

The Birds of Bill's Woods - A survey of species, Spring 2020

- David S. Liebl, August 2020

This report describes the results of daily observations of bird species found in a 9.5 hectare (24 acre) woodlot on the University of Wisconsin-Madison campus known as Bill's Woods. The goal of the survey was to identify the species and track the occurrence of migratory, breeding and other birds during the spring season of 2020.

Location

Bill's Woods, a part of the UW-Madison Lakeshore Nature Preserve, is located at Lat. 43.0854°, Long. -89.4306° and bounded by Picnic Point, University Bay Drive, Lake Mendota Drive, Eagle Heights Community Gardens and the BioCore Prairie. The landscape is a glacial moraine rising 20 meters (65 feet) above the adjacent Lake Mendota and The Class of 1918 Marsh. Field and prairie border the woods on the north side, where the UW-Physical Plant material storage yard is located. Figure 1 shows the survey boundary (yellow), foot and bicycle paths (white) and service roads (gray).



Fig. 1 UW-Lakeshore Nature Preserve Bill's Woods

The eastern third of Bill's Woods is a mature forest of oak, cherry, maple, elm, hackberry and fir. The western two-thirds is old-field succession dominated by green ash, box elder, poplar, buckthorn and honeysuckle. The under-story of the woods is primarily dense shrubs with a few openings, including roads and trails. Removal of invasive species and restoration of native herbaceous species was begun in 1999. During 2019-2020 invasive shrub removal was substantial in the west woods, altering the character of the under-story habitat. More detailed information about Bill's Woods is available <https://lakeshorepreserve.wisc.edu/>.

Due to its large population of migratory and breeding birds, the UW-Lakeshore Nature Preserve (including Bill's Woods) was named an Important Wisconsin Bird Area in 2007 by the National Audubon Society and the Wisconsin Bird Conservation Initiative (<http://www.wisconsinbirds.org/iba/>). Visitors entering Bill's Woods are provided with checklists and encouraged to record and report their observations (figure 2).



Fig. 2 Entry to Bill's Woods

Methods

The methods used for this report replicate those of the 2019 survey of Bill's Woods, see: <https://uwmadison.box.com/s/60efil80vn6sku1235cq4lm0i5tbupj1> .

Daily observations were made by the author from March 2 thru July 23, 2020. Typically, a distance of 1.2 kilometer (0.75 mile) was walked along the perimeter of the woods and the interior paths and roads. On some days conditions such as ice on the ground or recent heavy rainfall reduced this distance to 0.8 kilometer (0.5 mile).

The duration of the daily observations averaged 85 minutes (range 20 to 160 minutes). Factors that determined the length of the observation period included: weather conditions, numbers of individual birds observed, and effort to observe cryptic species or specific behaviors to confirm breeding activity.

Observation and identification of birds was by: naked eye, through 8X or 10X42 binoculars, using photos taken at the time of observation, by ear or by audio recording taken at the time of observation. Wisconsin Society of Ornithology-Wisconsin Breeding Bird Atlas II criteria were used to confirm breeding activity (<https://wsobirds.org/images/atlas/Breedingcodes.pdf>).

Over the course of the survey, a total of 6,388 observations were made of birds comprising 109 species. All observations were uploaded to the Cornell Lab of Ornithology *eBird* database (<https://ebird.org/home>), and are available on-line by viewing the Bill's Woods *eBird* hotspot.

The following tables and figures represent the species of birds that were observed by the author as being in Bill's Woods during Spring 2020 (birds reported by other observer, or that were observed in adjacent habitats (i.e. lake, wetlands, prairie, garden field) are not reported below). Species are grouped into three categories: Migratory Species (35) en-route to or from other habitats such as over-wintering or breeding areas (figure 3); Breeding Species (32) with confirmed breeding activities in Bill's Woods (figures 4 & 5); Incidental Species (42) that are known to inhabit Dane County but were not confirmed as breeding in Bills' Woods in 2020 (figure 6).

