

## The Birds of Bill's Woods - A survey of species, Spring 2019

-David S. Liebl

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 breeding, migratory and other birds during the spring season of 2019.

### 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 1918 Marsh. Field and prairie border the woods on the north side, where the 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, while 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 and is ongoing. 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 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/overview.htm>). 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

Daily observations were made by the author from March 2 thru July 5, 2019. 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 80 minutes (range 30 to 165 minutes). Factors that determined the length of the observation period included: weather conditions, numbers of individual birds observed, and difficulty in observing cryptic species or specific behaviors to confirm breeding activity.

Over the three month survey, a total of 1,940 birds were observed, comprising 119 species. All observations were uploaded to the Cornell Lab of Ornithology eBird database (<https://ebird.org/home>), which also provided the monthly species summary statistics. When breeding activity was observed, observations were contributed to the Wisconsin Society of Ornithology-Wisconsin Breeding Bird Atlas II (WBBA) (<https://wsobirds.org/what-we-do/atlas>).

Observations of birds were made by: naked eye, through 8X42 binoculars, using photos taken at the time of observation, by ear or by audio recording taken at the time of observation. Confirmation of species identification based on description, photo or audio recording was by eBird and WBBA data reviewers. WBBA criteria were used to confirm breeding activity (<https://wsobirds.org/images/atlas/Breedingcodes.pdf>).

The following tables and figures represent the 102 species of birds that were observed by the author as being in Bill's Woods during Spring 2019 (birds that were observed in adjacent habitats, i.e. wetlands, prairie, field, woodland or fly-over are not reported below). Species are grouped into three categories: Migratory Species (40) en-route to or from other habitats such as over-wintering or breeding areas (figure 3); Breeding Species (21) with confirmed breeding activities in Bill's Woods (figures 4&5); Other Species (41) that are spring residents in the area but were not confirmed as breeding in Bills' Woods (figure 6).

## Migratory Species

### Common Name

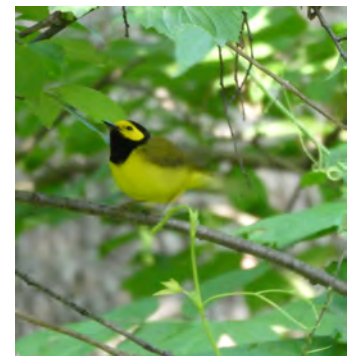
American Tree Sparrow  
 Bay-breasted Warbler  
 Black-and-white Warbler  
 Black-throated Green Warbler  
 Blackburnian Warbler  
 Blackpoll Warbler  
 Blue-headed Vireo  
 Blue-winged Warbler  
 Brown Creeper  
 Canada Warbler  
 Cape May Warbler  
 Chestnut-sided Warbler  
 Dark-eyed Junco  
 Fox Sparrow  
 Golden-crowned Kinglet  
 Golden-winged Warbler  
 Gray-cheeked Thrush  
 Hermit Thrush  
 Hooded Warbler  
 Least Flycatcher  
 Lincoln's Sparrow  
 Magnolia Warbler  
 Mourning Dove  
 Mourning Warbler  
 Nashville Warbler  
 Northern Parula  
 Northern Waterthrush  
 Palm Warbler  
 Pine Warbler  
 Red-breasted Nuthatch  
 Ruby-crowned Kinglet  
 Ruby-throated Hummingbird  
 Sharp-shinned Hawk  
 Swainson's Thrush  
 Tennessee Warbler  
 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*  
*Vireo solitarius*  
*Vermivora cyanoptera*  
*Certhia americana*  
*Cardellina canadensis*  
*Setophaga tigrina*  
*Setophaga pensylvanica*  
*Junco hyemalis*  
*Passerella iliaca*  
*Regulus satrapa*  
*Vermivora chrysoptera*  
*Catharus minimus*  
*Catharus guttatus*  
*Setophaga citrina*  
*Empidonax minimus*  
*Melospiza lincolnii*  
*Setophaga magnolia*  
*Zenaidura macroura*  
*Geothlypis philadelphia*  
*Oreothlypis ruficapilla*  
*Setophaga americana*  
*Parkesia noveboracensis*  
*Setophaga palmarum*  
*Setophaga pinus*  
*Sitta canadensis*  
*Regulus calendula*  
*Archilochus colubris*  
*Accipiter striatus*  
*Catharus ustulatus*  
*Oreothlypis peregrina*  
*Zonotrichia leucophrys*  
*Zonotrichia albicollis*  
*Cardellina pusilla*  
*Troglodytes hiemalis*  
*Setophaga coronata*



