# **Cooper North Pasture Preserve** Survey of Bird Species, April – August, 2008



Lynette Leka January 16, 2009

# Survey of Bird Species in the Cooper North Pasture Preserve, Newburyport, Massachusetts April – August, 2008

Conducted to fulfill the Independent Study Project requirement of the Birder's Certificate Program, Joppa Flats Education Center, Massachusetts Audubon

#### Introduction

In April, 2006, the City of Newburyport, in coalition with The Essex County Greenbelt Association and the Trust for Public Land, acquired and placed under permanent protection the Cooper North Pasture, a 102-acre parcel of land bounded on the south by Hale street, on the east by the Little River, and running west to the "Old I-95 North Lane". Approximately 1/3 of the property is comprised of a field which is under active cultivation for hay, and approximately 2/3 of the property is secondary forested upland. There are wet meadow areas in the section of the field which gets flooded by the river. (See Appendix A, Maps.) The parcel is part of the historic "Common Pasture", which was surveyed for statelisted species by Sanford Ecological Services in 2003, and evaluated for conservation status.

The management of the Cooper North Preserve is now under the direction of the Newburyport Planning Office Stewardship Committee. In 2007 Mr. Geordie Vining, Senior Project Manager, contacted Bill Gette, Sanctuary Director of the MassAudubon Joppa Flats Education Center in Newburyport, seeking support in monitoring the breeding bird activity on the property. This report is the result of surveys conducted during the nesting season of 2008.

#### Methods

The survey walks were done primarily by Lynette Leka and Nancy Purcell, either together or individually, both enrolled in the MassAudubon/Joppa Flats Birder's Certificate Program. Hilda Dorgan, also a BCP student, assisted with the initial process of planning the project (see Appendix B, Supporting Materials) and familiarizing ourselves with the property and the path through the woods (Appendix A, Maps) which one of the Committee members had cleared. Ganson Purcell joined Nancy on her walk several times, and Lynette was accompanied on her walks one time each by: Bill Gette, to assess the progress of the project; Sharon Stichter, to survey for butterflies and native plants: and Joe Teixeira, one of the Committee members and a wetland specialist.

At first, consideration was given whether to do point counts or transects, but the decision was made to simply walk one of two routes – either along the trail through the woods, or circumventing the periphery of the field, alternating between the two routes on observation days. This plan was based on the density of the understory in the forested area, the density and height of the grass that was to grow in the field, and the fact that each of the two routes required two to three hours to complete.

Our goal was to visit the Preserve three to four times each week, although that schedule was sometimes interrupted by weather conditions, and Lynette and Nancy were both away during much of July.

In preparation for locating and identifying nests of possible breeding species, a spreadsheet was researched and developed that provided information on nesting: dates, habitat, typical site, construction type, minimum and maximum height, diameter, and construction materials, for each species that potentially could be found breeding on this property (see Excel file "possible nesting species" on the CD included in the Appendices).

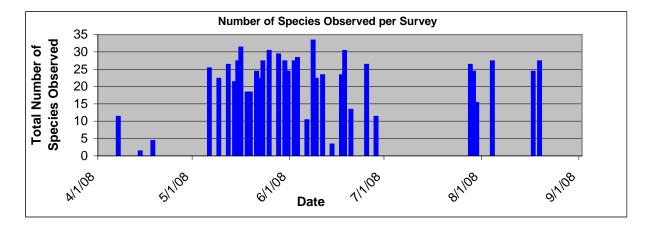
A data sheet for field observations was designed (Appendix B, Supporting Materials), as was a spreadsheet database for recording: observer(s); date; time of day; number of hours; temperature range; sky condition; wind condition; species name; section and area (see next paragraph); heard and/or seen; number of adults and/or males, females, juveniles; breeding evidence (Appendix B, Supporting Materials); nest location and/or GPS coordinates if applicable; and comments, for each observation (Excel file " CNPP database" on the CD).

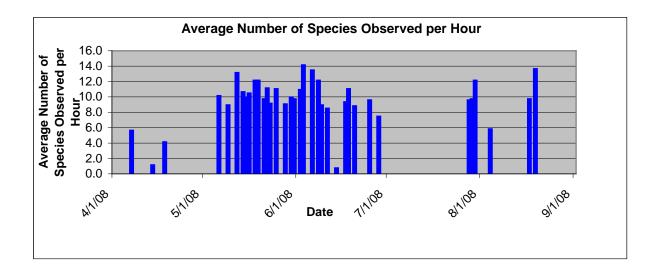
In order to document approximate location for each observation, the property was divided into: "front" or "back" sections, delineated by the old fieldstone wall that runs east and west roughly 2/3 of the way north from Hale Street; and areas designated as "woods", "clearing" (the blackberry patch in the back woods), "field", "trees on right" (of the field, facing north from Hale Street), "shrubs on right", "trees on left", "shrubs on left", "trees by road" (along Hale Street), "windrow" (at the stone wall crossing the field), and "trees at back" (rear of field). A map key of the letters A – O was later assigned to each section/area (Appendix A, Maps). When making observations, the front field was visually divided into thirds in order to estimate the number of flying Bobolinks and Red-winged Blackbirds.

### Data

Preliminary walks were made in late March and early April to explore the property and look for nests from previous seasons. Four nests were discovered and documented to location and type; three of these were tentatively identified as having belonged to (in order of discovery) American Robin, American Redstart, and Alder Flycatcher.

Survey walks were made on 36 different days, April 7 through August 19, 2008, amounting to 86.5 hours. A total of 80 different species were observed (Appendix C, Results), and 1201 separate observations were recorded (Excel file "CNPP database"). A spreadsheet showing the distribution of the different species by date can be found in Appendix C, Results.





Three active nests were found during the 2008 breeding season, belonging to Blue Jay and White-breasted Nuthatch (cavity) on May 23, and American Robin on June 9, and the respective trees flagged with a small bow of trail tape. No ground nests were found, so the issue of how to mark such locations did not need to be addressed.

On three occasions a large raptor was flushed from the front section of the woods, and was tentatively identified as a Red-shouldered Hawk, but was not included in the recorded observations.

Two evening/nighttime visits were made to the field, on April 18 to watch for Woodcock, and on June 11 to listen for Whip-poor-will. Both evenings the meteorological conditions were ideal for those species to occur, but none were located. Also, no owls were heard during those visits, and no nighttime trips into the woods were conducted to listen specifically for owls.

#### <u>Analysis</u>

The goal of this survey project was to "determine which bird species are nesting in the Cooper North Pasture (woodlands and fields), how many of each species are nesting, and the locations of their nests" (letter to Mr. Geordie Vining from Bill Gette, November 2, 2007). To achieve this goal, the records in the database were painstakingly scrutinized, in an effort to identify potentially distinct breeding events - by species, number, and location.

The criteria applied to identify such events as distinct were that a breeding behavior, as defined by the MassAudubon Breeding Bird Atlas 2 (Appendix B, Supporting Materials), had to occur at least 7 days apart or in a different section/area, from a similar behavior. As systematic approach as possible was taken to determine distinct events, but the decision-making was complex and will necessarily vary with the analyst.

The Breeding Bird Atlas categorizes breeding behaviors into 3 levels: Confirmed, Probable, and Possible. The results of this analysis indicate 20 Confirmed, 14 Probable, and 25 Possible breeding species in the Preserve during the 2008 season. Twenty-one of these species are in population decline in the New England/mid-Atlantic Coast region, according to the Partners in Flight Bird Conservation Scores.

Creation Name	Breeding	# of	Creation Norma	Breeding	# of
Species Name	<u>Status</u>		Species Name	<u>Status</u>	events
Heron, Green	possible	1	Robin, American	Confirmed	-
Goose, Canada	Probable	2	Catbird, Gray	Confirmed	
Duck, Wood	possible	3	Starling, European	possible	1
Mallard	Probable	4	Waxwing, Cedar	possible	8
Hawk, Sharp-shinned	Probable	1	Warbler, Blue-winged	Probable	3
Hawk, Red-tailed	possible	2	Warbler, Yellow	Probable	6
Turkey, Wild (NON-MIG)	Confirmed	2	Warbler, Chestnut-sided	possible	1
Killdeer	possible	3	Warbler, Black-throated Green	possible	2
Dove, Mourning	Probable	8	Warbler, Pine	possible	4
Swift, Chimney	possible	3	Warbler, Black-and-white	possible	2
Woodpecker, Downy	Probable	10	Redstart, American	possible	1
Woodpecker, Hairy	possible	3	Ovenbird	Probable	8
Flicker, Northern	Confirmed	4	Yellowthroat, Common	Confirmed	16
Wood-Peewee, Eastern	possible	4	Tanager, Scarlet	Probable	9
Phoebe, Eastern	Confirmed	2	Towhee, Eastern	Confirmed	17
Flycatcher, Great Crested	Probable	9	Sparrow, Chipping	possible	1
Kingbird, Eastern	possible	1	Sparrow, Savannah	possible	4
Vireo, Warbling	possible	1	Sparrow, Song	Confirmed	18
Vireo, Red-eyed	Probable	4	Cardinal, Northern	Confirmed	17
Jay, Blue	Confirmed	16	Grosbeak, Rose-breasted	Confirmed	8
Crow, American	possible	10	Bunting, Indigo	Probable	3
Swallow, Tree	possible	1	Bobolink	Confirmed	27
Swallow, Barn	Confirmed	1	Blackbird, Red-winged	Confirmed	62
Chickadee, Black-capped	Confirmed	27	Meadowlark, Eastern	possible	1
Titmouse, Tufted	Confirmed	9	Grackle, Common	Confirmed	12
Nuthatch, White-breasted	Confirmed	10	Cowbird, Brown-headed	Probable	6
Wren, Carolina	possible	3	Oriole, Baltimore	Confirmed	21
Wren, House	possible	2	Finch, House	possible	1
Thrush, Hermit	possible	1	Goldfinch, American	Probable	14
Thrush, Wood	Confirmed	4			

red indicates population decline

A table listing the 16 section/areas of the property, and the evidence documented for breeding events by species located in each by date, can be found in Appendix C, Results. A column has been included to indicate species which nest on the ground or low in vegetation, and which could be negatively impacted by mowing in the field or around the wet edges, or by human or pet traffic in the woods.

## Discussion

The field was heavily fertilized and seeded in late April, and the resulting grass grew astonishingly fast, tall, and thick. It was mowed for hay sometime during the first three weeks of July and cut so short that bare soil could be seen throughout, although re-growth did take place rapidly. After the mowing there were zero birds to be seen using the field until Barn Swallows began migrating through; however, bird reports for Essex County during mid- and late July indicated plenty of Bobolink activity continuing at nesting sites where mowing had not taken place. Also, it was disturbing to see motor oil floating on water that collected in tractor ruts along wet edges of the field.

The Stewardship Committee proposed, and the contracting farmer has agreed, that in the future a 100' buffer from the eastern boundary along the Little River (Appendix A, Maps) will be excluded from the first mowing. This will leave more of the wetland grass and edge species intact, which possibly could attract nesting birds to that habitat.



Historically, the Common Pasture has hosted many bird species which we did not find: American Bittern, Least Bittern, Upland Sandpiper, Loggerhead Shrike, Golden-winged Warbler, Northern Harrier, King Rail, Vesper Sparrow, Barn Owl, Long-eared Owl are all former nesters on the property (letter from Jim Berry, President, Essex County Ornithological Club, to the Executive Office of Environmental Affairs, Massachusetts, on September 26, 2005).

Other birders have reported species which we did not see: Ruby-crowned Kinglet, Golden-crowned Kinglet, Cooper's Hawk, Bob White, Woodcock and chicks (Merrimack Valley Bird Club, June 4, 2003). The agricultural management of the hayfield has not changed in 25 years, so other factors are responsible for our failure to find these birds; however, the presence of several recent housing developments on the east side of the property have probably contributed to the decline in use of that wetland habitat.

It was suggested that introductory field trips be offered to the public, in order to "help build support for the City's fine efforts to conserve open space" (Gette to Vining, 11/2/07). This plan was not put into place during the 2008 season, although the Stewardship Committee was heartily and repeatedly encouraged to join Nancy and/or Lynette any time they were doing a site walk - Joe Teixeira was the only member who responded to the invitation.

### Recommendations

Taking into account:

- a) the wide variety of habitats in the Cooper North Preserve and the bird species, especially those in population decline, which do, or could, make use of it
- b) the secluded character of the woodlands and possibility of delaying mowing the field until the first of August
- c) and the availability of the nearby and extensive Little River Nature Trail for recreational use opportunities,

this author would wish to see the City of Newburyport dedicate the Cooper North property as a Bird Sanctuary.

This would entail:

- a) leaving only one rudimentary trail in the woods, and clear that one only occasionally
- b) providing a path only around the periphery of the field, and then just in the front section and where it is dry
- c) reducing the signage at the trail heads to merely a name marker, with a note prohibiting all use except by foot and without pets, prohibiting hunting, and requesting no disturbance during nesting season
- d) retaining the very limited parking on Hale Street
- e) and most important, delay mowing the field until the first of August.

