

Biodiversity Research at LUREC

Edgar Perez
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Loyola University Chicago Retreat & Ecology Campus, 2011



SUMMER 2012

Breeding Bird Census

OBJECTIVES

Our primary research objective was to get as much detailed information on the avian community structure as time allowed. We specifically wanted to:

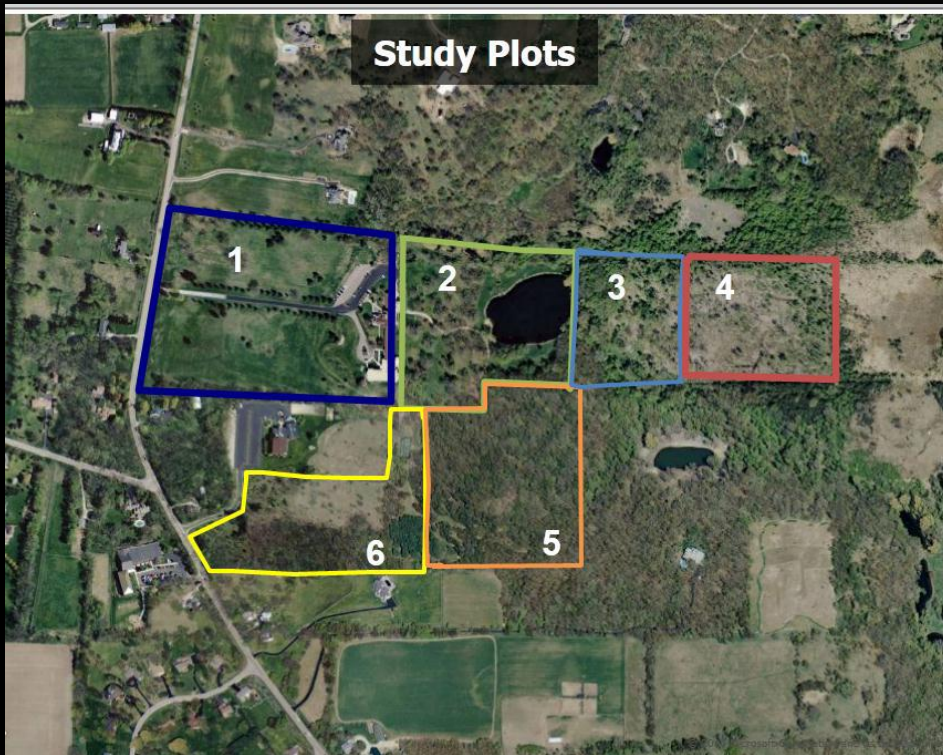
- 1) determine what species could be found at LUREC (species richness);
- 2) identify which species were using the campus as a breeding site;
- 3) establish how many of each species were breeding;
- 4) map their breeding territory if possible so as to identify territory distribution;

OBJECTIVES

- 5) discover the habitat preferences of the breeding birds;
- 6) identify what vegetative structure or nest selection sites they were using; and
- 7) get an estimate on the bird's relative abundance.

Our goal of the study was to obtain critical baseline data to aid in evaluating future assessment and monitoring of the wetland and woodland restoration projects.

METHODOLOGY



Each plot was randomly visited on separate days normally between 6:00am and 10:00am. Each was visited at least 4-6 times during the census. Transects counts, spot-mapping and nest searches'.

RESULTS

Avian Species Structure at Loyola University Retreat and Ecology Campus
During the 2012 Summer Breeding Season

Edgar R. Perez and Stephen F. Mitten
Institute of Environmental Sustainability
Loyola University Chicago