Migratory Species (n=35)

Common Name

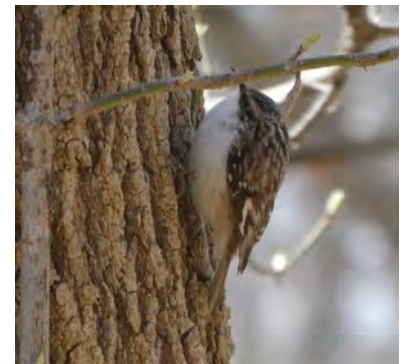
American Tree Sparrow
 Bay-breasted Warbler
 Black-and-white Warbler
 Black-throated Green Warbler
 Blackburnian Warbler
 Blackpoll Warbler
 Blue-winged Warbler
 Brown Creeper
 Canada Warbler
 Cape May Warbler
 Chestnut-sided Warbler
 Dark-eyed Junco
 Fox Sparrow
 Golden-crowned Kinglet
 Golden-winged Warbler
 Golden-winged X Blue-winged Warbler
 Hermit Thrush
 Least Flycatcher
 Lincoln's Sparrow
 Magnolia Warbler
 Nashville Warbler
 Northern Parula
 Orange-crowned Warbler
 Palm Warbler
 Pine Warbler
 Purple Finch
 Ruby-crowned Kinglet
 Swainson's Thrush
 Tennessee Warbler
 Veery
 White-crowned Sparrow
 White-throated Sparrow
 Wilson's Warbler
 Winter Wren
 Yellow-rumped Warbler

Scientific Name

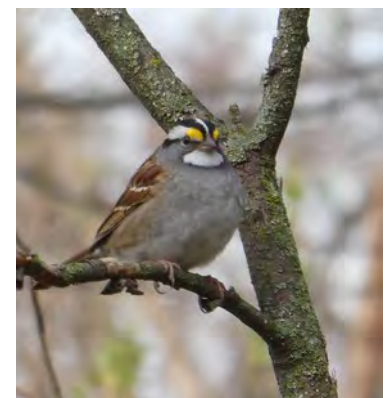
Spizelloides arborea
Setophaga castanea
Mniotilta varia
Setophaga virens
Setophaga fusca
Setophaga striata
Vermivora cyanoptera
Certhia americana
Cardellina canadensis
Setophaga tigrina
Setophaga pensylvanica
Junco hyemalis
Passerella iliaca
Regulus satrapa
Vermivora chrysoptera
 (hybrid)
Catharus guttatus
Empidonax minimus
Melospiza lincolnii
Setophaga magnolia
Oreothlypis ruficapilla
Setophaga americana
Leiothlypis celata
Setophaga palmarum
Setophaga pinus
Haemorhous purpureus
Regulus calendula
Catharus ustulatus
Oreothlypis peregrina
Catharus fuscescens
Zonotrichia leucophrys
Zonotrichia albicollis
Cardellina pusilla
Troglodytes hiemalis
Setophaga coronat