Golden Crowned Kinglet



Hooded Warbler

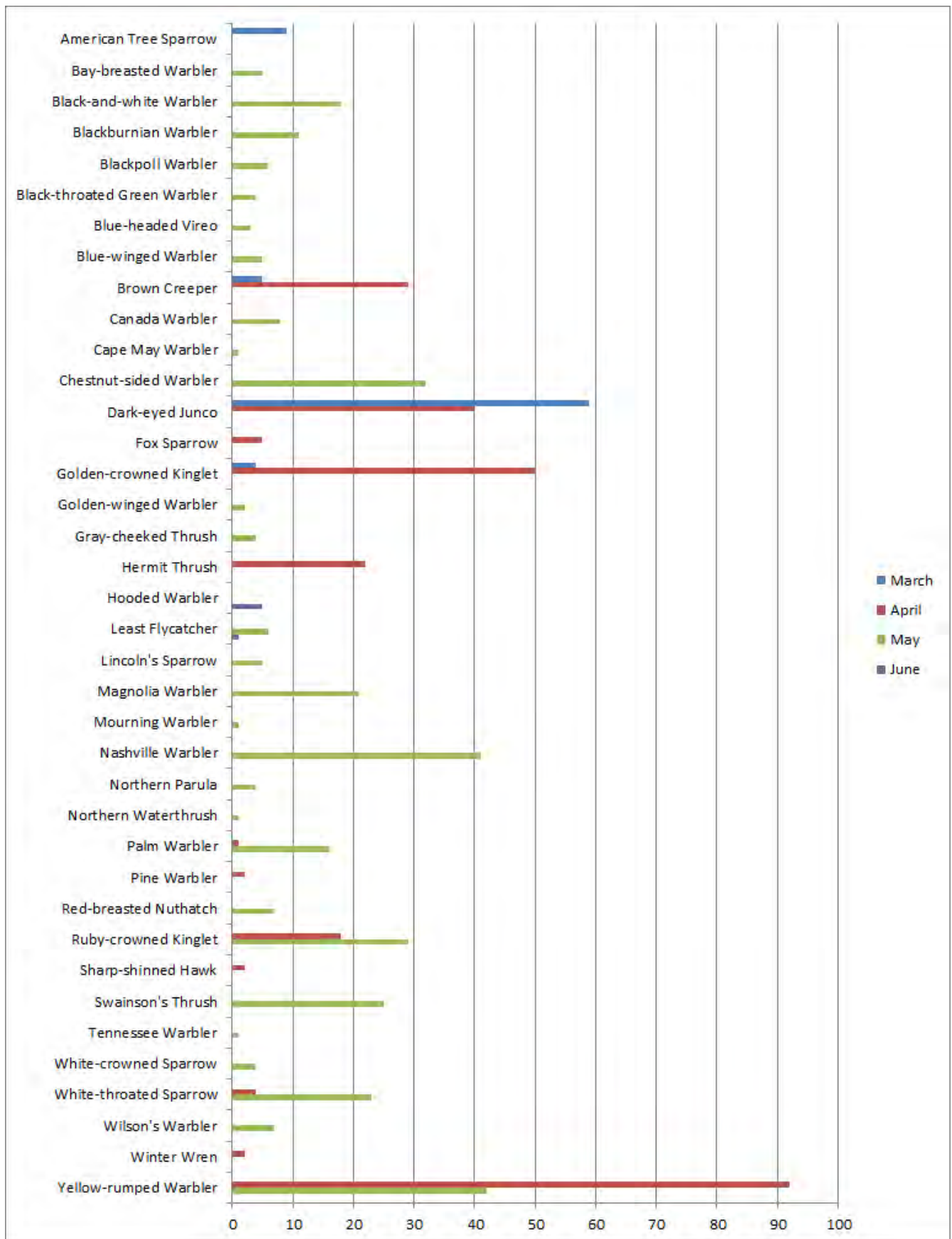


Fig. 3 Monthly occurrence of migratory species observations.

