrush	101	104	200	135	205	219	191	1981
American Robin	115	79	169	235	236	354	242	1831
(Black Backed Race)	0	0	0	0	0	1	0	1

\*Total also includes birds banded from 1996 -2003 but not shown in Appendix A.

Total Species Banded	167
Additional Identifiable Races	12
Hybrids	3
Intergrades	1
Total New Birds Banded	168,543
Total Returns	16,722
Total Repeats	19,185
Total Foreign Retraps	29
Total Birds Handled	204,479

Appendix B

Foreman's Branch Bird Observatory (Chino Farms) and Narnia Farm

List of Species with Highest Yearly Total and Year,  
And Number of Years of Occurrence

<b>SPECIES</b>	<b>HIGH</b>	<b>YEAR</b>	<b># YRS. OF OCCUR.</b>
Least Tern	1	2009 & 2010	2
Mallard	1	2010	1
Canada Goose	1	2006	1
Great Egret	1	2008	1
Green Heron	8	2009	11
American Woodcock	13	2007	12
Least Sandpiper	152	2010	9
Semi-palmated Sandpiper	2	2010	2
Greater Yellowlegs	8	2006	7
Lesser Yellowlegs	1	1999, 2006 & 2008	3
Solitary Sandpiper	23	2007 & 2010	10
Spotted Sandpiper	16	2006 & 2009	9
Killdeer	1	2008	1
Semi-palmated Plover	3	2010	1
Northern Bobwhite	78	2008	4
Mourning Dove	98	2007	14
Northern Harrier	1	2006	1
Sharp Shinned Hawk	18	2007	15
Cooper's Hawk	3	1999 & 2004	13
Red Tailed Hawk	2	2007 & 2008	7
Red Shouldered Hawk	1	2002 & 2006	2
Broad Winged Hawk	1	1997	1
American Kestrel	3	2003	9
Osprey	11	2001	13
Common Barn Owl	1	2004 & 2010	2
Barred Owl	1	2004	1
Northern Saw-whet Owl	94	2010	7
Eastern Screech Owl	9	2007	7
Great Horned Owl	2	2005	1
Yellow Billed Cuckoo	17	2010	13
Black Billed Cuckoo	2	2006 & 2010	5
Belted Kingfisher	14	2010	11
Hairy Woodpecker	9	1998, 2002, & 2006	15
Downy Woodpecker	32	2006	13
Yellow Bellied Sapsucker	7	2007	14
Pileated Woodpecker	1	2000 & 2009	2
Red Bellied Woodpecker	23	2009	14
Northern Flicker	32	2007	15
(Intergrade)	3	2006 & 2007	6
Whip-Poor-Will	2	2007	6

<b>SPECIES</b>	<b>HIGH</b>	<b>YEAR</b>	<b># YRS. OF OCCUR.</b>
Common Nighthawk	1	2006	1
Ruby Throated Hummingbird	316	2010	15
Calliope Hummingbird	1	2006	1
Eastern Kingbird	66	1998	14
Great Crested Flycatcher	38	2010	14
Eastern Phoebe	87	2008	15
Olive Sided Flycatcher	1	1997 & 2002	2
Eastern Wood Pewee	107	2005	15
Yellow Bellied Flycatcher	15	1997	15
Acadian Flycatcher	23	2009	15
Willow Flycatcher			
(Western Race)	1	2006	1
“Traill’s” Flycatcher	111	2010	15
Least Flycatcher	18	2010	15
Horned Lark	5	2004	5
Blue Jay	118	2008	15
American Crow	1	1998	1
European Starling	41	2009	14
Bobolink	90	2010	9
Brown Headed Cowbird	287	2009	15
Red Winged Blackbird	1515	2009	13
Eastern Meadowlark	4	2010	2
Orchard Oriole	131	2008	14
Baltimore Oriole	90	2006	14
Rusty Blackbird	1	2010	1
Common Grackle	210	2009	15
Bronze Race (versicolor)	1	2010	1
Purple Finch	209	2010	14
House Finch	856	2010	13
Common Redpoll	1	1999	1
American Goldfinch	2202	2001	15
Pine Siskin	55	2009	7
Vesper Sparrow	10	1999	12
Savannah Sparrow	346	2007	13
Grasshopper Sparrow	578	2004	13
LeConte’s Sparrow	1	2003	1
Seaside Sparrow	1	2005	1
White Crowned Sparrow			
(Eastern Race)	236	2010	14
(Gambel’s Race)	3	2000	10
White Throated Sparrow	2128	2006	15
(Zonotrichia Hybrid)	1	2003	1
American Tree Sparrow	11	2006	6

<b>SPECIES</b>	<b>HIGH</b>	<b>YEAR</b>	<b># YRS. OF OCCUR.</b>
Chipping Sparrow	564	2003	15
Clay Colored Sparrow	3	2003	6
Field Sparrow	710	2007	15
Dark Eyed Junco			
(Slate Colored Race)	921	1999	15
(Oregon Race)	1	2000, 2004, & 2005	3
(Cismontanus Race)	3	2003 & 2005	2
Song Sparrow	1386	2010	15
Lincoln's Sparrow	63	2004	15
Swamp Sparrow	334	2007	15
Fox Sparrow	103	2010	15
Eastern Towhee	165	2006	15
Northern Cardinal	306	2006	15
Rose Breasted Grosbeak	13	2009	13
Blue Grosbeak	204	2004	14
Indigo Bunting	1153	2010	15
Dickcissel	26	2007	12
Scarlet Tanager	27	2007	14
Summer Tanager	2	2007	5
Purple Martin	32	2009	9
Barn Swallow	69	2007	12
Tree Swallow	211	2008	13
Bank Swallow	38	2006	8
Northern Rough Winged Swallow	67	2007	12
Cedar Waxwing	91	2010	14
Northern Shrike	1	2000, 2007 & 2009	3
Red Eyed Vireo	103	2006	15
Philadelphia Vireo	5	2009	5
Warbling Vireo	9	2008	12
Yellow Throated Vireo	2	2007	3
Blue Headed Vireo	16	2010	14
White Eyed Vireo	46	2002	15
Black and White Warbler	97	2008	15
Prothonotary Warbler	2	2000 & 2008	6
Worm Eating Warbler	8	2007	12
Blue Winged Warbler	13	2010	13
(Brewster's Warbler Hybrid)	2	2008	4
(Lawrence's Warbler Hybrid)	1	2003	1
Golden Winged Warbler	1	2005, 2009 & 2010	3
Nashville Warbler	24	2006	15
Orange Crowned Warbler	4	2006	7
Tennessee Warbler	11	2003	15
Northern Parula	31	2010	15