A copy of this report will be supplied to the Stewardship Committee, along with an oral discussion at a time of their preference.

Respectfully submitted,

Lynette Leka January 16, 2009

## Resources

"The Birder's Handbook", Paul R. Ehrlich et al., Simon & Schuster Inc., 1988

"Birds' Nests", Hal H. Harrison, Peterson Field Guides, Houghton Mifflin Company, 1975

"Field Guide to Birds", Donald & Lillian Stokes, Little Brown, 1996

"The Handbook for the Massachusetts Breeding Bird Atlas 2", MassAudubon, Lincoln, MA

"Tips for Finding Nests", Smithsonian National Zoological Park, <u>www.nationalzoo.si.edu</u> NestWatch, Cornell Lab of Ornithology, <u>www.watch.birds.cornell.edu/nest</u> Species Assessment Database, Partners in Flight, www.rmbo.org/pif/pifdb

# Appendix A

Maps



# Cooper North Pasture Preserve

-70 54.442 42 48.289

-70 54.555 42.48.638

-70 54.579 42 48.480

-70 50 50 42 48.348

Martin II.

-70 54.699 42 48.444

- -70 54.725 42 43 339

-70 54.512 4248.580

-70 54.464 42 48.515

-70 54.471 42 48.359

-70 54.315 4248.712

• 470 54.415 42 48.225

Meters

300

200

-70 53.079 42 48.336

N

19:50 33

5.

1

DOE RUN DRIVE

FOX RUN DRIVE

-70 54.212 42 48.540

100

50

0

Cooper North Pasture Preserve Potential Trails and Parking

Potential parking at the end of Crow Lane GROWLANE

# **Cooper North Pasture Preserve**



500

1,000

Feet

0

250

**CNPP** Potential Trails

# Appendix B

# Supplementary Materials

Х

OB Category - Observed: not breeding evidence

- Species (male or female) known to breed in the state but seen "passing through" (e.g.,
- O vultures, nesting gulls), a colonial species observed with no colony found in the block, or a bird seen in unsuitable nesting habitat; all within safe dates.

PO Category - possible breeding evidence

- Species (male or female) seen or heard in suitable nesting habitat within safe dates but no further evidence of breeding is uncovered. This includes a single drumming woodpecker,
- although the species must be seen to identify the woodpecker.

**PR** Category - probable breeding evidence

- P A pair (male and female together) seen in suitable nesting habitat within safe dates. Permanent territory presumed through song, heard at same location on at least 2 occasions
- S (both within safe dates), 7 days or more apart. This can be used for drumming woodpeckers, although the species must be seen to be identify the woodpecker.
- T Permanent territory presumed through defense of territory (often a male chasing individuals of the same species) within safe dates.
- A Agitated behavior or anxiety calls from adult observed within safe dates. These calls are
- frequently directed at cats or snakes.
- C Courtship behavior or copulation seen within safe dates.
- N Visiting probable nest site within safe dates.
- B Building nests by wrens or excavation of holes by woodpeckers within safe dates.

CO Category - confirmed evidence of breeding

- ON Occupied nest. Adult seen sitting on nest and likely incubating eggs or brooding hatchlings. No eggs or young seen.
- CN Carrying nesting material such as sticks, grass, bark, etc. Not to be used for wrens, crows, or colonial species for which its colony is not found (e.g., Great Blue Heron).
- NB Nest building at the actual nest site by any species except wrens and woodpeckers.
- PE Physiological evidence of breeding, e.g. highly vascularized, edematous brood patch or egg in oviduct based on bird in hand. (For banders.)
- DD Distraction display or injury feigning.
- UN Used nest found. Must be carefully identified if it is to be accepted.
- PY Flightless young of precocial species restricted to the natal area by dependance on adults or limited mobility.
- FL Recently fledged young (either precocial or altricial) incapable of sustained flight,
- restricted to natal area by dependence on adults or limited mobility.
- CF Adult carrying food for young. Not to be used for crows unless they are seen going into a nest site.
- FY Adult feeding recently fledged young.
- FS Adult carrying fecal sac.
- NE Nest with egg(s).
- NY Nest with young seen or heard.

# Cooper North Pasture Bird Survey

# Data Recording Sheet

Field or Woods (circle one)

Observer(s)		Date				Begin time	End time
Temp (approx)	Sky conditio	ons				Wind (none, light, moderate	e, strong)
species	bird location: description / coordinates	# adult male	# adult fem	<b>#</b> juv/ imm	breedin g <b>code</b>	nest characteristics: description / tree type / location	comments (e.g., behavior, photo ID#)

# Plans for Bird Survey of the Cooper North Pasture Birder's Certificate Program, MassAudubon/Joppa Flats Hilda Dorgan, Lynette Leka

## 1. Become familiar with the property

## A. <u>background history</u>

Trust for Public Land http://www.tpl.org/tier3\_cd.cfm?content\_item\_id=21119&folder\_id=260

Joe Teixeira's web site http://thecommonpasture.org/

Essex County Greenbelt

Parker River Clean Water/Marlene Schroeder

Bill Gette/Joppa Flats

## B. maps

set supplied by Bill/Dave for walk-through

GoogleEarth map generated by LL

selections from Joe Teixeira's web site

Newburyport 1:25 000 scale Geological Survey topo map

Common Pasture parcels map from PRCWA (see if Marlene has an electronic version)

topo map from GPS software? (LL)

# 2. Prepare to do surveys

# A. resource materials

nesting book recommended by Dave Larson

"Nests, Eggs, and Nestlings of North American Birds" by Baicich, Harrison

Massachusetts Breeding Bird Atlas I and II

Breeding Bird Survey

Steve Grinley; Jim Berry; Sharon Stichter

#### B. nest survey protocols

Cornell Lab of Ornithology http://watch.birds.cornell.edu/nestcontent/instructions

Smithsonian Migratory Bird Center http://nationalzoo.si.edu/ConservationAndScience/MigratoryBirds/Research/Neighborhoo d\_Nestwatch/Newsletter/about\_nn.cfmC.

C. walk the property to decide observation locations

transects/grid

points

paths

D. database design (LL)

background table: possible species, migratory or breeding, possible breeding date(s), expected habitat, expected nest location, expected nest characteristics, reference

observation table: date, time, weather, GPS coordinates, species, gender, age, # of individuals, behavior, nest characteristics, notes, file location of photograph, tree species

# 4. Data acquisition

- A. field data form (LL)
- B. data entry (LL)
- C. mapping (LL)

ArcView? gpsVisualizer? MapTech

# 5. Project report

- A. objectives
- B. methods
- C. data and visuals
- D. discussion
- E. recommendations for management of property for migratory and breeding birds

# Appendix C

# Results

<u>map</u> location	species name	<u>date</u>	<u>breeding</u> status	<u>breeding</u> <u>code</u>	<u>singing</u> dates	breeding evidence	<u>nest</u> height
red indica	ates population decline						
FRONT W	/OODS						
Α	Hawk, Red-tailed	7/28/08	possible	possible		suitable habitat	
Α	Dove, Mourning	5/9/08	possible	possible		suitable habitat	low
Α	Dove, Mourning	7/28/08	possible	possible		suitable habitat	low
Α	Dove, Mourning	8/4/08	possible	possible		suitable habitat	low
Α	Woodpecker, Downy	5/6/08	possible	possible		suitable habitat	
Α	Woodpecker, Downy	5/14/08	Probable	P		Pair	
Α	Woodpecker, Downy	5/25/08	possible	possible		suitable habitat	
Α	Woodpecker, Downy	6/9/08	possible	possible		suitable habitat	
Α	Woodpecker, Downy	6/17/08	possible	possible		suitable habitat	
Α	Woodpecker, Downy	6/25/08	possible	possible		suitable habitat	
Α	Woodpecker, Hairy	5/19/08	possible	possible		suitable habitat	
Α	Woodpecker, Hairy	5/31/08	possible	possible		suitable habitat	
Α	Flicker, Northern	6/9/08	possible	possible		suitable habitat	
Α	Flicker, Northern	8/4/08	Confirmed	FL		FLEDGED	
Α	Wood-Peewee, Eastern	6/9/08	possible	possible	6/17/08	Song 2x, >7 days	
Α	Wood-Peewee, Eastern	6/25/08	, possible	, possible		suitable habitat	
Α	Wood-Peewee, Eastern	7/28/08	possible	possible		suitable habitat	
Α	Flycatcher, Great Crested	6/3/08	possible	possible		suitable habitat	
Α	Flycatcher, Great Crested	6/25/08	possible	possible		suitable habitat	
Α	Vireo, Warbling	5/23/08	possible	possible		suitable habitat	
Α	Jay, Blue	5/9/08	possible	possible		suitable habitat	
A	Jay, Blue	5/18/08	Probable	P		Pair	
A	Jay, Blue	5/28/08	possible	possible		suitable habitat	
A	Jay, Blue	6/25/08	possible	possible		suitable habitat	
Α	Jay, Blue	7/28/08	Confirmed	FL		FLEDGED	
Α	Jay, Blue	8/4/08	Confirmed	FL		FLEDGED	
Α	Crow, American	5/6/08	possible	possible		suitable habitat	
Α	Crow, American	5/14/08	possible	possible		suitable habitat	
Α	Crow, American	5/28/08	possible	possible		suitable habitat	
Α	Crow, American	6/17/08	possible	possible		suitable habitat	
Α	Chickadee, Black-capped	5/9/08	Probable	S	5/14/08	Song 2x, >7 days	
Α	Chickadee, Black-capped	5/19/08	Probable	С		COURTSHIP	
Α	Chickadee, Black-capped	5/31/08	Probable	S	6/11/08	Song 2x, >7 days	
Α	Chickadee, Black-capped	6/9/08	Probable	Р		Pair	
Α	Chickadee, Black-capped	6/17/08	Confirmed	CF		CARRYING FOOD	
Α	Chickadee, Black-capped	8/4/08	possible	possible		suitable habitat	
Α	Titmouse, Tufted	5/9/08	possible	possible		suitable habitat	
Α	Titmouse, Tufted	5/19/08	Probable	S	6/3/08	Song 2x, >7 days	
Α	Titmouse, Tufted	6/9/08	possible	possible		suitable habitat	
Α	Titmouse, Tufted	6/25/08	possible	possible		suitable habitat	
Α	Titmouse, Tufted	7/28/08	Confirmed	FL		FLEDGED	

map		• •	breeding	breeding	singing	breeding	<u>nest</u>
location	<u>species name</u>	<u>date</u>	<u>status</u>	<u>code</u>	<u>dates</u>	<u>evidence</u>	<u>height</u>
Α	Nuthatch, White-breasted	5/6/08	possible	possible		suitable habitat	
Α	Nuthatch, White-breasted	5/14/08	possible	possible		suitable habitat	
Α	Nuthatch, White-breasted	5/23/08	Confirmed	CF		CARRYING FOOD	
A	Nuthatch, White-breasted	5/31/08	Confirmed	FS		FECAL SAC	
A	Nuthatch, White-breasted	6/25/08	possible Probable	possible P		suitable habitat	
A A	Nuthatch, White-breasted Nuthatch, White-breasted	7/28/08 8/4/08		P possible		Pair suitable habitat	
A	Nuthaton, White-breasted	0/4/00	possible	possible		Suitable Habitat	
Α	Wren, Carolina	6/8/08	possible	possible		suitable habitat	low
Α	Thrush, Hermit	5/16/08	possible	possible		suitable habitat	grnd
Α	Thrush, Wood	6/3/08	Probable	S	6/25/08	Song 2x, >7 days	grnd
Α	Robin, American	5/6/08	Probable	S	5/16/08	Song 2x, >7 days	low
Α	Robin, American	5/18/08	Probable	S	5/30/08	Song 2x, >7 days	low
Α	Robin, American	6/9/08	Confirmed	ON		OCCUPIED NEST	low
Α	Robin, American	8/17/08	possible	possible		suitable habitat	low
Α	Catbird, Gray	5/23/08	possible	possible		suitable habitat	low
Α	Catbird, Gray	6/25/08	possible	possible		suitable habitat	low
Α	Waxwing, Cedar	6/9/08	possible	possible		suitable habitat	low
Α	Warbler, Pine	5/16/08	possible	possible		suitable habitat	
Α	Warbler, Pine	6/6/08	possible	possible		suitable habitat	
Α	Warbler, Pine	6/25/08	possible	possible		suitable habitat	
Α	Ovenbird (5 individuals)	5/22/08	Probable	S	5/30/08	Song 2x, >7 days	grnd
Α	Ovenbird (6 individuals)	5/31/08	Probable	S	6/8/08	Song 2x, >7 days	grnd
Α	Ovenbird (5 individuals)	6/9/08	Probable	S	6/17/08	Song 2x, >7 days	grnd
Α	Ovenbird (5 individuals)	6/18/08	Probable	S	6/25/08	Song 2x, >7 days	grnd
Α	Tanager, Scarlet	6/6/08	possible	possible		suitable habitat	low
Α	Tanager, Scarlet	6/18/08	possible	possible		suitable habitat	low
Α	Tanager, Scarlet	7/28/08	possible	possible		suitable habitat	low
Α	Towhee, Eastern	5/18/08	Probable	S	5/30/08	Song 2x, >7 days	grnd
Α	Towhee, Eastern	6/9/08	Probable	S	6/18/08	Song 2x, >7 days	grnd
Α	Towhee, Eastern	7/29/08	possible	possible		suitable habitat	grnd
Α	Cardinal, Northern	5/9/08	Probable	Р		Pair	low
Α	Cardinal, Northern	6/11/08	Probable	S	6/18/08	Song 2x, >7 days	low
Α	Cardinal, Northern	7/28/08	possible	possible		suitable habitat	low
Α	Grosbeak, Rose-breasted	5/30/08	Probable	S	6/6/08	Song 2x, >7 days	low
Α	Grosbeak, Rose-breasted	6/25/08	possible	possible		suitable habitat	low
Α	Grackle, Common	6/2/08	possible	possible		suitable habitat	
Α	Grackle, Common	6/17/08	possible	possible		suitable habitat	
Α	Cowbird, Brown-headed	5/6/08	Probable	С		COURTSHIP	
Α	Cowbird, Brown-headed	5/14/08	possible	possible		suitable habitat	
Α	Cowbird, Brown-headed	6/25/08	possible	possible		suitable habitat	