Results published in paper

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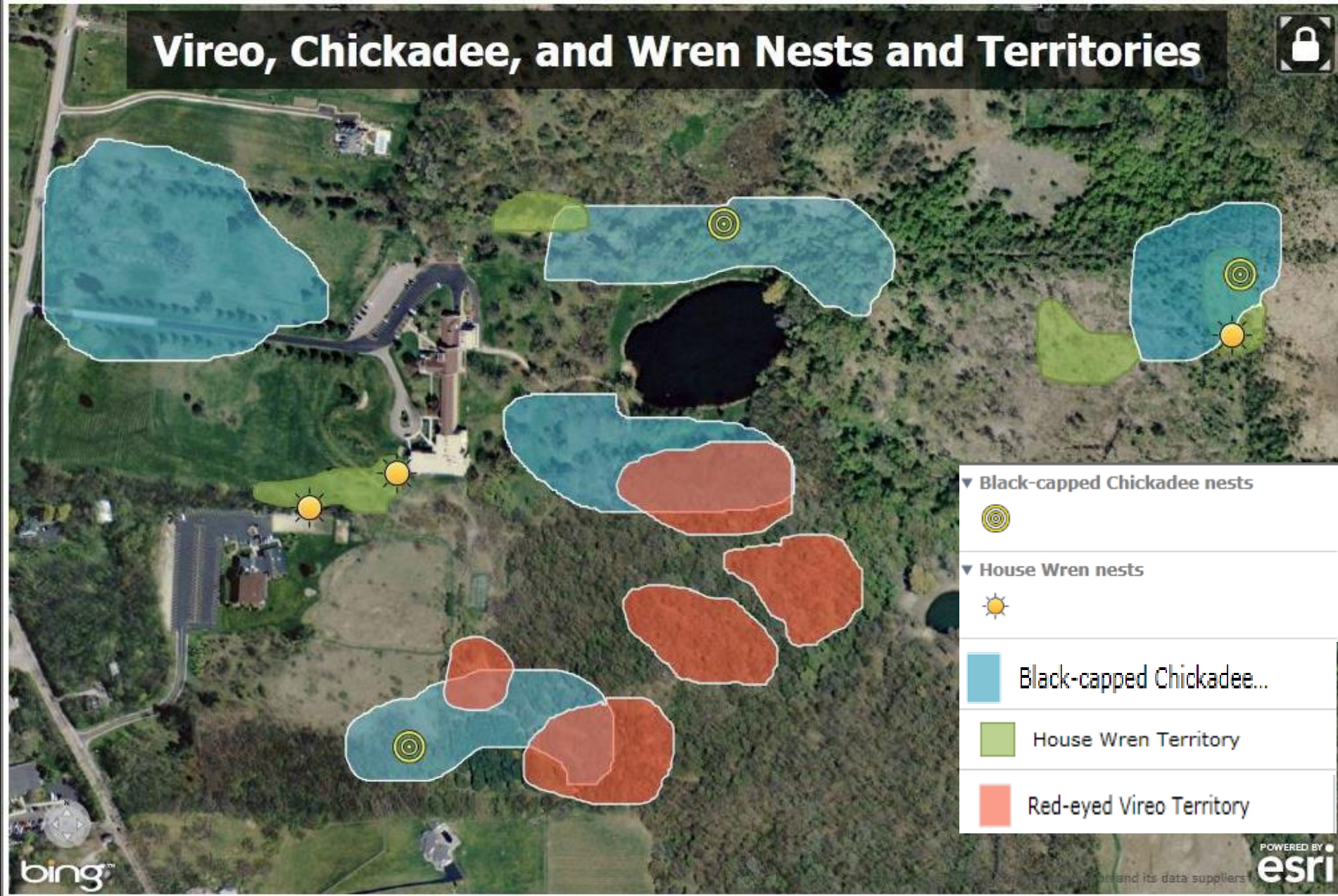
Avian Species Structure at Loyola University Retreat and Ecology Campus
During the 2012 Summer Breeding Season

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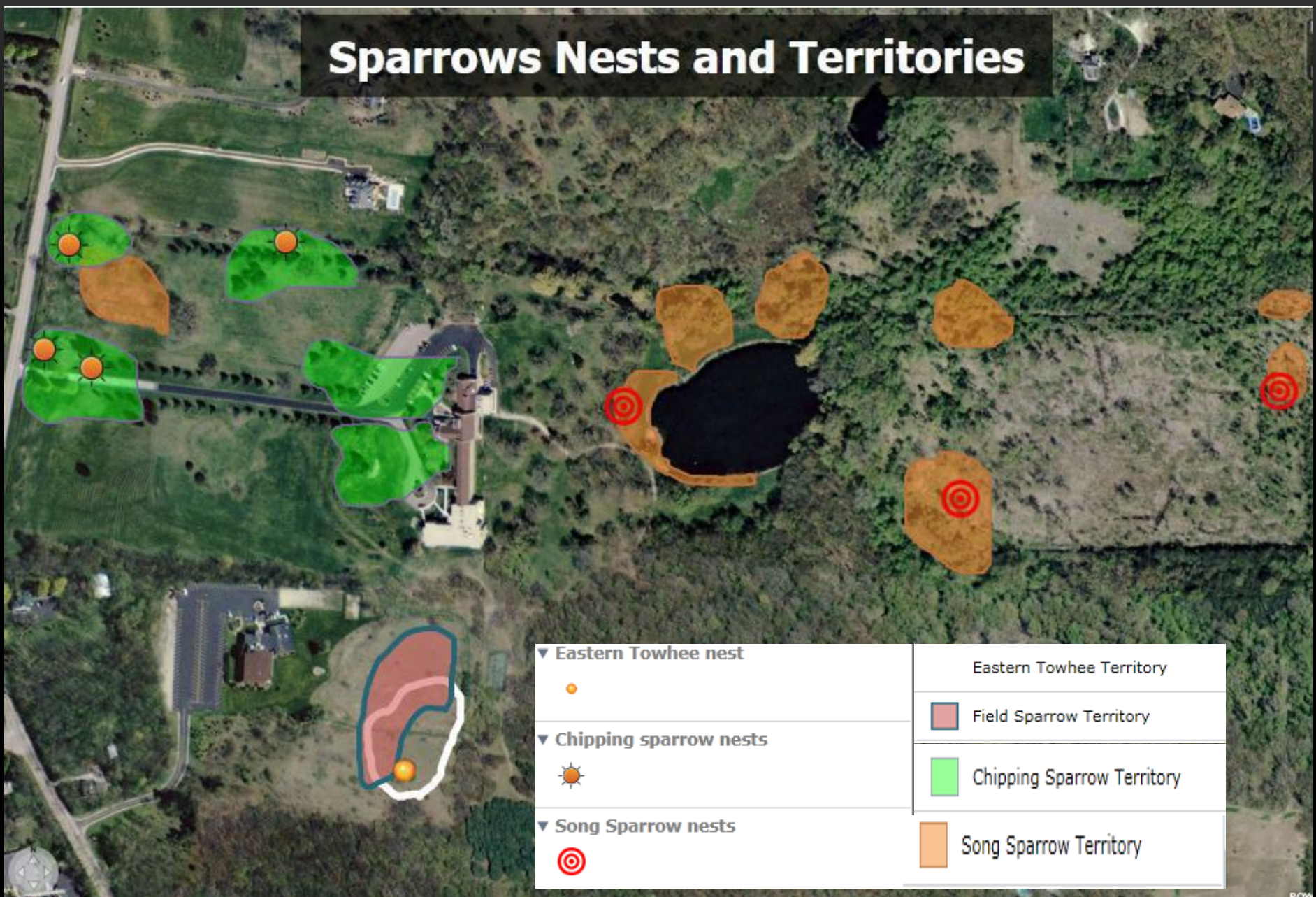
Abstract:







We undertook a breeding census of the avian community residing on the 98 acre (39.7 hectare) property of Loyola University Retreat and Ecology Campus (LUREC) over a two month period (May 12-July 18) in the summer of 2012. Territory-spot mapping was the primary method used, supplemented by timed counts, opportunistic visual sightings and nest searches. Sixty-nine species were documented; forty species were found breeding or holding territories on the campus with an additional twenty-nine species detected as flyovers or occasional visitors. One hundred and thirty-five nests of thirty-one species were found. Frequency of encounter and relative abundance indices were also calculated. The most frequently encountered species were the Gray Catbird and Northern Cardinal. The Red-winged Blackbird was the single most abundant species in terms of total number of individuals seen; however, Gray Catbirds, American Robins, Northern Cardinals, Black-capped Chickadees, American Goldfinches and Brown-headed Cowbirds were the most abundant (RA) birds across the campus. The American Robin had the most number of breeding territories. Habitat structure and food availability should both be considered important factors in future wetland and woodland restoration. Some recommendations are provided.

Vireo, Chickadee, and Wren Nests and Territories



Sparrows Nests and Territories



| | |
|---|--|
| ▼ Eastern Towhee nest | Eastern Towhee Territory |
|  |  Field Sparrow Territory |
| ▼ Chipping sparrow nests |  Chipping Sparrow Territory |
|  | |
| ▼ Song Sparrow nests |  Song Sparrow Territory |
|  | |

SUMMER 2013

LUREC TREES PROJECT

One main purpose of the survey was to identify and tag all the trees at LUREC (a plant with a DBH of 4 inches or higher was considered a tree), in an effort to provide a description of the woodland forest tree composition. In addition, the surveyors were also required to take the geographical position of the trees, so that the data could be entered into the Loyola University GIS database

METHODOLOGY

The coordinates, or the geographical position of one thousand five hundred and twenty-two trees (1,522) of the four thousand one-hundred and fifty-six (4,156) trees documented on campus were not taken, and therefore, were not represented on the LUREC trees map. So I set out to document them.

0 125 250 500 Feet

Loyola University Chicago Retreat & Ecology Campus



PERCENTAGE OF TREES FOUND DEAD

| Common Name | Number Observed | Number Dead | Percentage (%) |
|-----------------------|-----------------|-------------|----------------|
| Black Cherry | 300 | 24 | 8 |
| American Elm | 61 | 17 | 27.87 |
| Bur Oak | 20 | 2 | 10 |
| Yellow-bud Hickory | 59 | 1 | 1.69 |
| White Ash | 5 | 1 | 20 |
| Black Walnut | 5 | 1 | 20 |
| Cottonwood | 3 | 1 | 33.3 |
| Jack Pine | 10 | 1 | 10 |
| Silver Maple | 7 | 1 | 14 |
| Apple | 2 | 1 | 50 |
| White Oak | 86 | 6 | 5.8 |

Catbird, Sparrow and Wren Territories

- Song Sparrow
- House Wren
- Grey Catbird

Wood-Warblers and Blackbird Territories

- Common Yellowthroat
- Yellow Warbler
- Red-winged Blackbird

Bluebird, Kingbird, Cardinal and Grosbeak Territories

- Northern Cardinal
- Eastern Bluebird
- Rose-breasted Grosbeak
- Eastern Kingbird

