

Lincoln Land Community College Bird Banding Station (LLCC BBS)
Lincoln Land Community College, Springfield, IL
(Coordinates: 394-0893)

Report and Results, Spring 2017

Lincoln Land Association of Bird Banders
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Federal Permit # 08355

The Lincoln Land Community College bird banding station (LLCC BBS), established in September, 2012, began operations of its tenth migratory season and fifth spring season on Monday, 20 March 2017. The site was the same as the nine previous seasons, primarily the northern edge of the LLCC property (just north of the baseball and soccer fields and east of the campus lake) and the southwestern edge of City Water, Light and Power property. The purposes established for the station continue to be the use of bird banding as a tool to: a) document, quantify and monitor bird populations that permanently live in or visit the site during the spring and fall migratory seasons, and b) provide educational opportunities for students, staff and others interested in learning more about birds and their environments. Objectives include: 1) documenting, quantifying and monitoring the seasonal bird populations; 2) comparing seasonal results to those of past years and to similar projects or studies at other Illinois and national sites; 3) publishing project results; and 4) providing “hands-on” experiences to students, staff and others who visit the station.

As in past seasons, mist nets were used to capture birds from near sunrise to about 11:00 a.m. on days without rain, strong winds, or below freezing temperatures. Sunrise ranged from 7:01 am on the starting date (20 March) to 5:35 am on the closing date (26 May). From 14 to 28 nets were used on 50 mornings during this ten-week period (practically all weekdays and most Saturdays) with an accumulation of 3950 net hours of operation. [One net hour is the use of one standard, 12-meter x 2-meter mist net for one hour during daylight hours.] The habitats in which nets were placed consisted of the same four components (and, in most cases, the same locations) as in previous seasons; i.e., a) an older, regenerated, deciduous woods with a thick honeysuckle understory and a slightly-sloped ravine with a narrow, shallow stream that flows from the campus lake (below the dam) to Lake Springfield (off campus) – 6 nets; b) a woodland edge next to a crop field or mowed grassy lane – 6 nets; c) a small, managed prairie – 4½ nets; and d) an area in the vicinity of a group of bird feeders close to the lake – 8 nets. In addition, a fifth location was attempted this year with negligible success at the backwater edge of Lake Springfield – 4 nets. To capture birds, net “lanes” were established and the nets were stretched between two 10’ aluminum poles (½” ENT conduit) placed vertically in the ground. The nets were then “unfurled” (usually before sunrise) and “furled” at the end of the daily banding session (to prevent the accidental capture of any birds when not in operation). The Bander’s Code of Ethics – as developed and promoted by the North American Bird Banding Council (2001) – was the standard for banding operations. Station and banding protocols were also utilized as a formal part of the banding operations—these protocols included proper training of persons to extract birds from the nets, the careful handling, processing and releasing of the birds, and approved photography.

The 2017 spring season was typically windy, cool (even cold on some occasions) and damp. (Rain created flooded creek waters on several dates – part of the reason the Lake Springfield nets were not utilized). As last year, migrant birds were slow to arrive and quick to depart. Also, as last year, several expected species were neither caught nor seen this spring. Early morning temperatures in late March ranged from the low 30’s to upper 50’s and by mid-day had reached the mid-40’s to low 60’s. In April the range was from an early morning low of 37 degrees (1 April) to 70 (20 April) to mid-day highs up to 82 degrees (20 April). In May, morning lows started in the mid 40’s and by mid-day had reached highs in the low 80’s (and 86 on 15 May). The capture of birds this year was definitely lower than previously experienced for three possible reasons: 1) fairly strong to extremely strong winds on 18 days (36%) and moderate winds on another 22 days (44%); 2) drizzles, rain or thunderstorms on 10 days (20%) forcing the cancellation or early shut down of station operations; and 3) the number of holes/tears in the nets (primarily deer-caused) that permitted birds to fly through them without being captured. (Note: beginning this spring, the number of daily net hours was reduced by 15% based on the number and size of the holes/tears in the nets; and, on *excessively* wind days the number of net hours was reduced by another 10% since several nets had become non-functional “walls” in the strong wind – which the birds could either see or would bounce off if/when they flew into them.) A fourth factor that was somewhat influential in lower than usual numbers was the prairie; during the winter months it had matted down and the “prairie-type” species, such as goldfinches, the less common sparrows, and Red-winged Blackbirds did not utilize it this spring. Although the nets within the woodlands were responsible for capturing several species not caught in other habitats, only two of the six

could be considered consistently productive. Two of the prairie nets, six of the feeder-area nets and all six edge nets were productive in capturing birds. The four experimental (first-time) nets in a shaded, backwater cove at the edge of Lake Springfield were not productive at all. That experiment will be attempted again in the fall.