<u>map</u> location A A	<u>species name</u> Oriole, Baltimore Oriole, Baltimore	<u>date</u> 6/2/08 7/28/08	<u>breeding</u> <u>status</u> Probable possible	breeding <u>code</u> S possible	<u>singing</u> <u>dates</u> 6/11/08	<u>breeding</u> <u>evidence</u> Song 2x, >7 days suitable habitat	<u>nest</u> height
Α	Goldfinch, American	6/2/08	Probable	S	6/20/08	Song 2x, >7 days	low
FRONT T	REES ON L						
B	Phoebe, Eastern	7/28/08	Confirmed	FL		FLEDGED	low
В	Flycatcher, Great Crested	6/18/08	possible	possible		suitable habitat	
В	Jay, Blue	6/18/08	possible	possible		suitable habitat	
В	Crow, American	6/6/08	possible	possible		suitable habitat	
В	Chickadee, Black-capped	8/4/08	possible	possible		suitable habitat	
В	Robin, American	6/8/08	Probable	Р		Pair	low
B	Robin, American	6/18/08	Probable	P		Pair	low
В	Robin, American	7/30/08	Confirmed	FL		FLEDGED	low
В	Catbird, Gray	6/17/08	possible	possible		suitable habitat	low
В	Waxwing, Cedar	6/25/08	possible	possible		suitable habitat	low
В	Warbler, Yellow	5/25/08	possible	possible		suitable habitat	low
В	Warbler, Chestnut-sided	5/25/08	possible	possible		suitable habitat	
В	Redstart, American	6/8/08	possible	possible		suitable habitat	
В	Yellowthroat, Common	6/2/08	Probable	S	6/11/08	Song 2x, >7 days	low
В	Yellowthroat, Common	6/9/08	Probable	S	6/17/08	Song 2x, >7 days	low
В	Yellowthroat, Common	6/18/08	possible	possible		suitable habitat	low
В	Yellowthroat, Common	7/29/08	Confirmed	CF		CARRYING FOOD	low
В	Sparrow, Song	6/8/08	possible	possible		suitable habitat	low
В	Sparrow, Song	7/28/08	possible	possible		suitable habitat	low
В	Cardinal, Northern	5/23/08	Probable	S	5/30/08	Song 2x, >7 days	low
В	Cardinal, Northern	5/30/08	Probable	S	6/11/08	Song 2x, >7 days	low
В	Cardinal, Northern	6/18/08	Probable	Т		Territory defense	low
в	Grosbeak, Rose-breasted	6/9/08	possible	possible		suitable habitat	low
В	Oriole, Baltimore	5/25/08	possible	possible		suitable habitat	
B	Oriole, Baltimore	6/18/08	Probable	P		Pair	
В	Oriole, Baltimore	6/25/08	Confirmed	FL		FLEDGED	
в	Goldfinch, American	7/30/08	Probable	Р		Pair	low
	HRUBS ON L	0/0/00	a a a a ll I a	nee-lt I-			
С	Catbird, Gray	6/2/08	possible	possible		suitable habitat	low
С	Oriole, Baltimore	5/15/08	Confirmed	CN	(	CARRYING NESTING	

BACK WOODS

<u>map</u> location	species name	date	<u>breeding</u> status	<u>breeding</u> <u>code</u>	<u>singing</u> dates	breeding evidence	<u>nest</u> height
D D	Duck, Wood Duck, Wood	5/6/08 5/15/08	possible possible	possible possible		suitable habitat suitable habitat	
D D	Woodpecker, Downy Woodpecker, Downy	5/31/08 6/9/08	possible possible	possible possible		suitable habitat suitable habitat	
D	Flicker, Northern	6/18/08	possible	possible		suitable habitat	
D	Wood-Peewee, Eastern	6/14/08	possible	possible	7/30/08	Song 2x, >7 days	
D	Vireo, Red-eyed	6/3/08	Probable	S	6/18/08	Song 2x, >7 days	low
D D D	Jay, Blue Jay, Blue Jay, Blue	6/9/08 6/17/08 7/29/08	possible possible possible	possible possible possible		suitable habitat suitable habitat suitable habitat	
D	Crow, American	5/21/08	possible	possible		suitable habitat	
D D D	Chickadee, Black-capped Chickadee, Black-capped Chickadee, Black-capped	5/31/08 6/17/08 7/28/08	Probable Probable Confirmed	S P FL	6/11/08	Song 2x, >7 days Pair FLEDGED	
D	Titmouse, Tufted	5/25/08	Probable	S	6/3/08	Song 2x, >7 days	
D	Nuthatch, White-breasted	6/25/08	possible	possible		suitable habitat	
D	Wren, Carolina	6/11/08	possible	possible		suitable habitat	low
D D	Thrush, Wood Thrush, Wood	6/14/08 7/28/08	Probable Confirmed	S FL	6/25/08	Song 2x, >7 days FLEDGED	grnd grnd
D D D D	Robin, American Robin, American Robin, American Robin, American Robin, American	6/8/08 6/9/08 6/17/08 6/25/08 8/17/08	Probable Probable possible possible possible	S T possible possible possible	6/18/08	Song 2x, >7 days Territory defense suitable habitat suitable habitat suitable habitat	low low low low
D	Catbird, Gray	7/28/08	possible	possible		suitable habitat	low
D	Warbler, Black-throated Green	5/25/08	possible	possible		suitable habitat	
D	Warbler, Pine	5/22/08	possible	possible		suitable habitat	
D D D	Ovenbird (2 individuals) Ovenbird (2 individuals) Ovenbird (2 individuals)	5/28/08 6/9/08 6/25/08	Probable Probable Probable	S S S	6/8/08 6/17/08 7/30/08	Song 2x, >7 days Song 2x, >7 days Song 2x, >7 days	grnd grnd grnd
D D D	Tanager, Scarlet Tanager, Scarlet Tanager, Scarlet Tanager, Scarlet	5/28/08 6/9/08 6/17/08 6/25/08	Probable possible possible Probable	P possible possible P		Pair suitable habitat suitable habitat Pair	low low low low
D	Towhee, Eastern	5/31/08	Probable	S	6/17/08	Song 2x, >7 days	grnd
D D	Sparrow, Song Sparrow, Song	5/21/08 6/18/08	Probable Probable	S S	6/8/08 7/28/08	Song 2x, >7 days Song 2x, >7 days	low low

<u>map</u> location	species name	<u>date</u>	<u>breeding</u> status	<u>breeding</u> <u>code</u>	<u>singing</u> dates	breeding evidence	<u>nest</u> height
D D	Cardinal, Northern Cardinal, Northern	6/3/08 8/17/08	Probable possible	S possible	6/17/08	Song 2x, >7 days suitable habitat	low low
D D	Grosbeak, Rose-breasted Grosbeak, Rose-breasted	5/28/08 6/17/08	Probable possible	S possible	6/3/08	Song 2x, >7 days suitable habitat	low low
D	Blackbird, Red-winged	5/31/08	Probable	S	6/8/08	Song 2x, >7 days	grnd
D	Oriole, Baltimore	7/29/08	possible	possible		suitable habitat	
D	Goldfinch, American	6/17/08	possible	possible		suitable habitat	low
BACK CL	FARING						
E	Duck, Wood	6/25/08	possible	possible		suitable habitat	
Е	Hawk, Red-tailed	5/28/08	possible	possible		suitable habitat	
Е	Dove, Mourning	6/3/08	possible	possible		suitable habitat	low
Е	Swift, Chimney	8/4/08	possible	possible		suitable habitat	
Е	Woodpecker, Hairy	6/25/08	possible	possible		suitable habitat	
Е	Flycatcher, Great Crested	5/28/08	possible	possible		suitable habitat	
E	Flycatcher, Great Crested	6/25/08	possible	possible		suitable habitat	
	<b>,</b>			1			
E	Vireo, Red-eyed	7/28/08	possible	possible		suitable habitat	low
E	Jay, Blue	6/25/08	possible	possible		suitable habitat	
E	Crow, American	6/25/08	possible	possible		suitable habitat	
Е	Chickadee, Black-capped	6/25/08	Probable	Р		Pair	
Е	Chickadee, Black-capped	8/4/08	possible	possible		suitable habitat	
Е	Titmouse, Tufted	6/25/08	Confirmed	FY		FEEDING YOUNG	
Е	Nuthatch, White-breasted	6/17/08	possible	possible		suitable habitat	
_				<u></u>			
E	Robin, American	6/17/08	Confirmed	CN	(		low
E	Robin, American Robin, American	7/28/08 8/17/08	Confirmed possible	FL possible		FLEDGED suitable habitat	low low
<b>L</b>	Robin, American	0/17/00	possible	possible		Sullable Habitat	1010
E	Catbird, Gray	6/17/08	Probable	Р		Pair	low
Е	Waxwing, Cedar	6/9/08	possible	possible		suitable habitat	low
Е	Waxwing, Cedar	7/28/08	possible	possible		suitable habitat	low
E	Waxwing, Cedar	8/4/08	possible	possible		suitable habitat	low
Е	Warbler, Blue-winged	5/25/08	Probable	S	6/11/08	Song 2x, >7 days	low
F	Vallowthreat Common	6/0/00	Drobabla	c	6/25/00	Song 2x >7 days	low
E	Yellowthroat, Common Yellowthroat, Common	6/9/08 8/4/08	Probable Confirmed	S FL	6/25/08	Song 2x, >7 days FLEDGED	low low
Е	Towhee, Eastern	5/23/08	Probable	S	5/31/08	Song 2x, >7 days	grnd

<u>map</u> location E E E E	<u>species name</u> Towhee, Eastern Towhee, Eastern Towhee, Eastern Towhee, Eastern	<u>date</u> 6/9/08 6/25/08 7/28/08 8/17/08	<u>breeding</u> status Probable Probable Probable Confirmed	breeding Code P P S FL	singing dates 8/4/08	breeding evidence Pair Pair Song 2x, >7 days FLEDGED	<u>nest</u> <u>height</u> grnd grnd grnd grnd
Е	Cardinal, Northern	8/17/08	possible	possible		suitable habitat	low
E E	Bunting, Indigo Bunting, Indigo	6/3/08 6/17/08	Probable possible	P possible		Pair suitable habitat	low low
Е	Grackle, Common	6/3/08	possible	possible		suitable habitat	
E E E	Oriole, Baltimore Oriole, Baltimore Oriole, Baltimore Oriole, Baltimore	5/31/08 6/17/08 6/25/08 7/28/08	possible possible Confirmed possible	possible possible FL possible		suitable habitat suitable habitat FLEDGED suitable habitat	
E	Goldfinch, American	7/28/08	possible	possible		suitable habitat	low
<u>BACK TR</u> F	EES ON L Jay, Blue	5/30/08	possible	possible		suitable habitat	
F	Chickadee, Black-capped	8/4/08	possible	possible		suitable habitat	
F	Robin, American	8/4/08	possible	possible		suitable habitat	low
F F	Catbird, Gray Catbird, Gray	6/8/08 6/25/08	Probable possible	S possible	6/11/08	Song 2x, >7 days suitable habitat	low low
F	Warbler, Blue-winged	6/8/08	Probable	S	6/20/08	Song 2x, >7 days	low
F	Warbler, Black-throated Green	6/3/08	possible	possible		suitable habitat	
F	Towhee, Eastern	6/17/08	Probable	Ρ		Pair	grnd
F	Oriole, Baltimore	5/30/08	Probable	Ρ		Pair	
BACK SH	RUBS ON L						
G	Catbird, Gray	5/25/08	possible	possible		suitable habitat	low
G G	Yellowthroat, Common Yellowthroat, Common	6/2/08 8/4/08	Probable Confirmed	S FL	6/9/08	Song 2x, >7 days FLEDGED	low low
G	Cardinal, Northern	8/4/08	possible	possible		suitable habitat	low
	REES BY ROAD						
Н	Phoebe, Eastern	6/2/08	possible	possible		suitable habitat	low
Н	Flycatcher, Great Crested	6/17/08	possible	possible		suitable habitat	
н	Kingbird, Eastern	5/25/08	possible	possible		suitable habitat	
H H H	Chickadee, Black-capped Chickadee, Black-capped Chickadee, Black-capped	5/16/08 5/31/08 8/4/08	possible Probable possible	possible C possible		suitable habitat COURTSHIP suitable habitat	