Spot-mapping of back of wetland reveals site fidelity by species from previous year

| Species Summary | | | | | | | |
|------------------------|--------------------------|----------------|-----------------|----------------------|-----------------------|---|----------------------|
| Nest Sites | All Sites | | | | | | |
| Year | 2013 | | | | | | |
| Species | Total # of nest attempts | First egg date | Total # of eggs | Total # of nestlings | Total # of fledglings | Nest attempts with at least one fledgling | Nesting success rate |
| Blue Jay | 1 | 5/12/2013 | 4 | 4 | 4 | 1 | 100.00% |
| Tree Swallow | 1 | 6/12/2013 | 4 | 3 | 3 | 1 | 100.00% |
| Black-capped Chickadee | 1 | 6/3/2013 | 5 | 5 | 5 | 1 | 100.00% |
| House Wren | 2 | 5/19/2013 | 9 | 9 | 9 | 2 | 100.00% |
| Eastern Bluebird | 2 | 5/25/2013 | 7 | 6 | 6 | 2 | 100.00% |
| American Robin | 1 | 5/9/2013 | 3 | 3 | 3 | 1 | 100.00% |
| Gray Catbird | 1 | 5/28/2013 | 4 | 4 | 4 | 1 | 100.00% |
| Brown Thrasher | 1 | 6/3/2013 | 1 | 1 | 1 | 1 | 100.00% |
| Red-winged Blackbird | 2 | 6/18/2013 | 6 | 0 | 0 | 0 | 0.00% |

SPECIES SUMMARY FOR NESTS MONITORED AT LUREC

Nest check data sheet

Use this form to describe your nest site and to record data from each visit. Use a separate sheet for each nest monitored and each new nesting attempt. See back side for explanations of codes and fields. When finished, please enter completed sheets online at: www.NestWatch.org.

Year 2013 Species American Robin

1. NEST SITE LOCATION

Nest Site Name
American Robin Nest

Nearest address
2710 S. Country Club Road
McHenry County, Chicago, IL

-OR-

Latitude (decimal degrees; ex. 47.67932)
N _____

Longitude (decimal degrees; ex. -76.45448)
W - _____

2. SITE DESCRIPTION (see key on back)

Nest is located (circle one): IN UNDER

Nesting substrate Live Tree Branch

Cavity orientation (N,E,S,W) _____

Cavity opening width (in. or cm.) _____

Habitat within 1 arm length
Human modified description Open field w/ small blue spruce

Habitat within 1 football field length
Human modified description Open field (East) Roadside (W)

Elevation (ft. or m.) 956 ft.

Height above ground (ft. or m.) 3 ft.

3. BREEDING DATA If eggs or young are present but not countable, enter "u" for unknown.

| Vst # | DATE & TIME | | HOST SPECIES | | | STATUS & ACTIVITY CODES | | | | COWBIRD ACTIVITY | | | MORE INFO | |
|-------|-----------------------------|--------------|--------------|------------|------------|-------------------------|--------------|--------------|----------------|------------------|------------|------------|---------------|-------------|
| | Month / Day (1-12) / (1-31) | Time (am/pm) | Eggs | Live Young | Dead Young | Nest Status | Adult Status | Young Status | Mgmt. Activity | Eggs | Live Young | Dead Young | Obs. Initials | Notes Below |
| Ex. | 5/6 | 2pm | 1 | 0 | 0 | cn | aa | no | no | 0 | 0 | 0 | EE | X |
| 1 | 5/15 | 5:40pm | 3 | 0 | 0 | cn | aa | no | no | 0 | 0 | 0 | EP | |
| 2 | 5/17 | 3:48pm | 3 | 0 | 0 | cn | aa | no | no | 0 | 0 | 0 | EP | |
| 3 | 5/19 | 2:12pm | 3 | 0 | 0 | cn | ga | no | no | 0 | 0 | 0 | EP | |
| 4 | 5/21 | 4:30pm | 3 | 0 | 0 | cn | ga | no | no | 0 | 0 | 0 | EP | |
| 5 | 5/23 | 5:08pm | 1 | 2 | 0 | cn | va | hy | no | 0 | 0 | 0 | EP | |
| 6 | 5/25 | 2:27pm | 0 | 3 | 0 | cn | va | ny | no | 0 | 0 | 0 | EP | |
| 7 | 5/29 | 5:12pm | 0 | 3 | 0 | cn | va | py | no | 0 | 0 | 0 | EP | |
| 8 | 5/31 | 5:27pm | 0 | 3 | 0 | cn | va | fy | no | 0 | 0 | 0 | EP | |
| 9 | 6/03 | 4:53pm | 0 | 3 | 0 | cn | va | fy | no | 0 | 0 | 0 | EP | |
| 10 | 6/05 | 5:52pm | 0 | 2 | 0 | cn | va | fu | no | 0 | 0 | 0 | EP | |

4. NESTING ATTEMPT SUMMARY *Fill in information for HOST SPECIES below after the nesting attempt is complete.

IMPORTANT DATES:

First Egg Date May 9th 2013

Hatch Date May 22nd 2013

Fledge Date June 6th 2013

HOST SPECIES TOTALS:

| Visits to nest | Clutch Size | Unhatched Eggs | Live Young | Fledglings |
|----------------|-------------|----------------|------------|------------|
| 10 | 03 | 0 | 3 | 3 |

NEST FATE: Presumed all survived

COMMENTS: One probably fledged yesterday, and the other two were in the immediate vicinity of the nest.

