

Lincoln Land Community College Bird Banding Station (LLCC BBS)

Lincoln Land Community College, Springfield, IL

(Coordinates: 394-0893)

Report and Results, Fall 2017

Lincoln Land Association of Bird Banders

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Federal Permit # 08355

The Lincoln Land Community College bird banding station (LLCC BBS), initiated in September, 2012, began operations of its eleventh migratory season and sixth fall season on Monday, 21 August 2017. The site was the same as the ten 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 are to use 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 or 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 very cold temperatures. A hummingbird feeder was also placed in the area to allow more of these birds to be attracted, trapped and banded. This fall, from 12 to 24½ mist nets were used on 65 mornings (practically all weekdays and most Saturdays) from 21 August through 11 November with 4582 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 five 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) – 7 nets; b) a narrow woodland edge next to a weedy cornfield -- 2 nets; c) a mowed grassy lane -- 3 nets; d) a small, managed prairie – 3½ nets; and e) an area in the vicinity of a group of bird feeders close to the lake – 6 nets. In addition, a sixth location at the backwater edge of Lake Springfield was attempted for a short time-period this year with negligible success – 3 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) – continued to be 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. Table 1 presents the 2017 Fall statistics and compares them with those of the four previous fall seasons.

	<u>TABLE 1</u>					
Fall Comparisons	Fall 2013	Fall 2014	Fall 2015	Fall 2016	Fall 2017	
First banding Date	08/26	08/25	08/24	08/22	08/21	
Last banding Date	11/15	11/14	11/20	11/18	11/11	
Number of banding days	64	64	69	73	65	
Number of birds banded	1902	2670	2047	2318	2236	
Number of species banded	70	79	80	78	79	
Average number of Birds per day	29.7	41.7	29.7	31.8	34.4	
Highest one-day total banded	194	117	120	241	147	
Number of days with 100+ birds banded	5	4	2	4	4	
Number of Net Hours	5596	5103	5669	5100	4582	
Number of banded birds per Net Hour	0.34	0.52	0.36	0.45	0.49	
Returns of Banded Birds*	35	81	57	53	66	
Repeats of Banded Birds**	470	513	572	507	425	

*Returns: Birds banded at the site 90 or more days earlier (beginning in the fall of 2012).

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

This fall there were four days in which 100 or more birds were banded -- the largest number, 147, occurred on 6 November (the 4th highest total for a single day at the station -- the station record is still 241). In contrast, there were 3 days in which five or fewer birds were banded compared to 6, 2, 10 and 6 from 2013 to 2016, respectively. The 79 species banded this year was comparable to the 79, 80 & 78 species banded in 2014, 2015 & 2016, respectively, and could easily have exceeded the record of 80 had we captured only two or more of any of the following species: either cuckoo, Red-headed Woodpecker, Yellow-bellied Sapsucker, Great Crested Flycatcher, Warbling Vireo, any swallow, Marsh Wren, 3-4 more warbler species, either tanager, Eastern Towhee, one of four grassland sparrows, two blackbirds, either oriole or an Eurasian Tree Sparrow. The final tally of birds captured was 2236 (the third-best fall season -- just 430 birds short of the 2014 record). For the record, at least one species (a Great Horned Owl) hit the net and escaped. Based on the evidence, other large birds (possibly hawks) had also flown into the nets and escaped. The low number this fall can be attributed to the markedly reduced number of a) American Goldfinches -- which only arrived in good numbers the last few days of the season (nearly 600 had been banded in both 2013 & 2014 but only 300 -- half as many - this year); b) grassland (prairie) species (the typical sparrows and some warblers); and c) several edge and woodland species (Brown Creeper, Hermit Thrush, "myrtle" warbler, Chipping, White-throated and White-crowned sparrows). The "cold fronts", which often trigger birds to migrate in mass numbers, were few and far between for most of the season. However, during November's last week of banding the fronts did favor lots of birds and brought what had been a subpar season (at least number-wise) into respectability for comparison to past years. Despite the "low" numbers for many species, there were several 2017 highlights as well. The station's first Broad-winged Hawk (the only new species added to the station total -- bringing that total to 119) was captured and new high counts were established for 12 species -- most improved were both kinglets and two finches. There were three more species for which new high totals for a fall season were achieved (one of those was the first fall capture of a European Starling) and 9 more species tied the previous high total for any season. Although the nets within the woodlands were responsible for capturing several species not caught in other habitats, only three of the seven were consistently productive. The prairie nets were a major disappointment this year (based on their production in years past); however, all six of the feeder-area nets and three of the six edge nets produced well this year. The net lanes established in the backwaters of Lake Springfield were not productive at all. The complete list of species captured this fall and the number of each banded is provided in the APPENDIX. In addition to the mist net captures, 23 Ruby-throated Hummingbirds were captured and banded as a result of the hummingbird trap.