<u>map</u>	species name	date	<u>breeding</u> status	<u>breeding</u> <u>code</u>	<u>singing</u> dates	breeding evidence	<u>nest</u> height
H	Robin, American	<u>0ate</u> 5/25/08	possible	possible	uales	suitable habitat	low
н	Robin, American	6/8/08	possible	possible		suitable habitat	low
н	Catbird, Gray	5/28/08	Probable	S	6/8/08	Song 2x, >7 days	low
н	Catbird, Gray	6/18/08	possible	possible		suitable habitat	low
			-				
Н	Warbler, Yellow	5/28/08	Probable	S	6/3/08	Song 2x, >7 days	low
Н	Warbler, Yellow	6/8/08	Probable	S	6/17/08	Song 2x, >7 days	low
		0/0/00		7 1 .			ι.
H H	Yellowthroat, Common Yellowthroat, Common	6/2/08 8/4/08	possible possible	possible possible		suitable habitat suitable habitat	low
п	renowimoat, common	0/4/00	possible	possible		Suitable Habitat	low
н	Towhee, Eastern	5/12/08	possible	possible		suitable habitat	grnd
н	Sparrow, Chipping	7/29/08	possible	possible		suitable habitat	low
н	Sparrow, Song	5/25/08	Probable	S	5/31/08	Song 2x, >7 days	low
н	Sparrow, Song	6/3/08	Probable	S	6/11/08	Song 2x, >7 days	low
н	Sparrow, Song	6/18/08	possible	possible		suitable habitat	low
Н	Sparrow, Song	8/4/08	possible	possible		suitable habitat	low
н	Cardinal, Northern	6/8/08	Probable	S	6/18/09	Song 2x, >7 days	low
н	Blackbird, Red-winged	6/8/08	Confirmed	CN		CARRYING NESTINC	grnd
н	Grackle, Common	5/25/08	Confirmed	CF		CARRYING FOOD	
н	Oriole, Baltimore	5/31/08	possible	possible		suitable habitat	
н	Oriole, Baltimore	6/8/08	possible	possible		suitable habitat	
			•				
Н	Goldfinch, American	6/8/08	Probable	Р		Pair	low
Н	Goldfinch, American	6/18/08	possible	possible		suitable habitat	low
Н	Goldfinch, American	7/30/08	Probable	Р		Pair	low
<u>FRONT F</u>	Heron, Green	6/8/08	possible	possible		suitable habitat	
	Heron, Oreen	0/0/00	possible	possible		Sullable Habilat	
I	Goose, Canada	6/8/08	Probable	Р		Pair	grnd
I	Mallard	6/8/08	Probable	Р		Pair	grnd
I	Hawk, Sharp-shinned	5/12/08	Probable	С		COURTSHIP	
I	Turkey, Wild (NON-MIG)	7/28/08	Confirmed	PY		PRECOCIAL YOUNG	grnd
- E	Killdeer	5/9/08	possible	possible		suitable habitat	
- I	Killdeer	6/2/08	possible	possible		suitable habitat	
- E	Killdeer	6/20/08	possible	possible		suitable habitat	
I	Dove, Mourning	6/8/08	Probable	Р		Pair	low
	Swift Chimney	GIOE IOO	noosikle	nonsible		auitable bebitet	
1	Swift, Chimney	6/25/08	possible	possible		suitable habitat	
I	Swift, Chimney	7/29/08	possible	possible		suitable habitat	
1	Flicker, Northern	6/8/08	Probable	Р		Pair	

<u>map</u> location l	<u>species name</u> Swallow, Tree	<u>date</u> 5/19/08	<u>breeding</u> <u>status</u> possible	<u>breeding</u> <u>code</u> possible	<u>singing</u> dates	<u>breeding</u> <u>evidence</u> suitable habitat	<u>nest</u> height
1	Robin, American	6/18/08	Probable	Р		Pair	low
i i	Robin, American	7/29/08	Confirmed	FL		FLEDGED	low
I.	Starling, European	6/8/08	possible	possible		suitable habitat	
1	Sparrow, Savannah	5/12/08	possible	possible		suitable habitat	
i	Sparrow, Savannah	5/21/08	possible	possible		suitable habitat	
I	Sparrow, Song	5/6/08	Probable	S	5/19/08	Song 2x, >7 days	low
1	Grosbeak, Rose-breasted	7/29/08	Confirmed	FL		FLEDGED	low
	Bobolink (10 individuals)	6/2/08	Probable	С		COURTSHIP	grnd
	Bobolink	6/14/08	Confirmed	FS		FECAL SAC	grnd
	Bobolink	6/18/08	Confirmed	FS		FECAL SAC	grnd
I	Bobolink (8 individuals)	6/18/09	Probable	S	6/25/08	Song 2x, >7 days	grnd
1	Blackbird, Red-winged	5/12/08	Probable	Р		Pair	grnd
- I	Blackbird, Red-winged	5/15/08	Confirmed	CN	(	CARRYING NESTING	grnd
- I	Blackbird, Red-winged	5/21/08	Probable	Р		Pair	grnd
- I	Blackbird, Red-winged	5/30/08	Confirmed	CN	(	CARRYING NESTING	grnd
	Blackbird, Red-winged	6/11/08	Confirmed	CN	(	CARRYING NESTING	grnd
- I	Blackbird, Red-winged	6/17/08	Probable	S	6/25/08	Song 2x, >7 days	grnd
	Blackbird, Red-winged	6/18/08	Confirmed	CF		CARRYING FOOD	grnd
	Blackbird, Red-winged	7/30/08	Confirmed	FL		FLEDGED	grnd
I.	Blackbird, Red-winged	7/30/08	possible	possible		suitable habitat	grnd
I.	Meadowlark, Eastern	5/14/08	possible	possible		suitable habitat	
1	Grackle, Common	5/15/08	Probable	Р		Pair	
i	Grackle, Common	6/2/08	Probable	P		Pair	
i	Grackle, Common	6/11/08	Probable	P		Pair	
i	Grackle, Common	6/18/08	Probable	P		Pair	
i	Grackle, Common	6/25/08	possible	possible		suitable habitat	
Í	Grackle, Common	7/30/08	possible	possible		suitable habitat	
-			•				
I	Oriole, Baltimore	5/21/08	Confirmed	CN	(	CARRYING NESTING	i
I	Finch, House	7/29/08	possible	possible		suitable habitat	
I	Goldfinch, American	6/2/08	Probable	Р		Pair	low
I	Goldfinch, American	6/18/08	possible	possible		suitable habitat	low
I	Goldfinch, American	6/28/08	Probable	P		Pair	low
	W						
J	Chickadee, Black-capped	5/30/08	possible	possible		suitable habitat	
			·	·			
J	Catbird, Gray	8/4/08	possible	possible		suitable habitat	low
J	Waxwing, Cedar	7/29/08	possible	possible		suitable habitat	low
J	Warbler, Blue-winged	6/2/08	Probable	S	6/11/08	Song 2x, >7 days	low
J	Yellowthroat, Common	8/4/08	Confirmed	FL		FLEDGED	low

<u>map</u> location	species name	<u>date</u>	<u>breeding</u> <u>status</u>	<u>breeding</u> <u>code</u>	<u>singing</u> dates	breeding evidence	<u>nest</u> height
J J	Towhee, Eastern Towhee, Eastern	5/12/08 6/11/08	possible possible	possible possible		suitable habitat suitable habitat	grnd grnd
J	Towhee, Eastern	8/4/08	possible	possible	0/40/00	suitable habitat	grnd
J	Sparrow, Song	6/8/08	Probable	S	6/18/08	Song 2x, >7 days	low
J	Blackbird, Red-winged	6/3/08	Probable	Р		Pair	grnd
J	Grackle, Common	6/18/08	Probable	Т		Territory defense	
J	Cowbird, Brown-headed	5/15/08	Probable	Р		Pair	
BACK FIE	ELD						
K	Goose, Canada	5/21/08	possible	possible		suitable habitat	grnd
К	Mallard	5/12/08	Probable	Р		Pair	grnd
К	Mallard	5/21/08	possible	possible		suitable habitat	grnd
K	Mallard	5/31/08	Probable	Р		Pair	grnd
К	Turkey, Wild (NON-MIG)	5/15/08	possible	possible		suitable habitat	grnd
K	Dove, Mourning	5/25/08	Probable	Р		Pair	low
К	Sparrow, Savannah	5/12/08	possible	possible		suitable habitat	
К	Sparrow, Savannah	5/21/08	possible	possible		suitable habitat	
K K	Bobolink (9 individuals) Bobolink	6/11/08 6/14/08	Probable Confirmed	S FS	6/18/08	Song 2x, >7 days FECAL SAC	grnd grnd
IX.	Dobolinik	0/14/00	Committee	10		I LOAL DAD	gina
K	Blackbird, Red-winged	6/18/08	Probable	Р		Pair	grnd
К	Grackle, Common	6/8/08	Confirmed	CF		CARRYING FOOD	
К	Cowbird, Brown-headed	6/3/08	Probable	Р		Pair	
К	Goldfinch, American	7/29/08	possible	possible		suitable habitat	low
BACK TR	REES AT REAR						
L	Woodpecker, Downy	6/8/08	possible	possible		suitable habitat	
L	Flycatcher, Great Crested	6/2/08	possible	possible		suitable habitat	
L	Crow, American	5/28/08	possible	possible		suitable habitat	
L L	Chickadee, Black-capped Chickadee, Black-capped	5/28/08 6/8/08	possible Confirmed	possible FY		suitable habitat FEEDING YOUNG	
L	Titmouse, Tufted	6/11/08	possible	possible		suitable habitat	
L	Catbird, Gray	5/28/08	Probable	S	6/8/08	Song 2x, >7 days	low
ĩ	Catbird, Gray	6/18/08	possible	possible	0,0,00	suitable habitat	low
_		2, 10,00	F 2001010	F - 500,010			
L	Ovenbird (1 individual)	6/11/08	Probable	S	6/18/08	Song 2x, >7 days	grnd
L	Yellowthroat, Common	8/4/08	Confirmed	FL		FLEDGED	low

<u>map</u> location	species name	<u>date</u>	<u>breeding</u> status	<u>breeding</u> <u>code</u>	<u>singing</u> dates	<u>breeding</u> evidence	<u>nest</u> <u>height</u>
L	Tanager, Scarlet	6/8/08	possible	possible		suitable habitat	low
L	Towhee, Eastern	6/11/08	Probable	S	7/28/08	Song 2x, >7 days	grnd
L L	Sparrow, Song Sparrow, Song	6/8/08 8/4/08	possible possible	possible possible		suitable habitat suitable habitat	low low
L	Cardinal, Northern	6/18/08	possible	possible		suitable habitat	low
L	Grosbeak, Rose-breasted	6/18/08	possible	possible		suitable habitat	low
L	Bunting, Indigo	6/8/08	possible	possible		suitable habitat	low
L	Cowbird, Brown-headed	6/11/08	possible	possible		suitable habitat	
L L L L	Oriole, Baltimore Oriole, Baltimore Oriole, Baltimore Goldfinch, American Goldfinch, American	5/30/08 6/11/08 6/18/08 6/11/08 6/18/08	Probable Probable possible Probable possible	S P possible P possible	6/8/08	Song 2x, >7 days Pair suitable habitat Pair suitable habitat	low
	HRUBS ON R	0/10/00	possible	possible		Suitable habitat	low
M	Swallow, Barn	8/4/08	Confirmed	FL		FLEDGED	
Μ	Catbird, Gray	6/3/08	possible	possible		suitable habitat	low
Μ	Yellowthroat, Common	6/11/08	possible	possible		suitable habitat	low
M M M	Sparrow, Song Sparrow, Song Sparrow, Song	5/15/08 5/30/08 8/4/08	Probable Probable possible	P S possible	6/18/08	Pair Song 2x, >7 days suitable habitat	low low low
N	REES ON R Dove, Mourning	5/12/08	possible	possible		suitable habitat	low
Ν	Flycatcher, Great Crested	6/8/08	Probable	Р		Pair	
N N N	Jay, Blue Jay, Blue Jay, Blue	5/25/08 6/8/08 8/4/08	possible possible possible	possible possible possible		suitable habitat suitable habitat suitable habitat	
Ν	Crow, American	5/25/08	possible	possible		suitable habitat	
N N N	Chickadee, Black-capped Chickadee, Black-capped Chickadee, Black-capped	5/15/08 5/30/08 7/29/08	possible Probable possible	possible S possible	6/25/08	suitable habitat Song 2x, >7 days suitable habitat	
Ν	Titmouse, Tufted	7/29/08	possible	possible		suitable habitat	
N N	Wren, House Wren, House	6/2/08 6/8/08	possible possible	possible possible		suitable habitat suitable habitat	low low
N N	Robin, American Robin, American	5/30/08 6/8/08	Probable Probable	S P	6/11/08	Song 2x, >7 days Pair	low low