GPS MAPPING OF THE THIRTEEN-LINED GROUND SQUIRREL (*ICTIDOMYSS TRIDECEMPLINEATUS*) A SOCIAL COLONY AT LOYOLA UNIVERSITY RETREAT AND ECOLOGY CAMPUS

- We documented the expansion of the Thirteen-lined ground squirrel (*Ictidomyss tridecemlineatus*) across the front portion of the Loyola University Retreat and Ecology Campus (LUREC) during the summer of 2013 by GPS mapping the locations of their burrow entrances noting clusters of holes over time and recording their runways from hole to hole. We mapped 235 holes as of July 20, and estimated the number of ground squirrels at around 47 individuals.

EXPANSION OF GROUND SQUIRREL HOLES AT LUREC



MOTH/BUTTERFLY DATA AND IDENTIFICATION





2.JPG Ailanthus webworm Moth (Atteva aurea) 1.JPG Ailanthus webworm Moth (Atteva aurea) 3.JPG Ailanthus webworm Moth (Atteva aurea) 4.JPG Ailanthus webworm Moth (Atteva aurea) 5.JPG Ailanthus webworm Moth (Atteva aurea) 6.JPG Ailanthus webworm Moth (Atteva aurea) 7.JPG Ailanthus webworm Moth (Atteva aurea) 8.JPG Ailanthus webworm Moth (Atteva aurea) American Ear Moth (Amphipoea americana) 2.JPG American Ear Moth (Amphipoea americana) 3.JPG



American Ear Moth (Amphipoea americana) 4.JPG American Idia Moth (Idia americalis) 1.JPG American Idia Moth (Idia americalis) 2.JPG American Idia Moth (Idia americalis) 3.JPG American Idia Moth (Idia americalis) 4.JPG Armyworm Moth (Mythimna unipuncta) 1.JPG Armyworm Moth (Mythimna unipuncta) 2.JPG Armyworm Moth (Mythimna unipuncta) 3.JPG Armyworm Moth (Mythimna unipuncta) 4.JPG Armyworm Moth (Mythimna unipuncta) 5.JPG



Armyworm Moth (Mythimna unipuncta) 6.JPG Aster Borer Moth (Papaipema impecuniosa) 1.JPG Aster Borer Moth (Papaipema impecuniosa) 2.JPG Aster Borer Moth (Papaipema impecuniosa) 3.JPG Aster Borer Moth (Papaipema impecuniosa) 4.JPG Aster Borer Moth (Papaipema impecuniosa) 5.JPG Aster Borer Moth (Papaipema impecuniosa) 6.JPG Black rimmed Prominent (Pheosia rimosa) 1.JPG Black rimmed Prominent (Pheosia rimosa) 2.JPG Black rimmed Prominent (Pheosia rimosa) 3.JPG



Black Swallowtail (Papilio polyxenes) 1.JPG Black Swallowtail (Papilio polyxenes) 2.JPG Black Swallowtail (Papilio polyxenes) 3.JPG Black Swallowtail (Papilio polyxenes) 4.JPG Black Swallowtail (Papilio polyxenes) 5.JPG Black Swallowtail (Papilio polyxenes) 6.JPG Black Swallowtail (Papilio polyxenes) 7.JPG Black Swallowtail (Papilio polyxenes) 8.JPG Black Swallowtail (Papilio polyxenes) 9.JPG Black Swallowtail (Papilio polyxenes) 10.JPG



Black Swallowtail (Papilio polyxenes) 11.JPG Black Swallowtail (Papilio polyxenes) 12.JPG Black Swallowtail (Papilio polyxenes) 13.JPG Bristly 24.JPG Bristly Cutworm Moth (Lacinipolia renigera) 1.JPG Bristly Cutworm Moth (Lacinipolia renigera) 2.JPG Bristly Cutworm Moth (Lacinipolia renigera) 3.JPG Bristly Cutworm Moth (Lacinipolia renigera) 4.JPG Bristly Cutworm Moth (Lacinipolia renigera) 5.JPG Bristly Cutworm Moth (Lacinipolia renigera) 9.JPG