The final tally of this spring's operations was 1106 birds banded (752 fewer than last year) of 76 species on 50 days of operation with an average of 22.1 birds per banding day and 0.28 birds per net hour. **TABLE 1** presents the 2017 spring statistics and compares them with those of the three previous spring seasons. Even though there were more "Slate-colored" Juncos banded this spring than any other species, there were 335 fewer than last year's very high total. The Swamp and White-throated sparrows ranked second and third again this year (in reverse order of last year). **TABLE 2** identifies the 10 most commonly banded species and compares them with the totals of the three previous spring seasons

TABLE 1

<u>Spring Comparisons</u>	<u>Spring 2014</u>	<u>Spring 2015</u>	<u>Spring 2016</u>	<u>Spring 2017</u>
First banding Date	23 Mar.	24 Mar.	21 Mar.	20 Mar.
Last banding Date	24 May	25 May	27 May	26 May
Number of Banding Days	47	49	56	50
Total Birds Banded	1391	1065	1858	1106
<i>(Total Birds banded less juncos)</i>	<i>(1214)</i>	<i>(902)</i>	<i>(1364)</i>	<i>(947)</i>
Average number of Birds per day	29.6	21.7	33.2	22.1
Highest one-day banding total	139	71	127	57
Date of highest total	5 May	4 May	4 Apr.	31 Mar.
Number of days with 100+ birds banded	2	0	1	0
Total species banded	82	75	79	76
Number of Net Hours	4182	4781	5162	3950 [^]
Number of banded birds per Net Hour	0.33	0.22	0.36	0.28
Returns of Banded Bird*	213	193	198	123
Repeats of Banded Birds**	464	416	788	348
Total Birds Captured * **	2068	1674	2844	1577

[^] 15% reduction in net hours beginning in 2017 due to deer-damaged holes/tears in the nets; without the reduction, the total net hours would have been 4647 for comparative purposes.

*Returns: Birds banded at the site 90 or more days earlier

**Repeats: Birds captured within 90 days of original banding or previous capture.

as well as the species that are typically in the top 10 (in approximate descending order) at most other eastern and midwestern spring banding stations*. Seven of the "typical" top 10 were not represented at all in the LLCC BBS results this spring (last year that number was six). The American Goldfinch is often the most commonly banded species; however, this spring, because of the "lack" of prairie habitat and few visiting the feeders, their numbers were way down, ranking them tied for 23rd (with only 11 banded). In contrast to the most common birds, 22 species were represented by a single individual this spring (compared to 15 & 20 for 2016 and 2015, respectively), and another 7 by just two birds. Without the addition of a new species to the station this spring, the station's all-season total remains at 118; however, the Northern Parula was a new species for a spring season. In addition to the birds banded, another 123 were captured as

TABLE 2

The 10 most commonly banded species

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
"Slate-colored" Junco	169	284	494	159
Swamp Sparrow	98	89	91	117
White-throated Sparrow	92	96	128	115
"Myrtle" (Yel-rumped) Warbler	28*	39	55	71
Gray Catbird	46*	34*	88	59
Song Sparrow	56	28	47	36
Swainson's Thrush	31*	61	79	34
Common Yellowthroat	26*	24*	41	32
Northern Waterthrush	40*	24*	51	31
House Wren	13*	16*	47	30

***Species typically in the top 10 (all spring years combined)**

White-throated Sparrow
American Robin
Gray Catbird
Indigo Bunting
Swamp Sparrow
American Goldfinch
Hermit Thrush
Common Grackle
Nashville Warbler
Tennessee Warbler