<u>map</u> location N	<u>species name</u> Robin, American	<u>date</u> 8/19/08	<u>breeding</u> <u>status</u> possible	<u>breeding</u> <u>code</u> possible	<u>singing</u> dates	breeding evidence suitable habitat	<u>nest</u> <u>height</u> low
N N	Catbird, Gray Catbird, Gray	5/25/08 6/11/08	possible possible	possible possible		suitable habitat suitable habitat	low low
Ν	Waxwing, Cedar	6/18/08	possible	possible		suitable habitat	low
N N	Warbler, Yellow Warbler, Yellow	5/30/08 6/8/08	Probable Probable	P S	6/18/08	Pair Song 2x, >7 days	low low
Ν	Tanager, Scarlet	6/18/08	possible	possible		suitable habitat	low
Ν	Towhee, Eastern	5/15/08	Probable	Ρ		Pair	grnd
N N	Sparrow, Song Sparrow, Song	5/12/08 6/8/08	Probable Confirmed	S CF	5/25/08	Song 2x, >7 days CARRYING FOOD	low low
N N N	Cardinal, Northern Cardinal, Northern Cardinal, Northern Cardinal, Northern	4/18/08 5/14/08 6/11/08 8/4/08	Probable Probable Confirmed Probable	P S FL S	5/28/08 8/17/08	Pair Song 2x, >7 days FLEDGED Song 2x, >7 days	low low low low
N	Blackbird, Red-winged	6/8/08	Probable	Р		Pair	grnd
Ν	Oriole, Baltimore	5/25/08	possible	possible		suitable habitat	
Ν	Goldfinch, American	6/2/08	Probable	S	6/11/08	Song 2x, >7 days	low
BACK SH O	IRUBS ON R Dove, Mourning	6/11/08	possible	possible		suitable habitat	low
Ο	Catbird, Gray	6/11/08	Confirmed	CF		CARRYING FOOD	low
0	Warbler, Yellow	5/30/08	possible	possible		suitable habitat	low
0	Yellowthroat, Common	6/2/08	Probable	S	6/11/08	Song 2x, >7 days	low
0	Towhee, Eastern	5/12/08	Probable	S	6/11/08	Song 2x, >7 days	grnd
0	Sparrow, Song	7/29/08	Confirmed	FL		FLEDGED	low
<u>BACK TR</u> P	EES ON R Woodpecker, Downy	6/8/08	possible	possible		suitable habitat	
Р	Flycatcher, Great Crested	6/8/08	Probable	S	6/18/08	Song 2x, >7 days	
P P	Vireo, Red-eyed Vireo, Red-eyed	6/8/08 8/4/08	Probable possible	S possible	8/4/08	Song 2x, >7 days suitable habitat	low low
Р	Jay, Blue	6/18/08	possible	possible		suitable habitat	
Р	Crow, American	6/8/08	possible	possible		suitable habitat	
P P P	Chickadee, Black-capped Chickadee, Black-capped Chickadee, Black-capped	5/25/08 6/3/08 6/11/08	possible Probable possible	possible P possible		suitable habitat Pair suitable habitat	

<u>map</u> <u>location</u> P P	<u>species name</u> Chickadee, Black-capped Chickadee, Black-capped	<u>date</u> 6/18/08 7/29/08	<u>breeding</u> <u>status</u> possible possible	breeding code possible possible	<u>singing</u> <u>dates</u>	breeding evidence suitable habitat suitable habitat	<u>nest</u> <u>height</u>
Р	Nuthatch, White-breasted	7/29/08	possible	possible		suitable habitat	
Р	Wren, Carolina	6/18/08	possible	possible		suitable habitat	low
Р	Thrush, Wood	6/18/08	possible	possible		suitable habitat	grnd
P P	Robin, American Robin, American	8/4/08 8/19/08	possible possible	possible possible		suitable habitat suitable habitat	low low
P P P	Catbird, Gray Catbird, Gray Catbird, Gray Catbird, Gray	6/3/08 6/18/08 7/29/08 8/4/08	Confirmed possible possible possible	CF possible possible possible		CARRYING FOOD suitable habitat suitable habitat suitable habitat	low low low low
Р	Waxwing, Cedar	8/4/08	possible	possible		suitable habitat	low
P P	Warbler, Black-and-white Warbler, Black-and-white	5/25/08 5/25/08	possible possible	possible possible		suitable habitat suitable habitat	grnd grnd
P P	Yellowthroat, Common Yellowthroat, Common	6/18/08 8/4/08	Probable Confirmed	P FL		Pair FLEDGED	low low
Ρ	Cardinal, Northern	6/2/08	Probable	S	6/11/08	Song 2x, >7 days	low
Р	Grosbeak, Rose-breasted	6/2/08	possible	possible		suitable habitat	low
P P	Oriole, Baltimore Oriole, Baltimore	6/8/08 6/18/08	possible possible	possible possible		suitable habitat suitable habitat	

Map key:
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A front woods
B front trees on L
C front shrubs on L
D back woods
E back clearing
F back trees on L
G back shrubs on L
H front trees by road

I front field

 ${\bf J}$  windrow

 ${\bf K}$  back field

L back trees at rear

**M** front shrubs on R

N front trees on R

O back shrubs on R

P back trees on R

Number of SIGHTINGS by Date (2008)				ral; "M"			5/14 5/1	5 5/16	5/18	5/10	5/21	5/22	5/23	5/25	5/28	5/30	5/31	6/2	6/3 6/	6/8	6/9	6/11	8/14 6	17 6/	18 6/2	0 6/2	5 6/2	8 7/28	3 7/20	7/30	8/1	8/17	8/10
Cormorant, Double-crested	4/7	4/14	4/10	5/6	5/9 :	5/12 3	0/14 0/1	5 5/10	5 5/10	5/19	5/21	5/22	5/23	5/25	5/20	5/30 8	5/31	0/2	0/3 0/0	0/0	0/9	0/11	0/14 0/	17 0/	10 0/2	0 0/2	5 0/20	5 1/20	1129	7/30	0/4	0/17	1
Heron, Great Blue																2																	
Egret, Great																																	
Heron, Green	1															1				3									+				
Vulture, Turkey Goose, Canada	1										S					1 8				2									+				
Duck, Wood			2	1		1	1				-															4			+	+			1
Mallard						4	2				4						2			2													
Hawk, Sharp-shinned						2																							<u> </u>				
Hawk, Red-tailed Turkey, Wild (NON-MIG)	1					2	2				1			1	1												—	1	+		1	1	1
Killdeer					2	2	2											1							1				+	+			
Sandpiper, Spotted																															1		
Gull, Ring-billed																													М				
Dove, Mourning					2	5	4		1	1		1		2			2		3	5	1	2					1	2	1	2	2		4
Cuckoo, Black-billed Whip-poor-will																		1				0					—		+	+			
Swift, Chimney																				7	S	6		4	ŀ	1			1		1	2	6
Hummingbird, Ruby-throated																																1	1
Woodpecker, Downy	1			1	2		3 1				1			2			1			2	2			2 '	1			5	4		5	4	1
Woodpecker, Hairy		1		1				1	1	1		4			1		1				4	4		4	1	1					4	4	
Flicker, Northern Wood-Peewee, Eastern				1					1			1	2		1		1			2	1	1		1 <sup>·</sup> 2 <sup>·</sup>		2	1	1	+	1	4	1	3
Phoebe, Eastern													1					1			2		-	-			+	3	+	+ +	2	•	1
Flycatcher, Great Crested												1			2		1	2	2	3				2 2	2	2							1
Kingbird, Eastern														1													$\perp$					1	
Vireo, Blue-headed				1	2								4																+	<u> </u>			
Vireo, Warbling Vireo, Red-eyed				$\left  \right $				1					1 1		1	1		1	1	2						_		1	+	+	1	1	
Jay, Blue	1			S	S	S	5 2	S	S	3	2	2	5	2	5	3	S		S 1		5	3		s s		I S	2		S	S	14	S	7
Crow, American	2				M	2	4 2		1	M	S	S	4	6	4	M	M	S	1 S		S	S		S S					12	5	3	4	4
Swallow, Tree						1				1									1									2	3		М		6
Swallow, Barn				_	_	1	0 0	7		0	4	4		0		0	-	4	7 0		7	-		_					9		M	0	
Chickadee, Black-capped Titmouse, Tufted				S 1	S 3	S 3	S 6	7	1	2	1	1	7	2 2	5 3	2	9 5	4	7 2 5	7	7	4		6 4	+ M 1			S S	5	S	S 1	S S	S 3
Nuthatch, White-breasted				2	5	5	1	2		1			1	2	5		1		5		· ·	1		1		2		2		+	1	4	
Wren, Carolina																				1		1							+-		•		
Wren, House						1	1											1		1													
Veery					2																								<u> </u>				
Thrush, Swainson's Thrush, Hermit				1	2			1																									
Thrush, Wood								1					2		1				1				1		2	2		6	+	+			
Robin, American	1			1		1		1	1		1	1	2	1	1	4	3	3	3	6	18	2		6 6		6			М	М	9	S	7
Catbird, Gray					2		4	2		1	1	1	1	4	3	7	1	3	3	8	1	5		3 3	3	3		1	1		2	1	4
Mockingbird, Northern	1																												<u> </u>				
Starling, European Waxwing, Cedar											6				S	3		21	18	1 S	S	2			3	1	S	1	5	10	13		10
Waxwing, Cedar Warbler, Blue-winged											2	1	2	1	3	3		1	10	2	3	2		``	, 1						13		
Warbler, Nashville												•	1	•								_											
Parula, Northern				1	4		1	4																									
Warbler, Yellow						1	2		1	1	1	1	1	3	1	4		1	1	4				1							1		
Warbler, Chestnut-sided Warbler, Magnolia					2			1	1				1	1	2	1													+				
Warbler, Black-throated Blue				1	2 4	1	1 1	2					I	2	2	1																	
Warbler, Yellow-rumped				4	-	•	1																						+	+			
Warbler, Black-throated Green				2			2 1	6						1					1														
Warbler, Pine								1				1							1							1	$\perp$						
Warbler, Prairie Warbler, Blackpoll				2												1										_	—		+	+			
Warbler, Black-and-white				2	3	1	4 4				2	S	1	2											_		+	+	+	+			
Redstart, American						-	1	2			-	5	•	1	1	1				1							+	+	+	+		2	
Ovenbird				2	5		4 5	8	4	2		2	5	2	4	1	8		5 2		6	2		6 4		-			1	1			
Yellowthroat, Common					2	1	5 6	1	2	2	S	S	2	4	2	7	4	5	5	7	3	4		1 4	۱	2	—	1	1	<u> </u>	12	1	1
Warbler, Canada Tanager, Scarlet				1				1		1	1		1		2	1	1	1	1 1	1	1			2 2	,	2	+-	1	+	+		1	
Towhee, Eastern			1	1	1	3	2 4		1		3	1	2	3	 1	2	3	2	4	1	3	3		2 4 4 '				4	3	S	6	3	2
Sparrow, Chipping			-		-	-			· ·				_	~			-	-		- ·							+	+ .	1		-	-	
Sparrow, Savannah						2					2			1															$\perp$				
Sparrow, Song	1		1	1		1	4			1	1	1		2	1	4	2	3	2 1	9	2	1		ę	5		$\square$	2	3	<u> </u>	6	1	1
Sparrow, White-throated Cardinal, Northern	5		4	1	2	2	2 2	2	1	S	3	1	Л	2	0	Λ	2	2	2	5	Λ	9		3 !	5 1	_	1	A	3	1	4	5	3
Grosbeak, Rose-breasted			4	1	2	2	2 2	1		3	3	I	<u>4</u> 1	2 1	2	4	2	2	2 1		4	3		3 : 1 ·		1		4	3		4	Э	<u> </u>
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Bobolink Blackbird, Red-winged			1				1					S						_	5	S	4	S			_		_	_				_	11
Bobolink Blackbird, Red-winged Meadowlark, Eastern	•					N /		1												<u> </u>				$\circ$ $\cdot$ $\cdot$				-	4.0	N /	0		11
Bobolink Blackbird, Red-winged Meadowlark, Eastern Grackle, Common	2			2		М	4		1		2	3		1	2	М	S	3	5	3	1			2 3	3	4		5	10	М	3	6	
Bobolink Blackbird, Red-winged Meadowlark, Eastern Grackle, Common Cowbird, Brown-headed	•			2			1 4	2		1	2 S		2	2	1				3		1	1				1				M 1			1
Bobolink Blackbird, Red-winged Meadowlark, Eastern	•			2		M 2		2		1	2 S	1	2	-		3	4							2 : 4 1				5 3			3	5	
Bobolink Blackbird, Red-winged Meadowlark, Eastern Grackle, Common Cowbird, Brown-headed Oriole, Baltimore	•			2 	S		1 4	2		1			2	2	1			3	3			1			1	1		3	1	1			