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General

Conditional Formatting Format as Table Cell Styles

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| | B | C | D | E | F | G | H | I | K | L | M |
|----|----------------------------------|----------|------------|---------|-------------|--------------|------------------|----------------------------|--------------------------|---------------------|-------|
| | Scientific name | Kingdom | Phylum | Class | Order | Family | Genus | Species | Date | Location | Notes |
| 1 | <i>Ancyloxypha numitor</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Hesperiidae | Ancyloxypha | <i>A. numitor</i> | Summer 2012 | fen | |
| 2 | <i>Achalarus lyciades</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Hesperiidae | Achalarus | <i>A. lyciades</i> | Sept 13 2013 | Front Flower bed | |
| 3 | <i>Epargyreus clarus</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Hesperiidae | Epargyreus | <i>E. clarus</i> | Summer 2012, 2013 | fen | |
| 4 | <i>Erynnis sp</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Hesperiidae | Erynnis | <i>E. sp.</i> | Summer 2012 | fen | |
| 5 | <i>Hylephila phyleus</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Hesperiidae | Hylephila | <i>H. phyleus</i> | Summer 2012 | Front yard | |
| 6 | <i>Poanes massasoit</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Hesperiidae | Poanes | <i>P. massasoit</i> | Summer 2012 | Flower bed | |
| 7 | <i>Pholisora catullus</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Hesperiidae | Pholisora | <i>P. catullus</i> | Summer 2012 | fen | |
| 8 | <i>Polites mystic</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Hesperiidae | Polites | <i>P. mystic</i> | Summer 2012 | Large Pond | |
| 9 | <i>Pyrgus communis</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Hesperiidae | Pyrgus | <i>P. communis</i> | Summer 2012 | fen | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | <i>Papilio polyxenes</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Papilionidae | Papilio | <i>P. polyxenes</i> | Summer 2012 2013 | Flower bed | |
| 13 | <i>Papilio glaucus</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Papilionidae | Papilio | <i>P. glaucus</i> | Summer 2012, 2013 | Flower bed | |
| 14 | <i>Papilio troilus</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Papilionidae | Papilio | <i>P. troilus</i> | Sept 1 2012, Sept 1 2013 | small trout ponds | |
| 15 | | | | | | | | | | | |
| 16 | <i>Colias philodice</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Pieridae | Colias | <i>C. philodice</i> | Summer 2012, 2013 | Large Pond | |
| 17 | <i>Colias eurytheme</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Pieridae | Colias | <i>C. eurytheme</i> | Summer 2012, 2013 | Prairie | |
| 18 | <i>Pieris rapae</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Pieridae | Pieris | <i>P. rapae</i> | Summer 2012, 2013 | fen | |
| 19 | | | | | | | | | | | |
| 20 | <i>Cupido comyntas</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Lycaenidae | Cupido | <i>C. comyntas</i> | Sept 1 2012 | large pond | |
| 21 | <i>Celastrina neglecta</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Lycaenidae | Celastrina | <i>C. neglecta</i> | Summer 2012, 2013 | Front yard | |
| 22 | <i>Satyrrium sp</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Lycaenidae | Satyrrium | <i>Satyrrium sp</i> | Summer 2012, 2013 | fen | |
| 23 | | | | | | | | | | | |
| 24 | <i>Boloria bellona</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | Boloria | <i>B. bellona</i> | Summer 2012 | Back yard | |
| 25 | <i>Boloria selene</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | Boloria | <i>B. selene</i> | Summer 2012 | North of Large Pond | |
| 26 | <i>Cercyonis pegala</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | Cercyonis | <i>C. pegala</i> | Summer 2012 | Large Pond | |
| 27 | <i>Danaus plexippus</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | Danaus | <i>D. plexippus</i> | Summer 2012, 2013 | Common | |
| 28 | <i>Euptoieta claudia</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | <i>Euptoieta</i> | <i>E. claudia</i> | Sept 22 2013 | Large Pond | |
| 29 | <i>Limnitis archippus</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | Limnitis | <i>L. archippus</i> | Aug 12 2013 | Back yard | |
| 30 | <i>Limnitis artemis</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | Limnitis | <i>L. artemis</i> | July 22 2013 | Prairie | |
| 31 | <i>Limnitis artemis astyanax</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | Limnitis | <i>L. artemis astyanax</i> | July 27 2013 | Front yard | |
| 32 | <i>Nymphalis antiopa</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | Nymphalis | <i>N. antiopa</i> | Sept 15 2012 summer 2013 | Front yard | |
| 33 | <i>Phyciodes tharos</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | Phyciodes | <i>P. tharos</i> | Summer 2012, 2013 | Challenge Course | |
| 34 | <i>Polygonia comma</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | Polygonia | <i>P. comma</i> | Summer 2012, 2013 | Large Pond | |
| 35 | <i>Satyrodes eurydice</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | Satyrodes | <i>S. eurydice</i> | Summer 2012 | Back yard | |
| 36 | <i>Speyeria cybele</i> | Animalia | Arthropoda | Insecta | Lepidoptera | Nymphalidae | Speyeria | <i>S. cybele</i> | Summer 2012 | Shrubland | |