American Tree Sparrow



Brown Creeper



White-throated Sparrow

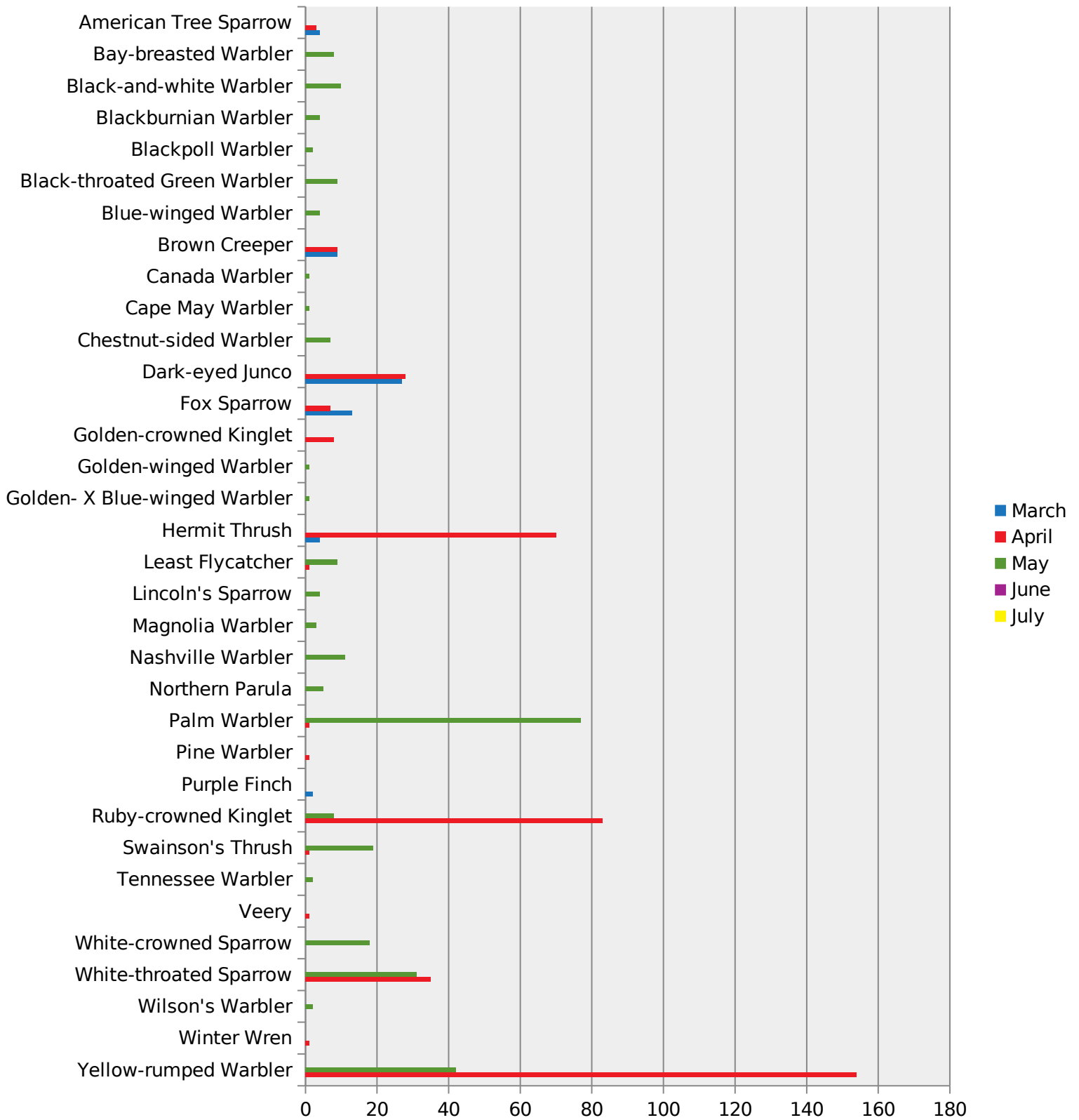


Fig. 3 Monthly observations of migratory species.

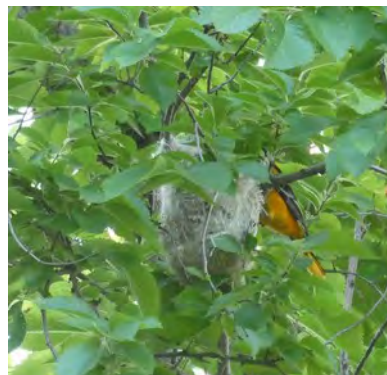
Breeding Species (n=32)