# Bird Species Sighted April 4 - August 19, 2008 Cooper North Pasture Preserve, Newburyport

surveys conducted by Lynette Leka and Nancy Purcell

- 1) Cormorant, Double-crested
- 2) Heron, Great Blue
- 3) Egret, Great
- 4) Heron, Green
- 5) Vulture, Turkey
- 6) Goose, Canada
- 7) Duck, Wood
- 8) Mallard
- 9) Hawk, Sharp-shinned
- 10) Hawk, Red-tailed
- 11) Turkey, Wild (NON-MIG)
- 12) Killdeer
- 13) Sandpiper, Spotted
- 14) Gull, Ring-billed
- 15) Dove, Mourning
- 16) Cuckoo, Black-billed
- 17) Swift, Chimney
- 18) Hummingbird, Ruby-throated
- 19) Woodpecker, Downy
- 20) Woodpecker, Hairy
- 21) Flicker, Northern
- 22) Wood-Peewee, Eastern
- 23) Phoebe, Eastern
- 24) Flycatcher, Great Crested
- 25) Kingbird, Eastern
- 26) Vireo, Blue-headed
- 27) Vireo, Warbling
- 28) Vireo, Red-eyed
- 29) Jay, Blue
- 30) Crow, American
- 31) Swallow, Tree
- 32) Swallow, Barn
- 33) Chickadee, Black-capped
- 34) Titmouse, Tufted
- 35) Nuthatch, White-breasted
- 36) Wren, Carolina
- 37) Wren, House
- 38) Veery
- 39) Thrush, Swainson's
- 40) Thrush, Hermit
- 41) Thrush, Wood
- 42) Robin, American

- 43) Catbird, Gray
- 44) Mockingbird, Northern
- 45) Starling, European
- 46) Waxwing, Cedar
- 47) Warbler, Blue-winged
- 48) Warbler, Nashville
- 49) Parula, Northern
- 50) Warbler, Yellow
- 51) Warbler, Chestnut-sided
- 52) Warbler, Magnolia
- 53) Warbler, Black-throated Blue
- 54) Warbler, Yellow-rumped
- 55) Warbler, Black-throated Green
- 56) Warbler, Pine
- 57) Warbler, Prairie
- 58) Warbler, Blackpoll
- 59) Warbler, Black-and-white
- 60) Redstart, American
- 61) Ovenbird
- 62) Yellowthroat, Common
- 63) Warbler, Canada
- 64) Tanager, Scarlet
- 65) Towhee, Eastern
- 66) Sparrow, Chipping
- 67) Sparrow, Savannah
- 68) Sparrow, Song
- 69) Sparrow, White-throated
- 70) Cardinal. Northern
- 71) Grosbeak, Rose-breasted
- 72) Bunting, Indigo
- 73) Bobolink
- 74) Blackbird, Red-winged
- 75) Meadowlark, Eastern
- 76) Grackle, Common
- 77) Cowbird, Brown-headed
- 78) Oriole, Baltimore
- 79) Finch, House
- 80) Goldfinch, American