2013



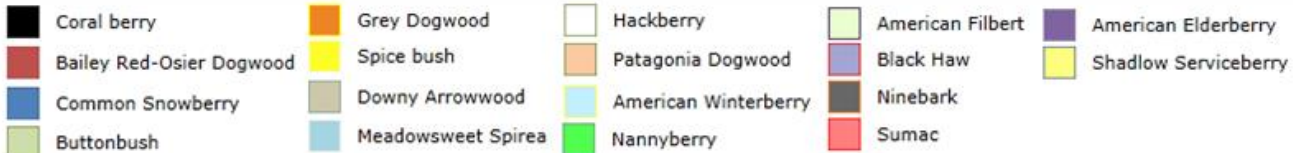
Loyola University Retreat and Ecology Campus

By: Edgar Perez, Emily Tuchman, and Scott Willis

Overseen by Fr. Stephen Mitten, SJ

LUREC MIGRATORY BIRD/ BUTTERFLY LANDSCAPE PROJECT

[Habitat loss is the leading cause of decline in resident and migratory species around the world. The introduction of native plant species in degraded areas is essential for increasing biodiversity. The landscape project focuses on establishing structured linear forests by planting native species in the immediate vicinity of the ponds, and the upland oak patch in the back of the main building.]



Bird Counts

The eBird logo features the word "eBird" in a green, sans-serif font. The "e" is lowercase and smaller than the "Bird", which is all lowercase. The background of the logo is a photograph of a penguin.[Home](#)[About](#)[Submit Observations](#)[Explore Data](#)[My eBird](#)[Help & Info](#)[Sign In or Register](#)Translate to: [English](#) | [Español](#) | [Français](#) | [Português](#)

View and Explore Data



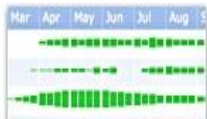
[Hotspot Explorer](#) BETA

Discover the best places for birding nearby or around the world.



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Explore interactive range maps by species or subspecies — zoom in for details



[Bar Charts](#)

Find out what birds to expect throughout the

Your Totals

Track your totals and compare with other eBirders.

[Yard Totals](#)

How many species and checklists have you submitted for your yard?

[Patch Totals](#)

How many have you submitted for your favorite birding patches?

[Top 100](#)

Compare with the top eBirders in your region.

Naturalist log LUREC.xlsx Microsoft Excel

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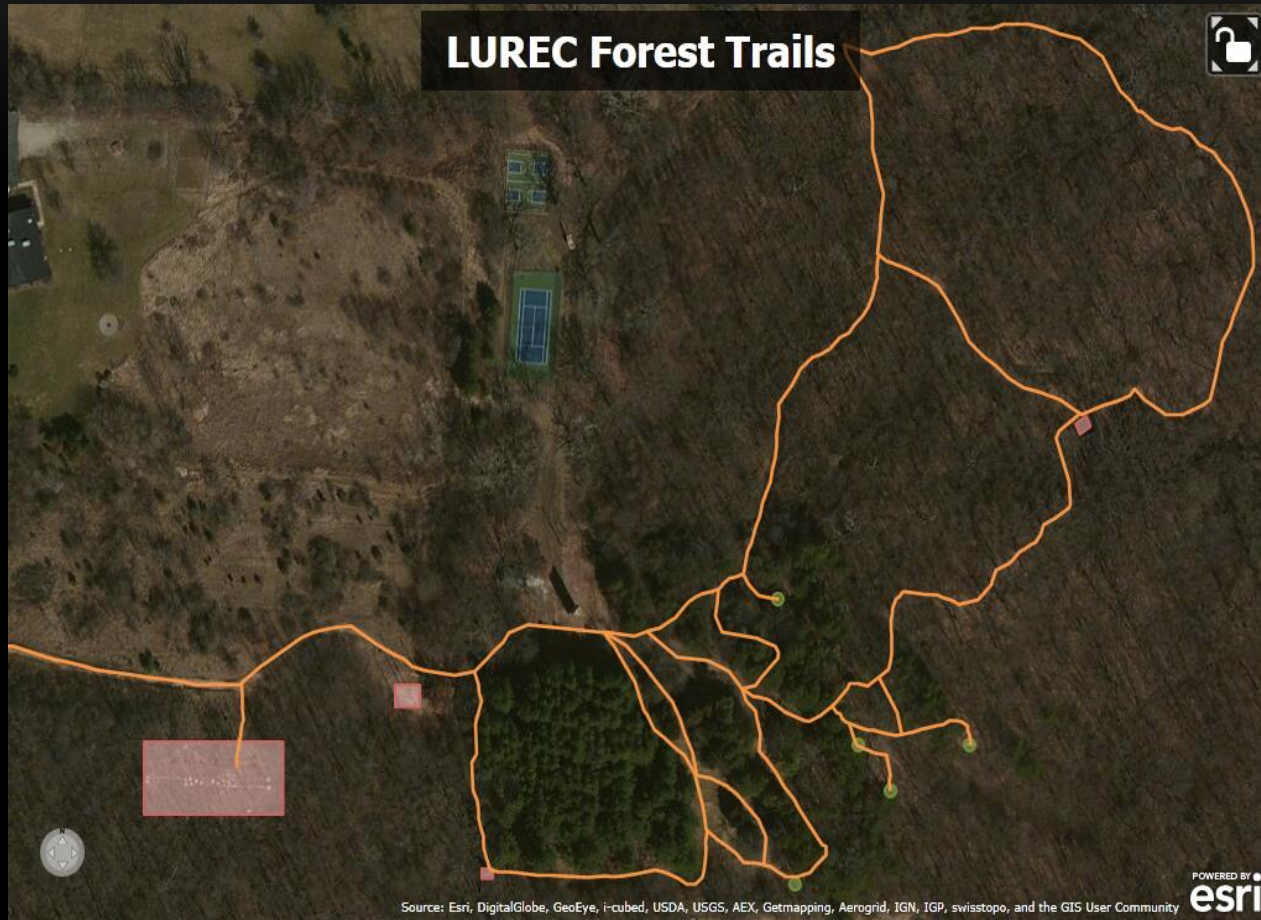
General