The average of 34.4 birds per day this fall was surpassed only by the 41.7 of 2014 but was only four birds per day more than the 30.4 combined average of the other years from 2013 to 2016; however, the figures for 2015 & 2016 included days that had been "shortened" (both by the number of nets used and hours of operation) because of rain or excessive wind (which reduced the number of potential birds that could have been captured). Although we did not have any seriously "shortened" days this year, fewer nets were used on days that were threatened by rain (in order to be able to furl them quickly, if necessary). On these latter days both the number of net hours and number of potential captures were naturally lower. This year, even though there was one more banding day than in 2014, the 4582 net hours were 520 fewer than in 2014. The 4582 figure (and the number of all net hours since 2014) includes a 10% reduction for the "too many" large, deer-caused holes in and other damage to the nets (unrepairable holes -- reducing the potential for capturing birds). Needless to say, the larger birds in the process of escaping (such as the known Great Horned Owl), often left sizeable holes in the nets as well.

TABLE 2

The 10 most commonly banded species

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
House Finch	52	216	102	250**	390**
American Goldfinch	579	629	243	336	300
Dark-eyed (Slate-colored) Junco	104	169	284	269	296
American Robin	37*	57*	84	53*	77
<u>Ruby-crowned Kinglet</u>	<u>15*</u>	<u>15*</u>	<u>34*</u>	<u>39*</u>	<u>68</u>
Yellow-rumped (Myrtle) Warbler	88	107	84	120	66
House Sparrow	91	178	67	80	60
Northern Cardinal	40*	33*	77	50*	56
American Redstart	13*	61	15*	17*	53
Song Sparrow	86	48*	120	60	51

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

White-throated Sparrow
American Goldfinch
Myrtle Warbler
Gray Catbird
Hermit Thrush
Ruby-crowned Kinglet
American Robin
Northern Cardinal
Magnolia Warbler
Swainson's Thrush
Ovenbird
Nashville Warbler
Golden-crowned Kinglet

*Not in the Top 10 these years

** New Fall Season high

Table 2 identifies the a) 10 most commonly banded species this fall and compares them with the totals of the four previous fall seasons, and b) species that are typically in the top 10 (in approximate descending order) at most other eastern and midwestern fall banding stations. Only five of the “typical” top 10 were represented at the LLCC BBS this fall. As previously referenced, the American Goldfinch has often ranked as the most commonly banded species in years past but was surpassed by the near-daily capture of many House Finches.

In contrast to the most common birds, 10 species were represented by a single individual this fall (compared to 12, 14, 17 & 12 from 2013 to 2016, respectively), and another 5 by just two birds. In addition to the new species and several new high totals, other interesting captures included two Sharp-shinned Hawks, single White-eyed, Blue-headed and Philadelphia vireos, three Red-breasted Nuthatches, two Cedar Waxwings, a Blackburnian Warbler (only the 2nd for the station), and 4 Bay-breasted Warblers. The most likely “non-captures” were identified above. Some of the species for which “lower than typical numbers” banded were: Mourning Dove, flycatchers, all vireos, Brown Creeper, Hermit Thrush, Nashville Warbler, Yellow-rumped (Myrtle) Warbler, Common Yellowthroat, Chipping, White-throated and White-crowned sparrows. In terms of species groups banded, there were: 37 woodpeckers of 4 species, 35 flycatchers of 5 species, 5 vireos of 4 species, 52 wrens of 3 species (32 House Wrens), 145 thrushes of 7 species, 368 warblers of 20 species, and 510 sparrows of 10 species. As always, an occasional casualty occurs; fortunately, the number of normal” casualties continued to be extremely low; however, of the fifteen this year (the highest seasonal total ever), ten were killed directly by the campus’s “tame” deer attempting to eat them while still in the nets (personal observation—multiple observers); a Great Horned Owl was responsible for another. As usual, the station continued to be the benefactor of several specimens from LLCC staff and visitors (primarily window casualties) for identification and donation to the State Museum.