## Breeding Species

### Common Name

American Robin  
Baltimore Oriole  
Barred Owl  
Black-capped Chickadee  
Blue Jay  
Blue-gray Gnatcatcher  
Brown-headed Cowbird  
Downy Woodpecker  
Gray Catbird  
Hairy Woodpecker  
House Finch  
House Wren  
Indigo Bunting  
Northern Cardinal  
Red-bellied Woodpecker  
Rose-breasted Grosbeak  
Ruby-throated Hummingbird  
Song Sparrow  
White-breasted Nuthatch  
Wild Turkey  
Wood Thrush

### Breeding Code

Nest with Young  
Feeding Young  
Nest with Young  
Carrying Food\*  
Nest with Young  
Recently Fledged Young  
Nest with Eggs  
Recently Fledged Young  
Carrying Food  
Nest with Young  
Feeding Young  
Nest with Young  
Recently Fledged Young  
Feeding Young  
Nest with Young  
Feeding Young  
Nest with Young  
Carrying Food  
Nest with Young  
Recently Fledged Young  
Carrying Food

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



Ruby-throated Hummingbird



Red-bellied Woodpecker



Wild Turkey



Barred Owl



Wood Thrush

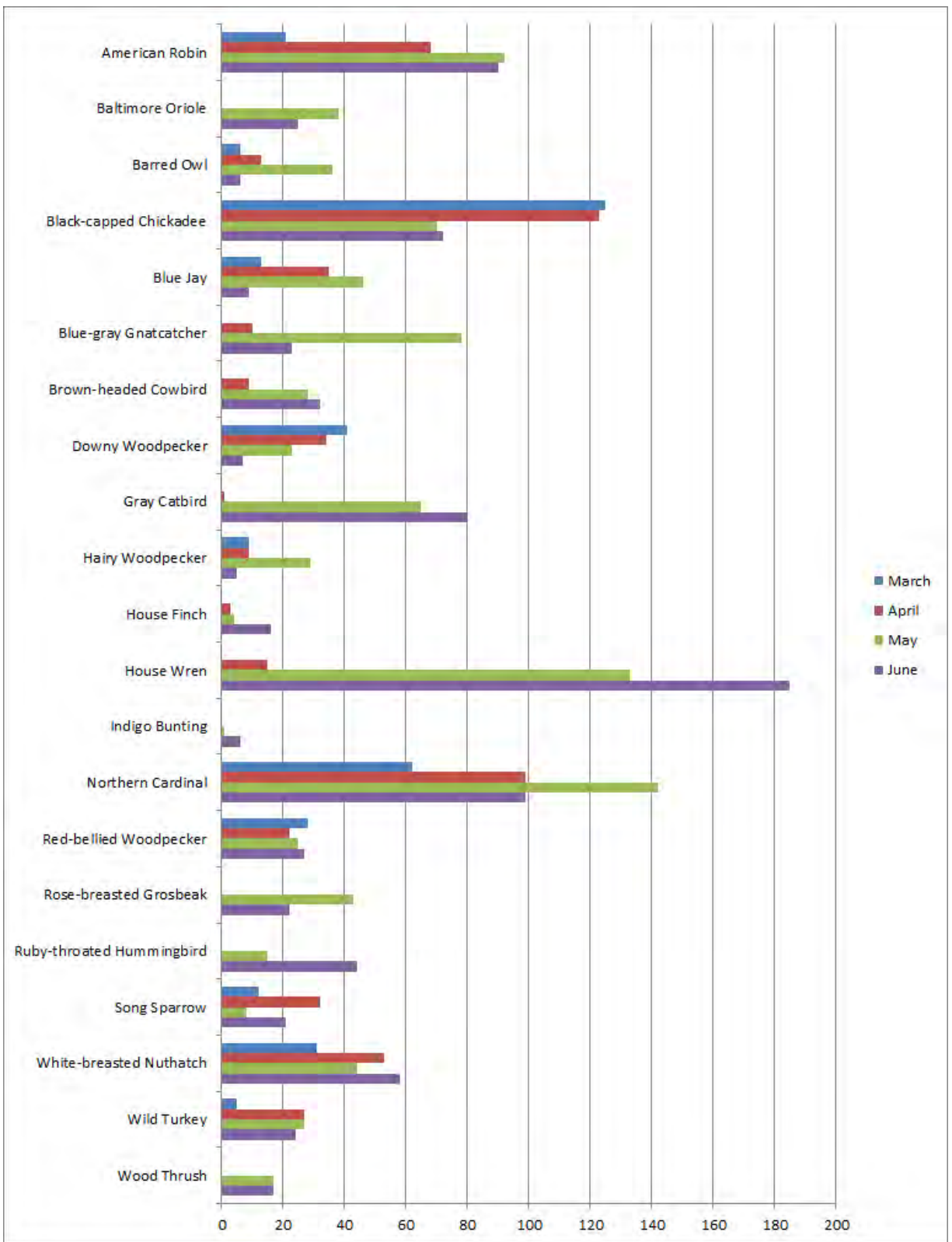


Fig. 4 Monthly occurrence of breeding species observations.