Conditional Formatting Format as Table Cell Styles

AutoSum Fill Clear Sort & Filter Find & Select

| A | B | C | D | E | F | G | H |
|------|-------------------------|------------------------------|-----|-----------|-------------|------------------------------------|---|
| 1734 | Northern Cardinal | <i>Cardinalis cardinalis</i> | 2 | 26-Oct-13 | 8:30-9:30am | around pond and edge of Oak forest | |
| 1735 | Red-winged Blackbird | <i>Agelaius phoeniceus</i> | 750 | 26-Oct-13 | 8:30-9:30am | around pond and edge of Oak forest | |
| 1736 | House Finch | <i>Carpodacus mexicanus</i> | 5 | 26-Oct-13 | 8:30-9:30am | around pond and edge of Oak forest | |
| 1737 | American Goldfinch | <i>Carduelis tristis</i> | 4 | 26-Oct-13 | 8:30-9:30am | around pond and edge of Oak forest | |
| 1738 | Pied-billed Grebe | <i>Podilymbus podiceps</i> | 1 | 2-Nov-13 | 11:00am | pond | |
| 1739 | Sharp-shinned Hawk | <i>Accipiter striatus</i> | 1 | 7-Nov-13 | 8:30am | around pond | |
| 1740 | Canada Goose | <i>Branta canadensis</i> | 30 | 7-Nov-13 | 8:30am | around pond | |
| 1741 | Mallard | <i>Anas platyrhynchos</i> | 1 | 7-Nov-13 | 8:30am | around pond | |
| 1742 | Belted Kingfisher | <i>Ceryle alcyon</i> | 1 | 7-Nov-13 | 8:30am | around pond | |
| 1743 | Red-bellied Woodpecker | <i>Melanerpes carolinus</i> | 1 | 7-Nov-13 | 8:30am | around pond | |
| 1744 | Downy Woodpecker | <i>Picoides pubescens</i> | 1 | 7-Nov-13 | 8:30am | around pond | |
| 1745 | Blue Jay | <i>Cyanocitta cristata</i> | 1 | 7-Nov-13 | 8:30am | around pond | |
| 1746 | American Crow | <i>Corvus brachyrhynchos</i> | 19 | 7-Nov-13 | 8:30am | around pond | |
| 1747 | Black-capped Chickadee | <i>Poecile atricapillus</i> | 2 | 7-Nov-13 | 8:30am | around pond | |
| 1748 | White-breasted Nuthatch | <i>Sitta carolinensis</i> | 1 | 7-Nov-13 | 8:30am | around pond | |
| 1749 | Eastern Bluebird | <i>Sialia sialis</i> | 2 | 7-Nov-13 | 8:30am | around pond | |
| 1750 | American Robin | <i>Turdus migratorius</i> | 1 | 7-Nov-13 | 8:30am | around pond | |
| 1751 | European Starling | <i>Sturnus vulgaris</i> | 2 | 7-Nov-13 | 8:30am | around pond | |
| 1752 | Dark-eyed Junco | <i>Junco hyemalis</i> | 4 | 7-Nov-13 | 8:30am | around pond | |
| 1753 | Northern Cardinal | <i>Cardinalis cardinalis</i> | 1 | 7-Nov-13 | 8:30am | around pond | |
| 1754 | Red-winged Blackbird | <i>Agelaius phoeniceus</i> | 2 | 7-Nov-13 | 8:30am | around pond | |
| 1755 | American Goldfinch | <i>Carduelis tristis</i> | 3 | 7-Nov-13 | 8:30am | around pond | |
| 1756 | | | | | | | |
| 1757 | | | | | | | |
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LUREC TRAILS GPS



Concluding Remarks

The LUREC Biodiversity data base currently contains over 600 specimen records, comprising 141 species of birds, 145 species of moths and butterflies, 12 species of reptiles and amphibians, 22 species of mammals, 12 species of fish, and more than 270 species of plants....and we have not even looked at most of the insects....

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