*Not in the Top 10 these years

returns” [birds banded 90 or more days earlier]--one of which, a cardinal, had been banded in the fall of 2012, the first season of operation (see **TABLE 4**); and 348 **“repeats”** [birds captured within 90 days of banding or a recapture date]--several of which were caught two or more times. For the record, at least four more species (Canada Goose, Mallard, Great Blue Heron and Eastern Towhee) were “in the nets” but escaped prior to being retrieved (we almost had the great blues and towhee). Needless to say, in the process of escaping the three larger species put sizeable holes in the nets.) We also did not band an Eastern Bluebird this spring but did capture one as a return. Other species missed that are usually captured in the spring included: Mourning Dove, Red-headed Woodpecker, Yellow-bellied Flycatcher, Great Crested Flycatcher, Wood Thrush (first time missed), Yellow Warbler (first time missed), and Savannah Sparrow.

This spring was a good season for a few species (such as Golden-crowned Kinglet, Brown Thrasher, Gray Catbird, Myrtle (Yellow-rumped) Warbler, Northern Waterthrush, Common Yellowthroat, and some sparrows) but a poor season for the flycatchers, vireos, thrushes, most warblers, the early sparrows, the prairie sparrows, buntings, blackbirds and finches. Some of the **noteworthy spring captures** included the Sharp-shinned and Cooper’s hawks, sapsucker, Eastern Kingbird, White-eyed Vireo (2), Northern Rough-winged Swallow, Tree Swallow (5), Marsh Wren, Northern Parula, chat and Blue Grosbeak. The two species for which **new seasonal highs** were established were: Tree Swallow (5) and Swamp Sparrow (117). There were also eight species that tied for the highest seasonal totals and another five that achieved new high totals for a “spring” season (see the **APPENDIX** for the complete list of species captured this spring, the number of each banded, and the new high totals). As always, an occasional casualty occurs; fortunately, the number of casualties is always extremely low and the station continued its great record for bird safety. Of the five known casualties this spring (00.3% of the birds captured), two were killed in the nets by deer attempting to eat them (personal observations) and a Sharp-shinned Hawk was responsible for another. The station continues to be the benefactor of specimens (primarily window casualties) for identification and donation to the State Museum

During the season it’s expected that there will be one or more days when 100 or more birds can be banded. In 2014 there were two such days, in 2015, none, in 2016 one, and 2017 none. The highest one-day spring total is still 139 birds (set on 5 May 2014); the 2017 highest one day total was just 57 birds. In contrast, during the spring season this year there were two days when the fewest birds (five) were banded.

An interesting aspect of each report is to compare the current season results with those of past seasons. Was this a typical year, or a year above or below par? As previously noted, the 2017 spring season was a fairly good year for a few species and a very poor year for several groups of species. **TABLE 3** provides comparisons. Note the low numbers of finches, blackbirds, “all” flycatchers, vireos and most warblers.

TABLE 3
Spring Season Captures for Selected Species

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>		<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Mourning Dove	5	4	3	0					
Ruby-throated Hummingbird	2	0	1	1	Ovenbird	17	8	11	4
Red-headed Woodpecker	2	0	3	0	Northern Waterthrush	40	24	51	31
“all” flycatchers (except phoebe)	9	4	5	8	Common Yellowthroat	26	24	41	32
“all” vireos	6	3	2	5	“all other warblers”	29	8	14	13
Golden-crowned Kinglet	0	2	14	13	Chipping Sparrow	23	33	14	26
Ruby-crowned Kinglet	8	10	22	8	Field Sparrow	18	7	26	21
Veery	4	4	11	3	Song Sparrow	56	28	47	36
Gray-cheeked Thrush	13	22	24	13	Lincoln’s Sparrow	18	7	27	17
Swainson’s Thrush	61	47	84	34	Swamp Sparrow	98	89	97	117
Hermit Thrush	16	11	4	4	White-throated Sparrow	101	41	128	115
Wood Thrush	2	4	3	0	White-crowned Sparrow	91	23	87	28
American Robin	24	35	36	28	Rose-breasted Grosbeak	5	0	4	3
Gray Catbird	46	34	88	59	Indigo Bunting	11	2	7	4
Brown Thrasher	11	12	23	18	Baltimore Oriole	0	0	4	2
Tennessee Warbler	21	4	6	1	Red-winged Blackbird	31	51	30	7
Nashville Warbler	23	3	8	6	Common Grackle	30	59	59	26
Magnolia Warbler	5	6	4	4	Brown-headed Cowbird	9	13	31	7
Yellow-r (Myrtle) Warbler	28	39	55	71	House Finch	57	39	18	13
Palm Warbler	15	2	20	13	American Goldfinch	106	69	42	11
American Redstart	12	4	4	5	House Sparrow	25	6	27	9

Another important aspect of the banding operations is to capture birds that have been banded in past seasons. As referenced earlier, there were 123 birds captured as returns this spring (birds banded at least 90 days earlier). **TABLE 4** identifies those species and how many and when they were banded.