Common Name	Scientific Name	Breeding Code
American Black Duck	<i>Anas rubripes</i>	NE Nest with Eggs
American Crow	<i>Corvus brachyrhynchos</i>	FL Recently Fledged Young
American Goldfinch	<i>Spinus tristis</i>	ON Occupied Nest
American Redstart	<i>Setophaga ruticilla</i>	S7 Singing Bird Present 7+ days
American Robin	<i>Turdus migratorius</i>	NY Nest with Young
Baltimore Oriole	<i>Icterus galbula</i>	NY Nest with Young
Barn Swallow	<i>Hirundo rustica</i>	FY Feeding Young
Black-capped Chickadee	<i>Poecile atricapillus</i>	FL Recently Fledged Young
Blue Jay	<i>Cyanocitta cristata</i>	CF Carrying Food
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	CF Carrying Food
Brown-headed Cowbird	<i>Molothrus ater</i>	FL Recently Fledged Young
Cedar Waxwing	<i>Bombycilla cedrorum</i>	ON Occupied Nest
Common Grackle	<i>Quiscalus quiscula</i>	FY Feeding Young
Downy Woodpecker	<i>Dryobates pubescens</i>	FL Recently Fledged Young
Eastern Bluebird	<i>Sialia sialis</i>	NY Nest with Young
Eastern Wood-Pewee	<i>Contopus virens</i>	NY Nest with Young
Gray Catbird	<i>Dumetella carolinensis</i>	NB Nest Building
Hairy Woodpecker	<i>Dryobates villosus</i>	ON Occupied Nest
House Finch	<i>Haemorhous mexicanus</i>	CN Carrying Nesting Material
House Wren	<i>Troglodytes aedon</i>	NY Nest with Young
Indigo Bunting	<i>Passerina cyanea</i>	CF Carrying Food
Mourning Dove	<i>Zenaida macroura</i>	NY Nest with Young
Northern Cardinal	<i>Cardinalis cardinalis</i>	NY Nest with Young
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	NY Nest with Young
Red-eyed Vireo	<i>Vireo olivaceus</i>	CF Carrying Food
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	FY Feeding Young
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	ON Occupied Nest
Song Sparrow	<i>Melospiza melodia</i>	FY Feeding Young
Tree Swallow	<i>Tachycineta bicolor</i>	ON Occupied Nest
Wild Turkey	<i>Meleagris gallopavo</i>	FL Recently Fledged Young
Wood Thrush	<i>Hylocichla mustelina</i>	S7 Singing Bird Present 7+ days
Yellow Warbler	<i>Setophaga petechia</i>	S7 Singing Bird Present 7+ days

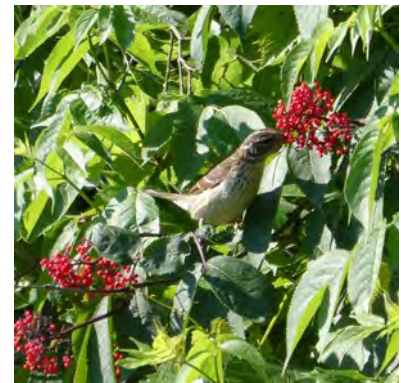
*Carrying Food – Indicates an adult carrying food to hatched or recently fledged young.