Jubbs Are and Based Sectors         Sectors         Jubbs Are and Sectors         Jubbs Are and Sectors         Jubbs Are and Sectors         Jubbs Are and Sectors           Based Sectors         File Sectors         File Sectors         File Sectors         File Sectors         File Sectors           Based Sectors         File Sectors         File Sectors         File Sectors         File Sectors         File Sectors           Based Sectors         File Sectors         File Sectors         File Sectors         File Sectors         File Sectors           Based Sectors         File Sectors         File Sectors         File Sectors         File Sectors         File Sectors           Based Sectors         File Sectors         File Sectors         File Sectors         File Sectors         File Sectors           Based Sectors         File Sectors         File Sectors         File Sectors         File Sectors         File Sectors         File Sectors           Based Sectors         File Sectors         File Sectors         File Sectors         File Sectors         File Sectors         File Sectors           Based Sectors         File Sectors         File Sectors         File Sectors         File Sectors         File Sectors           Based Sectors         File Sectors         File Sectors         File Sectors         <					1					T
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Constanter, Blue gray         615-81         Wooded deps along pords, rivers, streams, swamps, baser provids         dired         cup         1         3         3         addition in horiz inform for the model deps along pords, rivers, streams, swamps, baser provids         stream         stream <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td>10</td> <td>3</td> <td></td>					-			10	3	
Goldmann         61 - 81         Forest edge, copase, putury area, mark adge, reidential         grund				<u> </u>			-	25	2	
Cooke, Canada         41:5 - 241         Broce or latencis in any vertimed         ground         ground         on angle of a broke.         25         concernation         concernation           Gradels, Convert-Seasted         572: 58         Deciduous and mased forest, woodlos, shade trees of parks and suburbs         gradels         gradels         dirth word relation is whoth, market wag, tree cavity, autificial structure           Gradels, Convert         F16: 58         Model duration woods         gradels         dirth word relation         dirth word relation           Hawk, Rode-HouldMod         F16: 58         Model duration woods         gradels         dirth word relation         dirth word relation           Hawk, Rode-HouldMod         F16: 58         Mixel woodlands, proves coopes         dirth Mixel woodland,					trac		<u> </u>		2	
Grades, Common         515 - 770         Wide variety of utam and rurul habitat trees of parks and statures         decid         contr         p.p.         2         1         8         off numer, rates in structure, antificial structure           Grabake, Road-wide         58         Decidous and mixed forest, toxicolitas, strate trees of parks and studures         dicto         p.p.         1         Dicto         Dicto<							- 1	30	<u>ు</u>	
Grozeback, Rode-breasted         525: 95         Decklowa and forcet, woodlonk, shade trees of parks and suburs         deckl         shull         out         occes/bit           Forces, Ruff or NNMIM         417: 51: F1         Made updard woods         group         Idea         All and wondler         oft concold @ base tree           Fawk, Road-Winged         515: 725         Mature, mixed woodlands, groves, copes         deckl         ont f1 and wondler         50         16         us in ortich of deckl, occ by frunk in ond!           Hawk, Road-Winged         410: 815         Wet mixed forests, swamps         deckl         ont f1 and wondle wing         Group to all for only by frunk in ond!           Hawk, Road-Winged         410: 815         Wet mixed forest, swamps         deckl         ont         platform         10         20         15         on sand downed link, of the side wondle wing           Hum mignick, Ruby-friated         51: 815         Visite (harding most orises, glas wondle wond side wondle wondl				<u> </u>			-	10		
Groupse, Ruffed (NOX-MIQ)         4/15- 261         Mixed updand woods         group         strappe         0         team         Team         Constraints         deal         plants         Team									8	
Hawk, Encod-winged         5/15 -725         Mature, mixed woodlands, growes, copees         decid         pletform         30         50         16         usa in croth of denid, coc by trunk in confi           Hawk, Red-shouldered         4/10 - 8/15         Mature woodlands, growes, copees         decid         onlightorm         50         60         21         usu by trunk, flexible           Hawk, Red-shouldered         4/10 - 8/15         Mature woodlands, growes, copees         decid         onlightorm         50         70         20         croth flexible         decid							5	15		
Hawk, Cooper's         55-81         Mixed woodlands, groves, copes         deid         conit         Jintom         25         45         26         in ortch it conit, by tunk it diedd           Hawk, Red-shield         4/15-81         Mature woodlands, often near edges         deid         oft         juit for the state         21         us ty tunk, prennal           Haw, Red-shield         4/15-81         Mature woodlands, often near edges         deid         oft         juit for the state         juit				<u> </u>			0	50	10	
Hawk, Rod-shouldend       4/10-8/15       Winker wordands, offen near adges       decid       iptatom       12       usu by trunk: parennial         Hawk, Rod-shouldend       5/10-8/1       Wordy growth near marbes or open water       decid       shrub platform       10       20       11       usu portanking providend in the structure parennial         Jaw, Bio       611-87       Open wordand, crait ad suburba gradens, edge       decid       shrub platform       10       20       1.5       on horiz bronchin crotch, oca decid reckthuby/compact         Kardel, American       6/10-770       Open, sparsely vogetited areas, falt conftops       ground       scrape       0       tit af any, restiting material         Kildeer       4/20-71       Open, sparsely vogetited areas, falt conftops       ground       scrape       0       tit af any, restiting       tit af any, restiting         Kingler, Edited       51-81       Stream, rever, lake, or bay shore with barks       conf       pendart       4       to pendart       to pendart       to pendart       to pendart       to in horiz bronchin confto, scattered and scattered									16	
Hawk, Red-tailed4/15 e 21Mature woodlands, often near degesdecidfiltplatform157029crotch of large tree windle viewHummighrid, Ruby-Incold611 e 31Open woodland, rural and subtana gardens, edgedecidup102011.5on hortz brotch/in cortch, occ decid trees/huby/hortsp.Jay, Blue571 - 872Open country, scattered trees, edgesragoliffavril2015.0on hortz brotch/in cortch, occ decid trees/huby/hortsp.Kestrel, American570 - 722Open country, scattered trees, edgesrageoliffavrilviewn hortzKingleide571 - 870Den habitats, including edge, copaes, often near waterdecidavrilov82555michtal solad trees, mich text witk/edge, on horiz limbKingleide571 - 871Conferous woodsscatteredecidavrilov82555michtal solad trees, mich text michtalKingleide571 - 871Conferous woodsscattereov44602.5n trink, usu hung from branchesKingleide571 - 871Conferous woodsgroundscattere044602.5n trink, usu hung from branchesMainPupla552 - 771Open materiafaintalmain, and ragi oliculariasgroundscattere06.5doce in hindowidtrMeadowlark, Eastern55 - 772Extensive grassiands, including anityrots, marging oliculariasgroundno near06.5doce i	,				conif				26	
Heron, Green5/10 - 8/1Woody growth near marbles or gen valerdecidwhup jattor102011usu concealedJay, Blue6/1 - 8/1Open country, scattered trees, edgedecidcup10201.5on small downed indin, oft narseam, re-usedJay, Blue6/1 - 8/1Variet, including most forest types, thickets, suburban yards, parksconftcup10201.5on small downed link, occ decid trees hubbles/includingKalldear4/20 - 7/1Open, sparsely vegetated areas, flat tooltopsgroundstrage06indice flat tree, mole but trees, decidKinglein, Bated6/1 - 8/10Straam, river, iake, or bay shore with barksbarkstrage06indice flat tree, mole but trees, decidKinglein, Bated6/1 - 8/10Straam, river, iake, or bay shore with barksbarkstrage04in straben downedKinglein, Bated6/1 - 8/10Straam, river, iake, or bay shore with barksconftgroundstrage04in straben downedKinglein, Bated6/1 - 8/10Straam, river, iake, or bay shore with barksgroundstrage04in straben downedKinglein, Bated6/1 - 8/10Straam, river, iake, or bay shore with shore resolutiongroundstrage04in straben downedLark, Horne4/25 - 8/17Coastal dunes and baashing downed match, altraped downed matchgroundstrage04in straben downed matchMaard6/5 - 7/5Coastal dunes and b					-1:66					
Hummipping Rub, Hub, Hore 4f1         Open woodland, rural and suburban gardens, edge         decid         rup         10         20         1.5         on small derward limb, oft nr steam; ru-used           Jay, Blue         5/1-875         Varie (including most forest types, hitches; suburban yardens, parks         conf         cup         12         80         Ill fle, if any, nesting material           Kingler         4/20-771         Open, parkery vegetated areas; fat rootops         ground         Scrape         6         in open wood and wide view on stores types, hitches; suburban yardens, parks           Kingler, Estern         5/25-725         Open habitas, including edge, copese, often ner water         decid         shrub         in wet bark near water           Kingler, Golden-crowned         5/10-8/10         Conferous woods         conferous woods         in wet bark near water           Kingler, Barden         5/10-8/10         Variety woods         ground         saucer         0         -         in shall derward limb, oft nr steam; re-used           Main         Start         Conferous woods         ground         saucer         0         -         in shall derward limb, oft nr steam; re-used           Kingler, Eastern         Start         Start         Start         Start         Start         Start         Start         Start			, , , , , , , , , , , , , , , , , , , ,							
Jay, Blue         5/1 - 19/15         Varied: Including most forest types, thickets, suburban yards, parks         conf         cup         5         20         7.5         on hoiz brach/in crock, occ dedit tree/shrub/vine; bulky/compact           Kattel, American         6/10 - 720         Open, country, sattered trees, edge         scrape         0         6         in open w/wide view on stones/gravel           Kingbiet, Ealerd         6/10 - 720         Open, habitats, including edge, copses, oten neat wet         decid         hrub         kingbiet, Schenows         5.5         mich hois load tree, micked, on hoiz bart for hois load tree, micked, on hoix bart for hois load tree, micked, on a spoed side           Kingle, Galencowned         6/1 - 8/10         Kingle, Galencowne, schenows and saland ming pools         ground         saucer         0         -0         ocin holow logs           Marin, Purple         5/2 - 7/15         Coastal kinds         hind hois load tree, micke, micke, schenows         -0         ocin holow logs           Mochingdird, Northern         5/5 - 7/15         Suburban or semi-trainabilitats with hickes, hushry forest dege, hedgenows         shrub<					snrub	•				
Kesteria         S/10         Centry         Sate         Citil Construction         Sate         Citil Construction         Sate	· · ·									
Kildeer4420 * 7/1Open spatiely regetated areas; flat rootposgroundsorape0e6in open winde view on stores/gravelKinghter, Edeted575 * 725Open habitats, including edge, copes, often new waterdedishrubv4in vert bank near waterKinghter, Edeted571 * 275Open habitats, including edge, copes, often new waterbanksnagburrow4in vert bank near waterKinghter, Odden-crowned571 * 275Mallard571 * 275Mallardin vert bank near waterCarls, Horned4225 * 91Coastal dues and beaches, abandoned agricultural fields, airportsgroundsaccer0-4in shallew dpresh; oft wirth of pobbles/dric tods on expoes dideMallard571 * 875Mallard572 * 725Open areas; edge of saltmarsh, coastal farminand, and golf coursessnagcavity55tree hole/cifff inich/cibrits, morth, or cw/sint oft not keep eggs in onMeadowink, Eastern557 * 775Chensive grasshands, including any prosts, margins of saltmarshgroundcavity06.55tree hole/cifff inich/cibrit cavity, coc widit rin to keep eggs in on sideMochingpird, Northern557 * 775Coastal Islandsgroundgroundno nest06.58san stump; dpression in sensu to sitting adultMochingpird, Northern657 * 775Coastal Islandsdecidshrubplatform340920coc premialNight-Heron, Bitck-crowned557 * 775					aliff				7.5	
Kingbink, Eastern5/25Cyben habitats, including edge, copes, often near waterdecidshurbUpu8255.5micht of isolated tree, mid betw trnk&edge, on horiz limbKingleike, Golden-crowned5/16/10Stream, river, lake, or bay show with banksbanksnagkingleike, Bulke, or bay show with banksbanksnagkingleike, Bulke, Stream, ver, lake, or bay show with banksconifbankfinwith ver bank near waterKingleike, Golden-crowned5/16/10Coalstat dures and beaches, abandoned agricultural fields, airportsgroundscrape0in ver bank near waterMaland5/16/10Open areas: edge of saltmarsh, on adgo for coursesgroundscrape0in ver bank near waterMediowlark, Eastern5/57/25Extensive grasslands, including airports, margins of saltmarshgroundno est0in ver bank near waterMochringkin, Northern5/58/15Extensive grasslands, including ver bars and fit rooftopsgroundno est0in anti-abulka ver over daned grass cancep worn wisurounding veg: entr on sideMochringkin, Nighthew, Common5/57/15Coastal laiandsgroundno est10in anti-abulka ver over daned grass cancep worn wisurounding veg: entr on sideMighthew, Common5/57/15Coastal laiandsgroundno est10in anti-abulka veg eagle in anti-abulka veg eagle								80	6	
Kinglet, Giden-crowned5/1 - 8/1Stream, river, lake, or bay shore with banksbanksnagburk4in vert bank near waterKinglet, Giden-crowned4/25 - 8/1Constrat dunes and beaches, abandoned agricultural fields, airportsgroundsurger04602.5nr trik, usu hung from branchesMallard5/1 - 8.5All weltands, cocasionally subunhan yards with swimming poolsgroundsurger04in shallow dpress, rid writin of pebled/rt clobs on exposid sideMartin, Purple5/2 - 7/15Open areas; edge of saltmarsh, coastal farmland, and golf coursessnagcavity55tree hole/cliff inche/othr cavity; occ widit rim to keep eggs inMockingbird, Northern5/5 - 7/15Solurban or semi-nurual habitatis with hickes, bruchy for set edges, hedgerowsshubtree6.5dpress in i dense cov; dorned grass canopy worn visuroundng veg; entr on sideMochen, Common6/2 - 8/15Fresh/brackish reedy pond or marshffoatnggroundno nest0-ramps lead down towater; noos platform nearbyNight-Heror, Black-crowned5/5 -7/15Coastal Islandsdecidshrubplatform000co cor in holidy down to water; noos platform nearbyNight-Heror, Black-crowned5/5 -7/15Coastal Islandsdecidshrubplatform0000000Night-Heror, Night-Heror, Night-He							-	25	5.5	
Kinglet, Golden-crowned       5/10 - 8/1       Conferous woods       Constal dures and beaches, abandoned agricultural fields, aippots       ground       sauce       0       4       in shallow dpresh; of twim of pebbels/dir closts on exposd side         Mallard       5/1 - 8/5       All wetlands, occasionally suburban yards with swimming pools       ground       sauce       0       4       in shallow dpresh; of twim of pebbels/dir closts on exposd side         Martin, Purple       5/2 - 7/1       Open areas; edge of satimarsh, coastal alramiand, and golf ocurses       snag       cavity       5       tree hole/cliff inche/clift ravity; occ widirt im to keep eggs in         Mackovinghrid, Northern       5/5 - 7/15       Suburban or semi-ural habitats with thickets, brushy forest edges, hedgerows       shub       tree       opc       6.5       dpression is result of sitting adult         Mocrine, Common       5/2 - 7/15       Coastal algands       marsh       ground       no nest       0       -       & an shubitats       and shub       tree       opc       ds.       ds.       no shutce       nopc       nopc       no shutce       no							0	25	5.5	
Lark, Horned4/25 - 8/1Coastal dunes and beaches, abandoned agricultural fields, airportsgroundsaucer04In shallow dyres <sup>in</sup> , oft wirm of pebbles/drictods on exposd sideMallard5/1 - 6/8All wetdands, cocasionally suburban yards with swimming poolsgroundscrape000 <t< td=""><td></td><td></td><td></td><td></td><td>snag</td><td></td><td>-</td><td>-</td><td>•</td><td></td></t<>					snag		-	-	•	
Malard       6/1 - 8/6       All wetlands, occasionally suburban yards with skiming pools       ground       scrape       0       occ in hollow logs         Mactin, Purple       5/5 - 7/25       Extensive grasslands, including airports, margins of saltmarsh       ground       cup       0       6.5       dpress'n in dense covr; domed grass canopy wow w/surrounding veg; entr on side         Moching, Common       5/5 - 7/15       Extensive grasslands, including airports, margins of saltmarsh       ground       tree       cup       3       10       7       occ in hollow logs         Moching, Common       5/5 - 7/15       Extensive grasslands, including river bars and flat rooftops       ground       no nest       0       6.5       doe in index       doe in index       son stump; dpression is result of sitting adult         Moother, Common       5/5 - 7/15       Coastal Islands       decid       shrub platform       30       40       20       occ in hollow logs       and stump; dpression is result of sitting adult         Night-Heron, Yellow-crowned       5/15 - 7/15       Coastal Islands       decid       shrub platform       30       40       20       occ in hollow logs       and stump; dpression is result of sitting adult         Nuthatch, Recherbeasted       5/15 - 7/15       Coastal Islands       decid       shrub       platform       30	<b>3</b>					•	4	60	2.5	
Matrix, Purple         S/25 - 7/1         Open areas: edge of saltmarsh, coastal farmland, and golf courses         Fanag         Cavity         5         5         Tree hole/cliff inche/orbr cavity: occ widint min to keep eggs in denskowlark, Eastern           Macdowlark, Eastern         5/5 - 8/15         Extensive grasslands, including airports, margins of saltmarsh         ground         cup         3         10         7         occ in vines           Mochingbird, Northern         5/5 - 8/15         Freshbrackish reedy pond or marsh         floating         ground         platform         0         6.5         does not water; roost platform neerby           Mochingbird, Northern         5/5 - 7/15         Cosatal Islands         floating         ground         no nest         0         Kons tum; grassina is result of sitting adult           Night-Heron, Black-crowned         5/5 - 7/15         Cosatal Islands         decid         shrub         platform         10         40         20         occ prennial           Nuthatch, Red-breasted         5/15 - 8/10         Doniferous forest         conif         cavity         5         40         20         occ prennial           Nuthatch, White-breasted         5/25 - 7/15         Open partexis, topse, often near tiver, stream, or pond         decid         shrub         platform         30         60							0		4	
Meadowlark, Eastern5/5 - 7/25Extensive grassiands, including airports, margin of saltmarshgroundgroundup06.5dpress'n in dese covr; domed grass canopy worn w/surroundng veg; entr on sideMockingbird, Northern5/5 - 8/15Suburban or semi-rural habitats with thickets, brushy forest edges, hedgerowsshrubtreecup06.5dpress'n in dese covr; domed grass canopy worn w/surroundng veg; entr on sideMoorhen, Common6/5 - 8/15Fresh/brack/sib reedy pond or marshfloatinggroundplatform0-ramps lead down to water; roost platform nearbyNight-Heron, Yellow-crowned5/5 - 7/15Coastal Islandsdecidshrubplatform304020occ prennialNuthatch, Mithe-breasted4/5 - 8/10Deridoculos forestdecidshrubplatform304020occ prennialOriele, Baltimore5/25 - 8/1Deen deciduous forest, shade trees in urban or rural areasdecidpendant6602.5rarely in conif; sustend at rimital sides to drooping branchOriele, Chard5/25 - 8/1Deen deciduous forest, shade trees in urban or rural areasdecidshrubpendant6.56.5in gely in conif; sustend at rimital sides to drooping branchOriele, Ghard5/20 - 8/5Open habitatsopen arriver, stream, or ponddecidshrubpendant6.56.5in gely in conif; sustend at rimital des to drooping branchOwi, Barred4/1 - 8/1Open habitatsform on understory vegelation and ample leaf litter <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td> <td>F</td> <td></td> <td></td>							0	F		
Modelingbird, Northern5/5 - 8/15Suburban or semi-rural habitats with thickets, brushy forest edges, hedgerowsshubtreecup3107occ in vinesMoorhen, Common5/5 - 8/15Freshbrackish reedy pond or marshfloatinggroundplatform0ramps lead down to water, roost platform nearbyNight-Heron, Black-crowned5/5 - 7/15Coastal Islandsdecidshrubplatform153024perennialNight-Heron, Pallow-crowned5/5 - 7/15Coastal Islandsdecidshrubplatform304020occ perennialNuthatch, Nithe-breasted5/15 - 8/10Coniferous forestconif secandcavity540excavatd rotth branch/stmp, occ in desertd woodpkr holeNuthatch, Nithe-breasted5/25 - 8/10Open deciduous forest, shade trees in urban or rural areasdecidcavity540excavatd rotth branch/stmp, occ in desertd woodpkr holeOriole, Baltimore5/25 - 8/1Open deciduous forest, shade trees in urban or rural areasdecidshrubpendant4504rarely in conif; suspended from forkd terminal twg, hiddn by leavesOvenbird5/25 - 8/1Open habitatsno near tiver, stream, or ponddecidshrubpendant4504rarely in conif; suspended from forkd terminal twg, hiddn by leavesOriole, Orchard5/25 - 7/15Open, habitatsno near tiver, stream, or ponddecidshrubisra4504rarely in conif; suspended from forkd terminal twg, hidd							-	5	6 F	
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Night-Heron, Black-crowned6/5 - 8/1Barren habitats including river bars and flat rooftopsgroundno nest0%& on stump; dpression is result of sitting adultNight-Heron, Black-crowned5/5 - 7/15Coastal Islandsdecidshrubplatform304020occ perennialNuthatch, Red-breasted5/15 - 8/10Coniferous forestconifconifcavity540excavatd roth branch/stump, occ in desertd woodpkr holeNuthatch, White-breasted5/12 - 8/10Deciduous forest, shade trees in urban or rural areasdecidcavity1060in nat'l cavity/desertd woodpkr holeOriole, Batimore5/25 - 7/15Open, patchy forest, copses, often near river, stream, or ponddecidshrubpendant4504rarely in conif; suspended from forkd terminal twig, hiddn by leavesOvenbird5/25 - 7/15Open habitatsoron understory vegatation and ample leaf littergroundoven036.5in open, lead/out woodpkr holeOwn, Barred4/1 - 8/1Open habitatssmagbuildingcavity20504rarely in conif; suspended from forkd terminal twig, hiddn by leavesOwn, Great Homed (NON-MIG)2/1 - 7/15Moist woods, wooded swamps, bottomlands.snagcavity20504seanandonded nestsOwn, Great Homed (NON-MIG)2/1 - 7/14Wide variety of habitats from forest to farmlanddecidcavity1460aband nestOwn, Great Homed (NON-MIG)2/1 - 8/15Open scru								10	1	
Night-Heron, Black-crowned5/5 7/15Coastal Islandsdecidshrubplatform153024perennialNight-Heron, Yellow-crowned5/5 7/15Coastal Islandsdecidshrubplatform304020occ perennialNuthatch, Red-breasted5/15 - 8/10Coniferous forestconifcavity540excavatd roth branch/stump, occ in desertd woodpkr holeNuthatch, White-breasted4/25 - 8/10Deciduous forestdecidcavity1060in natl cavity/desertd woodpkr holeOriole, Baltimore5/25 - 7/15Open deciduous forest, shade trees in urban or rural areasdecidpendant6602.5rarely in conif; suspended from fork terminal twig, hiddn by leavesOwn, Barned5/20 - 8/5Open nabratsopen habitatssnagoven036.5in open, leaf-covrd floor decid woods; always roofd wleavs, etc; entr small slitOwn, Barned4/1 - 7/15Moist woods, wooded swamps, bottomlands.snagcavityOwn, Great Horned (NON-MIG)2/1 - 7/1Wide variety of habitats from forest of tamlanddecidcliffaband ns3050perennialPheasant, Ring-necked5/1 - 8/15Open scrub, pastures, fieldsgroundscrape0Pigeon, Rock (NON-MIG)3/1 - 1/1Wide moist woods with coniferssnagcavityPigeon, Rock (NON-MIG)3/1 - 1/15Ledges, bridges, porch sills, etc., usually near water						•	0			
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Dedetert American 40 00 0.5 of the task of tas				-		-	10			
Redstart, American       6/1 - 8/1       Secondary forest, copses       decid       shrub       cup       10       20       2.5       oft in fork of low tree; compact								-		
Robin, American 5/1 - 9/1 Almost anywhere except the most open habitats such as marsh, grasslands decid conif cup 10 20 6.5 also shrubs; unkempt foundation of protruding twigs							10	20	6.5 F	
Sandpiper, Spotted       5/25 - 7/5       Coastal shores, shores of freshwater lakes, ponds, rivers, streams       ground       scrape       0       5       elevated site in grass/among rocks         Sandpiper, Upland       5/20 - 7/15       Evtensive grasslande, consciently eigenstee       ground       scrape       0       4.5       depression consciently part of hebitat				-			0		C C	
Sandpiper, Upland5/20 - 7/15Extensive grasslands, especially airportsgroundscrape04.5depression concealed on dry part of habitat	Sanupiper, Upland	5/20 - 7/15	Extensive grassiands, especially airports	ground		scrape	U		4.5	uepression concealed on dry part of nabitat