Fig.5 Location of occupied nests, Spring 2019

Key to nesting species in figure 5

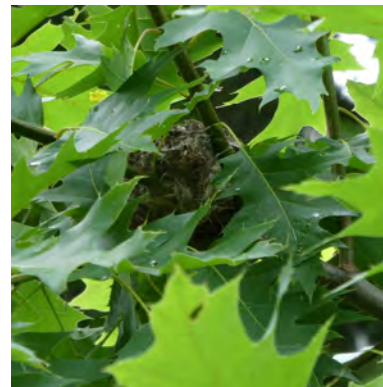
- 1 - Hairy Woodpecker
- 2 - White-breasted Nuthatch
- 3 - Red-bellied Woodpecker
- 4 - Ruby-throated Hummingbird
- 5 - Black-capped Chickadee
- 6 - American Robin
- 7 - Northern Cardinal
- 8 - Barred Owl
- 9 - Brown-headed Cowbird



Red-Bellied Woodpecker



White-breasted Nuthatch



Cowbird parasitized

## Other Species

### Common Name

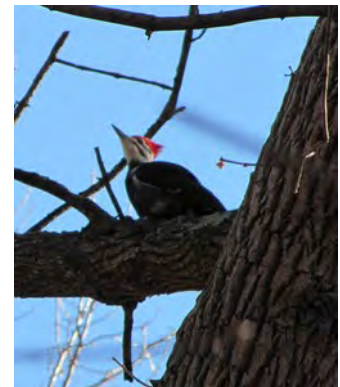
Alder Flycatcher  
American Crow  
American Goldfinch  
American Redstart  
Brown Thrasher  
Cedar Waxwing  
Chipping Sparrow  
Common Grackle  
Common Yellowthroat  
Cooper's Hawk  
Eastern Bluebird  
Eastern Kingbird  
Eastern Phoebe  
Eastern Towhee  
Eastern Wood-Pewee  
Great Crested Flycatcher  
House Sparrow  
Mourning Dove  
Northern Flicker  
Northern Rough-winged Swallow  
Osprey  
Ovenbird  
Pileated Woodpecker  
Pine Siskin  
Red-eyed Vireo  
Red-headed Woodpecker  
Red-tailed Hawk  
Red-winged Blackbird  
Scarlet Tanager  
Song Sparrow  
Swamp Sparrow  
Tree Swallow  
Tufted Titmouse  
Veery  
Warbling Vireo  
White-eyed Vireo  
Willow Flycatcher  
Wood Duck  
Yellow Warbler  
Yellow-bellied Sapsucker  
Yellow-throated Vireo

### Scientific Name

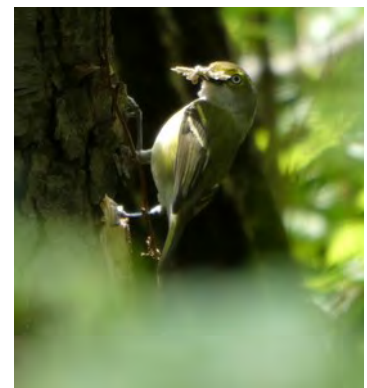
*Empidonax alnorum*  
*Corvus brachyrhynchos*  
*Spinus tristis*  
*Setophaga ruticilla*  
*Toxostoma rufum*  
*Bombycilla cedrorum*  
*Spizella passerina*  
*Quiscalus quiscula*  
*Geothlypis trichas*  
*Accipiter cooperii*  
*Sialia sialis*  
*Tyrannus tyrannus*  
*Sayornis phoebe*  
*Pipilo erythrophthalmus*  
*Contopus virens*  
*Myiarchus crinitus*  
*Passer domesticus*  
*Zenaida macroura*  
*Colaptes auratus*  
*Stelgidopteryx serripennis*  
*Pandion haliaetus*  
*Seiurus aurocapilla*  
*Dryocopus pileatus*  
*Spinus pinus*  
*Vireo olivaceus*  
*Melanerpes erythrocephalus*  
*Buteo jamaicensis*  
*Agelaius phoeniceus*  
*Piranga olivacea*  
*Melospiza melodia*  
*Melospiza georgiana*  
*Tachycineta bicolor*  
*Baeolophus bicolor*  
*Catharus fuscescens*  
*Vireo gilvus*  
*Vireo griseus*  
*Empidonax traillii*  
*Aix sponsa*  
*Setophaga petechia*  
*Sphyrapicus varius*  
*Vireo flavifrons*