Indigo Bunting



Baltimore Oriole, nest



Rose-breasted Grosbeak

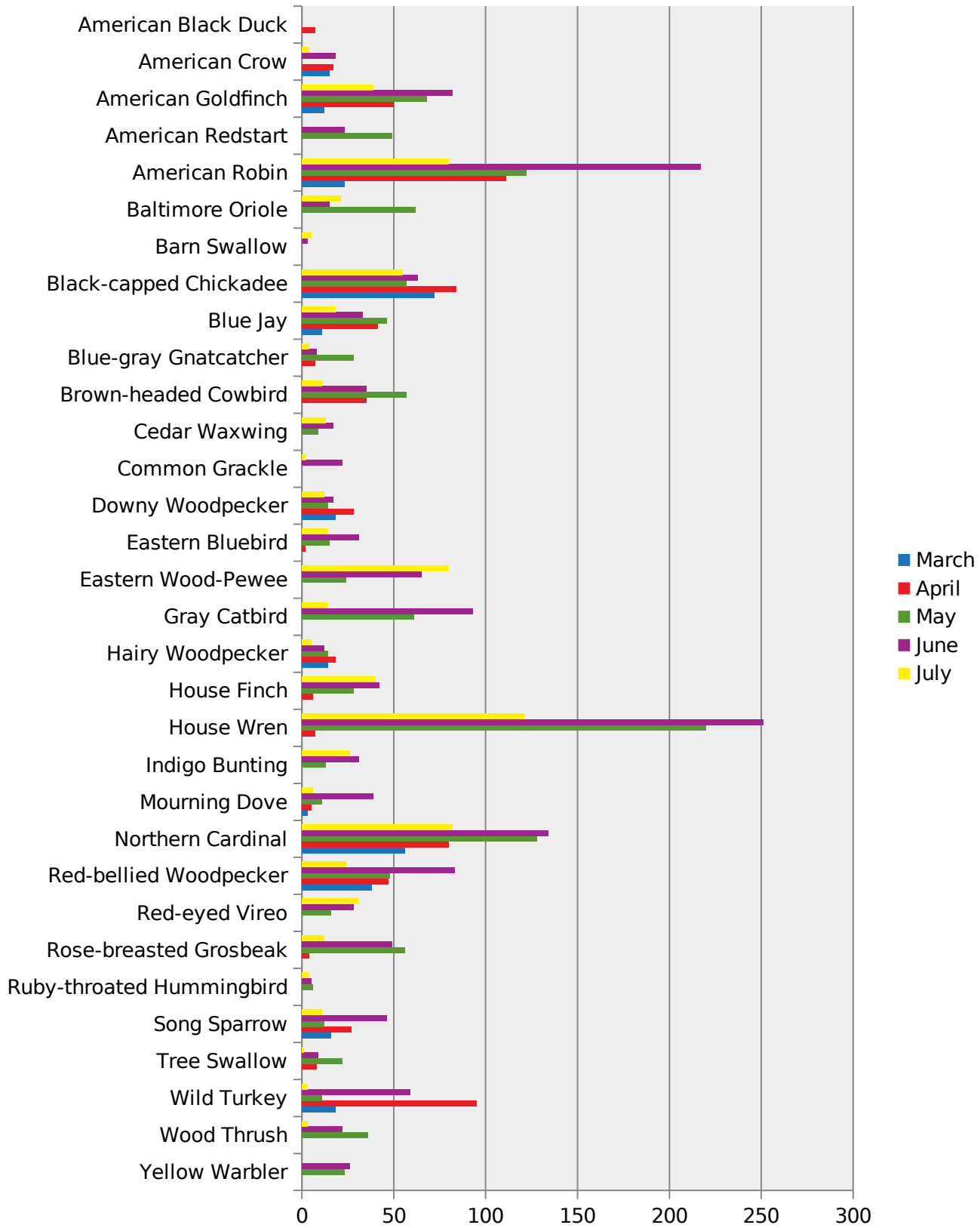


Fig. 4 Monthly observations of breeding species.



Fig.5 Location of seventeen observed occupied nests, Spring 2020

Key to species in figure 5.

- 1- American Black Duck
- 2- American Goldfinch
- 3- American Robin
- 4- Baltimore Oriole
- 5 - Cedar Waxwing
- 6- Eastern Bluebird
- 7- Eastern Wood-Pewee
- 8- Hairy Woodpecker
- 9- House Wren
- 10- Mourning Dove
- 11- Northern Cardinal
- 12- Red-bellied Woodpecker
- 13- Ruby-throated Hummingbird
- 14- Tree Swallow



American Black Duck



American Black Duck - Nest



Eastern Wood-Pewee



Eastern Wood-Pewee, Nest

Incidental Species (n=42)

Common Name

American White Pelican
Bald Eagle
Barred Owl
Broad-winged Hawk
Canada Goose
Chipping Sparrow
Common Yellowthroat
Cooper's Hawk
Double-crested Comorant
Eastern Kingbird
Eastern Phoebe
Eastern Towhee
European Starling
Field Sparrow
Great Blue Heron
Great Crested Flycatcher
Great Horned Owl
House Sparrow
Killdeer
Mallard
Northern Flicker
Northern Rough-winged Swallow
Olive-sided Flycatcher
Orchard Oriole
Osprey
Ovenbird
Pileated Woodpecker
Purple Martin
Red-tailed Hawk
Red-winged Blackbird
Ring-billed Gull
Sandhill Crane
Scarlet Tanager
Tufted Titmouse
Turkey Vulture
Warbling Vireo
White-breasted Nuthatch
Willow Flycatcher
Wood Duck
Yellow-bellied Sapsucker
Yellow-billed Cuckoo
Yellow-throated Vireo