Another important aspect of the banding program is the capture of birds that have been banded in past seasons. This year, 66 were captured as **returns**” [birds banded 90 or more days earlier]; seven of these had been banded in the spring of 2013. Another 425 birds were captured as **“repeats”** [birds caught within 90 days of banding or a recapture date]--several of these were caught multiple times (some as many as eight times during the season). **TABLE 3** identifies those species and how many and when they were banded.

TABLE 3
Returns from past seasons

	<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>	<u>Sprg</u> <u>2017</u>
Cooper’s Hawk									1
Mourning Dove					1				
Red-bellied Woodpecker								2	
Downy Woodpecker	2							2	
Hairy Woodpecker									1
Blue Jay						1			
Black-capped Chickadee						1	3	2	3
Tufted Titmouse						1	1	3	3
Carolina Wren						1		4	
House Wren							1		
American Robin					1				
Gray Catbird						1		1	
Song Sparrow		1							
Slate-colored Junco	1								
Northern Cardinal			1				3	1	3
House Finch	1			3			1	1	1
American Goldfinch	1							6	2*
House Sparrow	2								

*These were the last two goldfinches banded last spring

The five issues affecting banding operations (and, in some cases, the potential number of nets used each day) were wind, rain, leaves, people and deer. Very little could be done about the wind and rain except to furl nets that had been opened

or, at dawn, elect not to open them at all. As for leaves, when leaves are in the nets, the number of birds captured are reduced in two ways: 1) the birds can see and therefore avoid leaf-filled nets, and 2) considerable time is required to extract the leaves and during that time, when people are at the nets, birds are reluctant to fly into the capture area. [This year, however, unlike most previous fall seasons, a heavy leaf-fall (which normally occurs on five or more days each fall) only occurred once (thankfully) on the penultimate day; there were modest leaf-fall days – but nothing major.] Of course, all leaves (and their remnants) must be totally removed from the nets prior to furling each day, otherwise, the nets could not be readily unfurled the next morning. As for visiting people, there are four types: full classrooms, interested students (some earning extra classroom credits), periodic wanderers, and those with dogs. The classroom groups, students and periodic wanderers don't usually affect banding operations unless they linger for extended periods or stage as a group in close proximity to active nets – especially the nets close to the campus lake. Then there are two categories of people with dogs: 1) those whose dogs are either on leashes or trained not to stray and 2) those who permit their dogs to run freely. Fortunately none of the nets were damaged by running dogs this fall. Then there are the deer (and more deer). The only hope remains that they learn where the nets are when furred (and readily visible) and avoid them when unfurled (not visible). Deer were definitely responsible for the complete destruction/loss of nets and for large, gaping holes in others. When the deer are caught off-guard (which they sometimes are), or are in pursuit of other deer, they disperse quickly--and a net in their departure path does not stop them. The deer in the area of the banding station are so tame, they don't even flee when you actively try to chase them away. On at least three occasions a deer was observed using its nose to lift up the bottom trammel of the net and slither underneath before scampering away.

The banding “headquarters” (building) has been a major blessing, not only as a safe place to keep the “bird-mobile” and banding materials, but 1) as a work-site on the cold, windy and misty days, and 2) as a warm, wind-free rest area between net checks. However, the picnic table under the canopy continued to be the primary banding work station. We will always be grateful to the LLCC Work Force Careers Center for making this possible. Of course, the backbone of the station's operations is its volunteers. During the fall season there were at least 28 individuals who volunteered one of more days at the station. **Table 4** provides a brief accounting of this fall's volunteer support in terms of individual person-days worked and individual person-hours worked.