TABLE 4
Returns from past seasons

	<u>Fall</u> <u>2012</u>	<u>Sprg</u> <u>2013</u>	<u>Fall</u> <u>2013</u>	<u>Sprg</u> <u>2014</u>	<u>Fall</u> <u>2014</u>	<u>Sprg</u> <u>2015</u>	<u>Fall</u> <u>2015</u>	<u>Sprg</u> <u>2016</u>	<u>Fall</u> <u>2016</u>
Red-bellied Woodpecker						1			
Downy Woodpecker		1					2	2	2
Yellow-shafted Flicker							1		
Blue Jay					2	3		2	2
Black-capped Chickadee				3			4	1	12
Tufted Titmouse					1		3	1	2
White-breasted Nuthatch						1	1	1	1
Carolina Wren									2
House Wren			1					1	2
Eastern Bluebird									1
American Robin						2			
Chipping Sparrow						1			
Song Sparrow			1	1					
White-throated Sparrow									1
Slate-colored Junco					2		1	2	6
Northern Cardinal	1			2	1	1	1	2	8
Red-winged Blackbird						1			
Common Grackle		1		2		2	1		
Brown-headed Cowbird								2	
House Finch				1					
American Goldfinch						1			2
House Sparrow			1		2		1	2	5

In addition to the mist net operations, a blackbird “decoy” trap was established in the spring of 2014 and was operated along with the regular banding activities. It would have been operated again this year had the blackbirds been more “plentiful”; however, since they were scarce, the trap was not utilized this spring.

The four issues affecting banding operations (and, in some cases, the potential number of nets used each day) remained the same: wind, rain, people and deer. Very little could be done about the wind and rain except to cancel the day’s banding operations (before the day even started) or to furl the nets that may have been opened before the wind and rain arrived. As for people, there were four types: full classrooms, periodic wanderers, those fishing from the dam, and those with dogs. The classroom groups and periodic wanderers didn’t usually affect banding operations unless they lingered for extended periods or staged as a group in close proximity to active nets – especially those close to the lake. The fishermen, dependent on where they fished, would affect the catchability of birds in several key nets. Then there were two categories of people with dogs: 1) those whose dogs were either on leashes or trained not to stray and 2) those who permitted their dogs to run freely. The latter have caused problems when the dogs ran through and destroy nets; however, this was not a known problem this spring (although in some nets there were large holes low to the ground for which there was no identifiable explanation). Then there were the deer (and more deer). The only hope remains that they learn where the nets are when furled (and readily visible) and avoid them when unfurled (not visible) – which in many observed situations they did (avoided the nets). On too many occasions, though, the deer didn’t remember that the nets were there and either ran/jumped through them (leaving large holes), or forced them to the ground (bending the net poles and damaging/destroying the nets). When the deer are caught off-guard (which they sometimes were), they dispersed quickly and a net in their departure path didn’t stop them. The deer in the area of the banding station are so tame, they don’t even flee when intentionally being chased away.

The unique LLCC BBS banding building/facility has proven to be an extremely welcome aspect of the banding station and its operations, especially on the cool, windy and damp days. It has now been fully functional for more than a year

and is a perfect setting for the banding operations and convenient as a “garage” for the station’s “bird mobile” (ATV) and other equipment. Visitors also appreciate its convenience. One thing still needed, though, is a mechanism to keep everything clean (since there’s no running water available nearby); the floor, the bird mobile and the work-space need constant attention.