Scientific Name

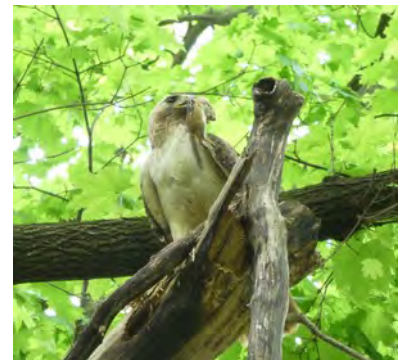
Pelecanus erythrorhynchos
Haliaeetus leucocephalus
Strix varia
Buteo platypterus
Branta canadensis
Spizella passerina
Geothlypis trichas
Accipiter cooperii
Phalacrocorax auritus
Tyrannus tyrannus
Sayornis phoebe
Pipilo erythrophthalmus
Phalacrocorax auritus
Spizella pusilla
Ardea herodias
Myiarchus crinitus
Bubo virginianus
Passer domesticus
Charadrius vociferus
Anas platyrhynchos
Colaptes auratus
Stelgidopteryx serripennis
Contopus cooperi
Icterus spurius
Pandion haliaetus
Seiurus aurocapilla
Dryocopus pileatus
Progne subis
Buteo jamaicensis
Agelaius phoeniceus
Larus delawarensis
Antigone canadensis
Piranga olivacea
Baeolophus bicolor
Cathartes aura
Vireo gilvus
Sitta carolinensis
Empidonax traillii
Aix sponsa
Sphyrapicus varius
Coccyzus americanus
Vireo flavifrons