species	dates	habitat	nri cito	sec site	tupo	min ht	max ht	diam	notes
Screech-Owl, Eastern		Open deciduous forests, woodlots, orchards, residential areas	snag	Sec Sile	type cavity	15	50	ulaili	usu in tree cavity/hollow stump
Shoveler, Northern		Fresh/brackish pond or marsh	ground		scrape	0	50		
Siskin, Pine	5/1 - 7/15		conif	decid	saucer	8	50	4	on horiz limb well out from trunk
Sora		Fresh/brackish reedy pond or marsh	floating	ground	saucer	0	0.5		usu over deeper water than V.Rail
Sparrow, Chipping		Open mixed forest, suburbs, parks, and cemeteries with conifers	conif	decid	cup	0	11		also in vine tangl; compact
Sparrow, Field		Brushy areas, weedy fields, powerline cuts	ground	sapling	cup	0	2.5	<u>-4.5</u>	occ in vine tangl
Sparrow, Grasshopper		Grasslands, including airports, hayfields	ground	saping	cup	0	2.5	-	sunk in slight dpress'n, rim flush w/ground levl, well-concealed by ovrhanging forbs
Sparrow, House		Residential, farms	building	tree		0	40	5	
Sparrow, Savannah		Grasslands, including airports, hayfields		uee	cavity	0		2	in dereas's rim fluck w/ground wall concold by overbanging yog
		Forest edge, brushy areas, marsh edges, suburbs	ground	shrub	cup	•	0.5		in dpress'n, rim flush w/ground, well-coneald by ovrhanging veg
Sparrow, Song			ground		cup	0	3		bneath grass tuft, brushpile
Sparrow, Swamp		Freshwater wetlands including cattail marsh, swamps, river meadow, and pond edges		ground	cup	0	5	4	oft ovr water; bulky foundation
Sparrow, Vesper		Short grass areas, agricultural fields, clearings in pine barrens, coastal moors	ground	- h h	cup	0	0	0.5	excavatd dpress'n, conceald by mat of dead veg or fresh growth
Sparrow, White-throated		Scrubby habitats esp with conifers (C, W); Red Maple, Atlantic White Cedar (SE)	ground	shrub	cup	0	3		at edge of clearing, well-concealed
Starling, European		Everywhere, except remote rural areas	decid	building	cavity	10	25		any handy cavity; slovenly
Swallow, Bank		Earthen embankments	bank		burrow	4	4	2	at end of burr 2-3' deep, usu in disturbed sites
Swallow, Barn		Structures offering access to interior; barns, garages, porches, sheds, etc.	building		cup	6	40	5	plastrd ledges/walls of bldg, occ in cave/crevice; mud pellets/straw/heavly lined w/fthrs
Swallow, Cliff		Eves and sides of old barns and other buildings, bridges	bridge	cliff	gourd	3	3	1.5	plastrd undrside culvrt/othr vert surf; of mud pellets; tubulr entr to spher cavity, oft re-used
Swallow, Northern Rough-winged		Variety of habitats, often near water, in cavity, pipe, or excavated burrow.	bank	culvert	burrow	4	4		at end of burr 4-5' deep or othr cavity/niche; no feathr lining
Swallow, Tree		Open areas or woodland edge near wetlands; including saltmarsh	snag		cavity	5	5		tree hole/othr cavity
Swift, Chimney		Urban, suburban chimneys, beaver swamps?	chimney	hollo tree	saucer	-	-	4	1/2 saucer, attached to wall; avg 22' from top
Tanager, Scarlet		Mature deciduous forest	decid	conif	saucer	20	30		on horiz branch, well out from trunk
Teal, Blue-winged		Fresh/brackish pond or marsh	ground		scrape	0			occ foundation wet
Teal, Green-winged	5/15 - 8/5	Fresh/brackish pond or marsh	ground		scrape	0			occ far from water
Thrasher, Brown	5/15 - 8/10	Dry secondary growth; powerline cuts, overgrown pastures, coastal thickets,	shrub	ground	cup	2	5	12	on ground mostly in E; also in vines/small tree
Thrush, Hermit		Damp mixed forest with dense undergrowth including pine barrens	ground	tree	cup	0	8		on ground in E
Thrush, Wood		Mature forest	decid	conif	cup	6	50	5	bulky, compact; freq use white paper/bag in base
Titmouse, Tufted	4/5 - 8/1	Deciduous (especially oak) forest, riparian woodlands, and residential areas	decid	snag	cavity	3	90		in nat'l/woodpkr cavity; occ perennial
Towhee, Eastern		Dry, open forest, edge, brushy habitats, including coastal thickets, powerline cuts	ground	shrub	cup	0	5		oft in scratched depress'n, rim of cup flush w/ground surface
Turkey, Wild (NON-MIG)		Mature deciduous woods, edge	ground		scrape	0			
Veery		Moist mixed forest	ground	shrub	cup	0	6	10	substantial
Vireo, Blue-headed		Mature coniferous or mixed woods	conif	decid	cup	4	30	3	suspnded by rim frm prongs of frkd twig, well-made, deep
Vireo, Red-eyed		Mixed and deciduous Woods	shrub	decid	cup	5	35	3	susprided by rim frm prongs of frkd twig; dainty, well-made, deep
Vireo, Warbling		Semi-open borders of river meadows, ponds, and streams	decid	shrub	cup	30	60	3.5	hi in tree suspnded by rim from prongs of frkd twig; compact, deep
Vireo, White-eyed		Moist areas, thickets, tangles of vines or briers.	shrub		cup	1	8		rim suspinded by forkd twg in scrub oak/shrub/saping
Vireo, Yellow-throated		Open deciduous and mixed forest and riparian woodlands	decid		cup	20	60		suspided by rim frm prongs of frkd twig, well-made, deep
Warbler, Black-and-white		Mainly deciduous forest	ground		cup		2	4	rarely nr ground; concealed undr dead leaves/branches
Warbler, Blackburnian		Coniferous forest	conif			20	50	3	high in dense branches
Warbler, Black-throated Green		Coniferous and mature mixed forest	conif		cup				oft on horiz branch; compact, deep
				tonglo	cup	20	35	3.5	
Warbler, Blue-winged		Old, brushy fields, copses, edge with low undergrowth, powerline cuts	ground	tangle	cup	0			hiddn in grass/vine; bulky, deep, narrow; lined w/grapevine
Warbler, Canada		Thick undergrowth in moist deciduous or mixed forest; cedar swamp, Red Maple (SE)			cup	0	0.5	5	on sphagnum hummocks, amng roots of stumps; bulky
Warbler, Chestnut-sided		Brushy, open second-growth, edges	shrub		cup	1	3	3	usu loosely constructed
Warbler, Golden-winged		Damp brushy fields, powerline cuts	ground		cup	0		4	hiddn in grass/against tree; lined w/grapevine; outer unkempt
Warbler, Nashville		Open Scrub Oak woodlands (SE), overgrown pastures, bogs (C, W)	ground		cup	0		3	well hiddn
Warbler, Pine		Variety of pine forest types	conif		cup	25	40		oft far out on limb, concealed from below by leaves; compact
Warbler, Prairie		Brushy fields, powerline cuts, edges	shrub	tree	cup	1	10	3	in upright fork/on limb/against trunk; compact
Warbler, Yellow		Margins of freshwater marsh, other wet brushy areas, farmland	shrub	tree	cup	1	14	2.5	usu compact, neat, strong, of weed stalks
Warbler, Yellow-rumped		Mature White Pines (SE), coniferous forest (C, W)	conif		cup	4	50	3	usu on horiz branch; some lined w/feathers that screen eggs
Waterthrush, Louisiana		Rocky streams in deciduous or mixed forest	ground	bank	cup	0	2	3.5	hiddn amng tree roots, ovrhang of bank, a few ft frm watr; walkway from nst to watr
Waterthrush, Northern		Wooded swamps, bogs, backwaters	ground	bank	cup	0	2		hiddn amng tree roots, ovrhang of bank, close to water
Waxwing, Cedar	6/10 - 8/15	Second-growth forest, parks, orchards, gardens, and margins of waterways	decid	conif	cup	6	50	5.5	variable in position
Whip-poor-will	5/25 - 7/15	Secondary forest, copses, pine barrens, scrub oak, edge	ground		no nest	0			on well-drained ground nr edge of woods
Woodcock, American	4/15 - 7/15	Forest edges	ground		scrape	0			w/in 300' display area
Woodpecker, Downy	5/1 - 7/25	Forests, copses, suburbs	snag		cavity	3	50	1.5	perfect circle; new hole yearly; entrance oft camouflaged
Woodpecker, Hairy	4/25 - 7/20	•	decid	snag	cavity	4	60	2.5	usu annual
Woodpecker, Pileated (NON-MIG	4/25 - 7/20	Matured forest, especially bottomland	snag	Ū	cavity	45	45	3.5	holes oft face E or S, oft on bark-free surface
Woodpecker, Red-bellied		Older-growth forest and woodlots	snag		cavity	0	40	2	usu decid; oft >1 hole/tree; may be perennial
Wood-Peewee, Eastern		Mature forest	decid		cup	15	35	2.5	on horiz limb far from trunk
Wren, Carolina		Wet woods, stream edges with dense thickets, tangles, brush piles, etc.	decid	snag	cavity	0	10	*	nat'l hole/amid roots/cntr of brushpile
Wren, House		Open forests, wood edges, farms, orchards, suburbs, parks, gardens	decid	snag	cavity	0	20		usu in nat'l hole, occ in nests of othr birds
Wren, Marsh		Cattail and other tall marshes, including saltmarsh edges	reeds	-	spherical	1	9	1	att/chd to reeds, bi\uilt in layrs w/entr usu nr top (facing S or W)
Wren, Winter		Cool, moist, coniferous or mixed woods, swamps, bogs, streams, brooks	snag		cavity	0	6	•	usu in nat'l hole/undr stmp/amid roots; of moss on base of twgs
Yellowthroat, Common		Brushy areas, thickets, powerline cuts, preferably wet	shrub		cup	0	3	3	bulky, loosely made
renominiout, common	0/10/10		Jinub		Jup	0	5	0	