Acknowledgments: Finally, many thanks to everyone who volunteered time at and visited the LLCC banding station. Special thanks to a) Lincoln Land Community College for permitting the project to continue (in particular Dr. Charlotte Warren, Dr. Eileen Tepatti, Bill Bade, Dave Bretscher and Steve Handy); b) Anthony Rothering (LLCC Biology Faculty) for near-daily assistance in all aspects of the project from beginning to end; c) many regular assistants (especially Paul & Ruth Biggers, Stevie Emmons, Joe Gardner, Jared Gorrell, Betty Kleen, Logan McHenry, Jim Mordacq, Nick Morgan, Wayne Huckabee, Ron Moorman, Nancy & Bruce Redman, Andrew Sharp, Susan Shaw and Cara Whalen); d) students and staff of the LLCC Biology Department; e) all who donated items for the new facility and station; f) Paul Biggers and Anthony Rothering for reviewing and providing pertinent comments on the draft of this report; and g) everyone else who helped and/or visited the station (including 43+ LLCC classroom students, at least 5 LLCC classes, 3 UIS grad students and other visitors) throughout the season. Thanks, too, to everyone who provided financial support, especially to The Rotary Club of Springfield South for the very nice grant and Nancy & Bruce Redman for unique Phillips 66 grants.

The LLCC BBS is scheduled to be in operation in the fall from about 21 August through 17 November. See you then.

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APPENDIX: 2017 Spring Banding Summary

Bold Face = New Station Species (none)

** new seasonal high total (2 species)

* new spring season high total (5 species)

T ties high total all seasons (8 species)

t ties spring season high total (4 species)

Sharp-shinned Hawk	1
Cooper's Hawk	1 t
Ruby-throated Hummingbird	1
Red-bellied Woodpecker	2
<u>Yellow-bellied Sapsucker</u>	<u>1 T</u>
Downy Woodpecker	3
Hairy Woodpecker	3*
Northern Flicker	3
Eastern Wood-Pewee	1 t
<u>Traill's Flycatcher</u>	<u>5</u>
Least Flycatcher	1
Eastern Phoebe	8
Eastern Kingbird	1 T
White-eyed Vireo	2 T
<u>Warbling Vireo</u>	<u>1</u>
Red-eyed Vireo	2 t
Blue Jay	10
Tree Swallow	5**
No. Rough-winged Swallow	1 T
<u>Black-capped Chickadee</u>	<u>11</u>
Tufted Titmouse	4
White-breasted Nuthatch	1
Brown Creeper	8*
Carolina Wren	1
<u>House Wren</u>	<u>31</u>
Winter Wren	3*
Marsh Wren	1 T
Golden-crowned Kinglet	13
Ruby-crowned Kinglet	8
<u>Veery</u>	<u>3</u>
Gray-cheeked Thrush	13
Swainson's Thrush	34
Hermit Thrush	4
American Robin	28
<u>Gray Catbird</u>	<u>59</u>
Brown Thrasher	18
European Starling	1
Tennessee Warbler	1
Orange-crowned Warbler	2
<u>Nashville Warbler</u>	<u>6</u>
Northern Parula	1*
Chestnut-sided Warbler	1
Magnolia Warbler	4
Yellow-rumped Warbler	71*
<u>Palm Warbler</u>	<u>13</u>
American Redstart	5
Ovenbird	4
Northern Waterthrush	31
Louisiana Waterthrush	1 T
<u>Kentucky Warbler</u>	<u>2</u>
Mourning Warbler	1 t
Common Yellowthroat	32
Wilson's Warbler	3
Canada Warbler	1
<u>Yellow-breasted Chat</u>	<u>1</u>
Chipping Sparrow	26
Field Sparrow	21

Fox Sparrow	1
Song Sparrow	36
Lincoln's Sparrow	17
Swamp Sparrow	117**
<u>White-throated Sparrow</u>	<u>115</u>
White-crowned Sparrow	28
Dark-eyed Junco	159
Northern Cardinal	28
Rose-breasted Grosbeak	3
<u>Blue Grosbeak</u>	<u>1 T</u>
Indigo Bunting	4
Red-winged Blackbird	7
Common Grackle	26
Brown-headed Cowbird	7
<u>Orchard Oriole</u>	<u>2 T</u>
Baltimore Oriole	2
House Finch	13
American Goldfinch	11
House Sparrow	9
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Total Birds Banded	1106
Total Species Banded	76