Tree Swallow



Pileated Woodpecker



White-eyed Vireo



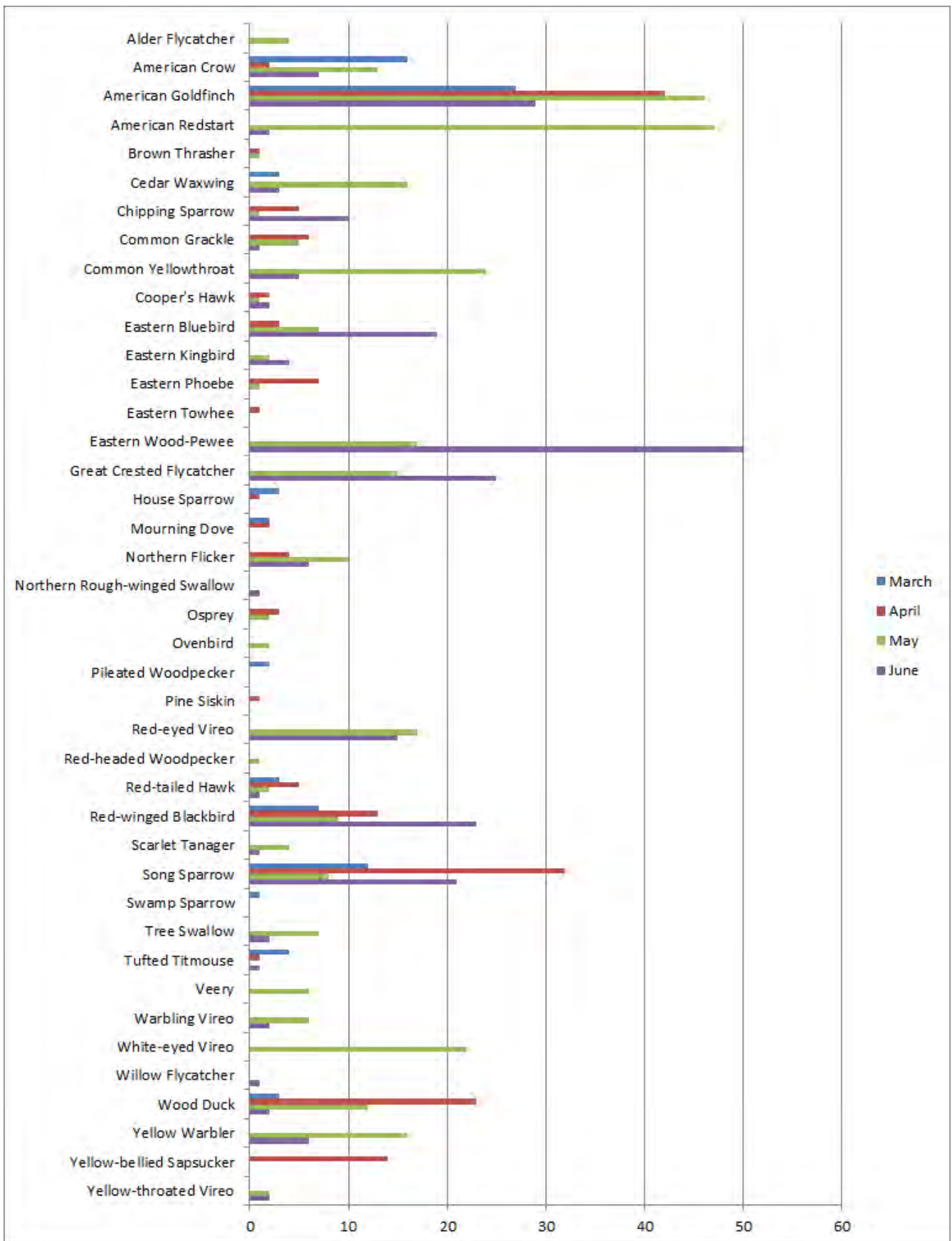


Fig.6 Monthly occurrence of other species observations.

## Discussion

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, 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,
- Dogs both on and off-leash,
- Frequent heavy truck and maintenance vehicle traffic on the interior roads.

Some disturbance was more direct, for example the American Robin chicks seen at right were lost due to removal of stacked firewood from the Physical Plant material storage yard.



Nest Predation – The population of Eastern Chipmunks (*Tamias striatus*) during the spring of 2019 was unusually dense. 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. Cowbird parasitism was observed as were numerous immature cowbirds indicating a substantial impact on host species.

Taken together, these factors support the observation that cavity nesting birds such as black-capped chickadee; downy, hairy and red-bellied woodpeckers; house wren and white-breasted nuthatch seem especially successful at breeding in Bill's Woods, as compared to other species.