Table 4
VOLUNTEER SUPPORT

<u># of</u> <u>DAYS</u>	<u># of</u> <u>Volunteers</u>	<u># of</u> <u>HOURS</u>	<u># of</u> <u>Volunteers</u>	
50+ days	2	100+ hours	4	
25-49 days	2	50-99 hours	2	Total Number of Person Days: 364
15-24 days	4	25-49 hours	9	Total Number of Person Hours: 1264
9-14 days	6	15-24 hours	4	
5-8 days	4	5-14 hours	4	
1-4 days	10	1- 4 hours	5	
	28		28	

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 and especially during the two-plus weeks I was gone; c) many regular assistants (notably Paul & Ruth Biggers, Chad Cremer, Joe Gardner, Wayne Huckabee (who regularly arrived early on Wednesdays to set up the nets that day), Ron Moorman, Nic Morgan, Jim Mordacq, Asya Rahlin, Bruce & Nancy Redman, Andrew Sharp, Susan Shaw, Kelsey Thornton and Phil Wheat); d) all who donated wish-list items for the new facility and station; e) to Paul Biggers and Anthony Rothering for reviewing and providing pertinent comments on the draft of this report, and f) everyone else who helped and/or visited the station (including 100+ LLCC classroom students and at least 8 LLCC classes) any time during the season. Thanks, too, to everyone who provided financial support, especially to The Rotary Club of Springfield South for another grant, the Thrivent Financial Action Team grant, the Redmans for unique grants and several anonymous donors.

The LLCC BBS is scheduled to resume next spring from 19 March through 25 May. See you then.

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APPENDIX: 2017 Fall Banding Summary

Bold Face = New Station Species (1)

** new seasonal high total (12 species)

* new fall season high total (3 species)

T ties high total all seasons (9 species)

t ties fall season high total (0 species)

Sharp-shinned Hawk	2 T
Cooper's Hawk	4 **
Broad-winged Hawk	1 **
Mourning Dove	6
<u>Ruby-throated Hummingbird</u>	<u>2</u>
Red-bellied Woodpecker	7
Downy Woodpecker	24
Hairy Woodpecker	1
Northern Flicker	5
<u>Eastern Wood-Pewee</u>	<u>2</u>
Yellow-bellied Flycatcher	4 **
Traill's Flycatcher	3
Least Flycatcher	6 T
Eastern Phoebe	20 **
<u>White-eyed Vireo</u>	<u>1</u>
Blue-headed Vireo	1 T
Philadelphia Vireo	1 T
Red-eyed Vireo	2
Blue Jay	11
<u>Black-capped Chickadee</u>	<u>17</u>
Tufted Titmouse	12
White-breasted Nuthatch	4
Red-breasted Nuthatch	3
Brown Creeper	5
<u>Carolina Wren</u>	<u>14 T</u>
House Wren	32
Winter Wren	6
Golden-crowned Kinglet	31 **
Ruby-crowned Kinglet	68 **
<u>Eastern Bluebird</u>	<u>3</u>
Veery	5
Gray-cheeked Thrush	7
Swainson's Thrush	32
Hermit Thrush	16
<u>Wood Thrush</u>	<u>5 T</u>
American Robin	77
Gray Catbird	20
Brown Thrasher	10 *
European Starling	1 *
<u>Cedar Waxwing</u>	<u>2</u>
Golden-winged Warbler	4 **
Tennessee Warbler	48
Orange-crowned Warbler	17 **
Nashville Warbler	14
<u>Northern Parula</u>	<u>5 **</u>
Chestnut-sided Warbler	5
Magnolia Warbler	31
Yellow-rumped (Myrtle) Warbler	66
Black-throated Green Warbler	13
<u>Blackburnian Warbler</u>	<u>1 T</u>
Palm Warbler	29 T
Bay-breasted Warbler	4 T
Black-and-white Warbler	7
American Redstart	53
<u>Ovenbird</u>	<u>24</u>

Northern Waterthrush	11
Mourning Warbler	2
Common Yellowthroat	32
Wilson's Warbler	1
<u>Canada Warbler</u>	<u>1</u>
American Tree Sparrow	3
Chipping Sparrow	29 d
Field Sparrow	11
Fox Sparrow	16 **
<u>Song Sparrow</u>	<u>51</u>
Lincoln's Sparrow	7
Swamp Sparrow	42
White-throated Sparrow	48 d
White-crowned Sparrow	7 d
<u>"Slate-colored" Junco</u>	<u>296 *</u>
Northern Cardinal	56
Rose-breasted Grosbeak	1
Indigo Bunting	9
Common Grackle	21
<u>Purple Finch</u>	<u>5 **</u>
House Finch	390 **
Pine Siskin	43 **
American Goldfinch	300
House Sparrow	60
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Total Birds Banded	2236
Total Species Banded	79

d = major decrease since 2016

Supplemental Banding (from special trap)

Ruby-throated Hummingbird 23