<b>SPECIES</b>	<b>HIGH</b>	<b>YEAR</b>	<b># YRS. OF OCCUR.</b>
Cape May Warbler	10	2001	11
Yellow Warbler	37	2006	13
(Amnicola Race)	1	2006, 2008 & 2009	3
Black Throated Blue Warbler	85	2008	15
(Cairns' Race)	2	2005	2
Yellow Rumped Warbler	739	2008	15
(Hooverii Race)	1	2009	1
(Audubon's Race)	1	2010	1
Magnolia Warbler	209	2006	15
Cerulean Warbler	1	1999	1
Chestnut Sided Warbler	29	2006	15
Bay Breasted Warbler	4	2010	9
Blackpoll Warbler	78	1999	14
Blackburnian Warbler	3	2002 & 2006	9
Black Throated Green Warbler	19	2001	15
Pine Warbler	11	2008	15
Palm Warbler			
(Western Race)	60	2007	15
(Yellow Race)	203	2007	15
Prairie Warbler	15	2007	13
Ovenbird	152	2010	15
Northern Waterthrush	80	2008	15
Louisiana Waterthrush	3	2005 & 2010	8
Kentucky Warbler	19	2005	15
Connecticut Warbler	20	2001	15
Mourning Warbler	10	2001	15
Common Yellowthroat			
(Eastern Races)	942	2005	15
(Northern Plains Race)	1	1997, 2000, 2002, & 2008	4
Yellow Breasted Chat	78	2000	15
Hooded Warbler	5	2007	11
Wilson's Warbler	7	2006	13
Canada Warbler	31	2007	15
American Redstart	137	2010	15
House Sparrow	14	2005 & 2008	11
Northern Mockingbird	206	2009	14
Gray Catbird	845	2006	15
Brown Thrasher	152	2008	15
Carolina Wren	123	2006	15
House Wren	96	2007	15
Winter Wren	45	2006	15
Sedge Wren	1	2005	1
Marsh Wren	2	2008	6

<b>SPECIES</b>	<b>HIGH</b>	<b>YEAR</b>	<b># YRS. OF OCCUR.</b>
Brown Creeper	26	2010	15
White Breasted Nuthatch	14	1999	13
Red Breasted Nuthatch	31	2007	13
Tufted Titmouse	79	1999 & 2010	15
Black Capped Chickadee	3	2000	3
Carolina Chickadee	68	1999	15
Golden Crowned Kinglet	192	2010	15
Ruby Crowned Kinglet	1088	2006	15
Blue Gray Gnatcatcher	10	2009	14
Wood Thrush	180	1997	15
Veery	75	2008	15
Gray Cheeked Thrush	40	2006	15
Bicknell's Thrush	3	1997 & 2003	11
Swainson's Thrush	40	1997	15
Hermit Thrush	219	2009	15
American Robin	354	2009	15
(Black Backed Race)	1	2009	1

Yearly New Bird Total	18,221	2010
Yearly Return Total	2,178	2008
Yearly Repeat Total	2,405	2008
Yearly Total Bird Handlings	22,260	2010
Yearly Species Total	138	2010
Yearly Additional Races Total	5	2000 & 2005
Yearly Hybrid Total	2	2003
Yearly Intergrade Total	2	2008
Yearly Foreign Retrap Total	10	2010

Appendix C

Top 25 Most Commonly Banded Species 1996-2010

<b>Rank</b>	<b>Species</b>	<b>Banding 1996-2010</b>	<b>Total</b>	<b>Rank 2010</b>
1	WhiteThroated Sparrow	18,431		1
2	American Goldfinch	13,811		3
3	Song Sparrow	10,458		2
4	Common Yellowthroat	8,987		7
5	Gray Catbird	7,507		9
6	DarkEyedJunco (Slate Colored Race)	7,065		6
7	Indigo Bunting	6,939		4
8	RedWinged Blackbird	6,658		10
9	Field Sparrow	6,408		12
9	RubyCrowned Kinglet	6,408		11
10	YellowRumped (Myrtle) Warbler	5,834		8
11	Chipping Sparrow	4,771		17
12	Grasshopper Sparrow	3,627		13
13	House Finch	3,083		5
14	Northern Cardinal	2,878		15
15	Swamp Sparrow	2,757		16
16	Savannah Sparrow	1,992		32
17	Hermit Thrush	1,981		24
18	BrownHeaded Cowbird	1,900		20
19	Ruby Throated Hummingbird	1,870		14
20	American Robin	1,831		18
21	Wood Thrush	1,611		34
22	Magnolia Warbler	1,589		25
23	Northern Mockingbird	1,561		31
24	Eastern Towhee	1,380		33
25	GoldenCrowned Kinglet	1,373		23