Great Blue Heron



Great Horned Owl,
with American Crows



Red-tailed Hawk

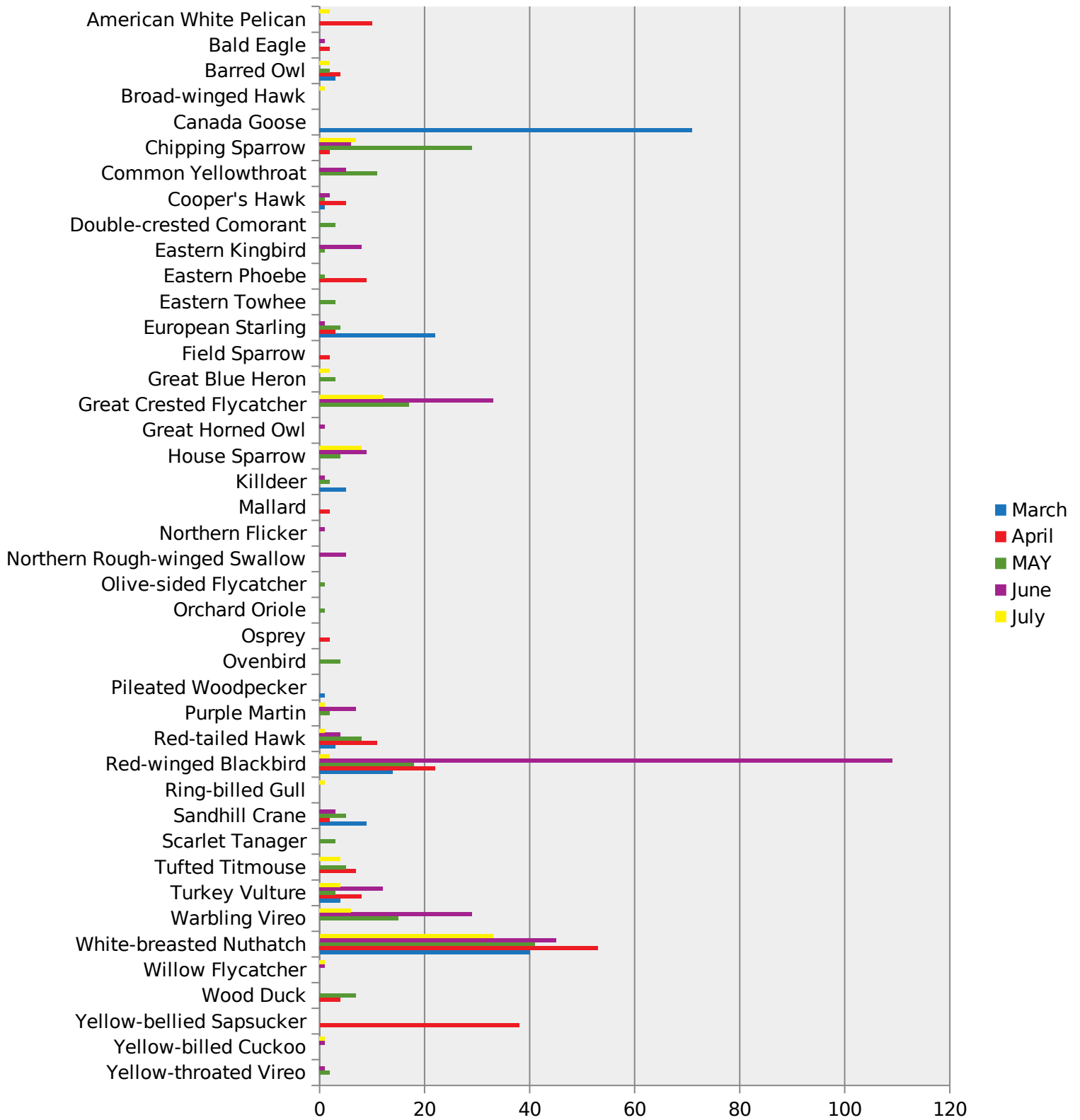


Fig.6 Monthly observation of incidental species.

Comparison of the 2019 and 2020 surveys

While it may be tempting to compare the results of the 2019 and 2020 surveys, for example to identify trends in species abundance, migratory behavior or other factors, the limited daily observational time, lack of same-day replicate observations and lack of control for duplicate observation suggests that the data from both years be combined into a qualitative snapshot of spring bird activity in Bill's Woods.

Likewise, generalizing these data to the entirety of the UW-Lakeshore Nature is not appropriate due to the differences in habitat across the Preserve. During the first six months of 2020, 176 observers reported 200 species of birds in the Lakeshore Nature Preserve. The Cornell Lab of Ornithology's eBird database maintains a record of those observations under the following [eBird Hotspots](#): Lakeshore Nature Preserve-General, -Frautschi Point, -Biocore Prairie, -Picnic Point, -Bill's Woods, -Class of 1918 Marsh, -Willow Creek Woods/ Willow Beach, -University Bay, -Lakeshore Path, -Muir Woods.

Threats to the Birds of Bill's Woods

Bill's Woods continues to host a large number and variety of resident and migratory species of birds. While ecological restoration efforts by the UW-Lakeshore Nature Preserve staff and volunteers promises to improve bird habitat, as noted in the 2019 report several factors threaten to significantly degrade it:

Human Disturbance – While occasional foot traffic through the woods does not seem to disrupt bird activity, there were abundant examples seen of disruptions that likely affect the viability of the woods as breeding habitat:

- Trail running, bicycling, skateboarding;
- Dogs, both on-leash and off leash (e.g. seen pursuing Wild Turkey);
- Frequent heavy truck and maintenance vehicle traffic on the interior roads, and activity in the Physical Plant material storage yard.

Nest Predation – The population of Eastern Chipmunks (*Tamias striatus*) during the spring of 2020 remained high. These rodents are known to predate bird eggs and young, and were seen actively searching for food through the branches of shrubs and high into trees throughout the woods.

Nest Parasitism – The adjoining fields of the community gardens and Biocore Prairie support an active population of Brown-headed Cowbirds and House Sparrow. Cowbird parasitism of songbird species was observed, and house sparrow competed for nest location with Purple Martin and Eastern Bluebird.

Acknowledgments

The UW-Madison Lakeshore Nature Preserve supported this work by providing a research permit that allowing access to off-trail areas of the woods.

The Cornell University Lab of Ornithology *eBird* and *Birds of the World* were used during the survey and in the creation of this report.