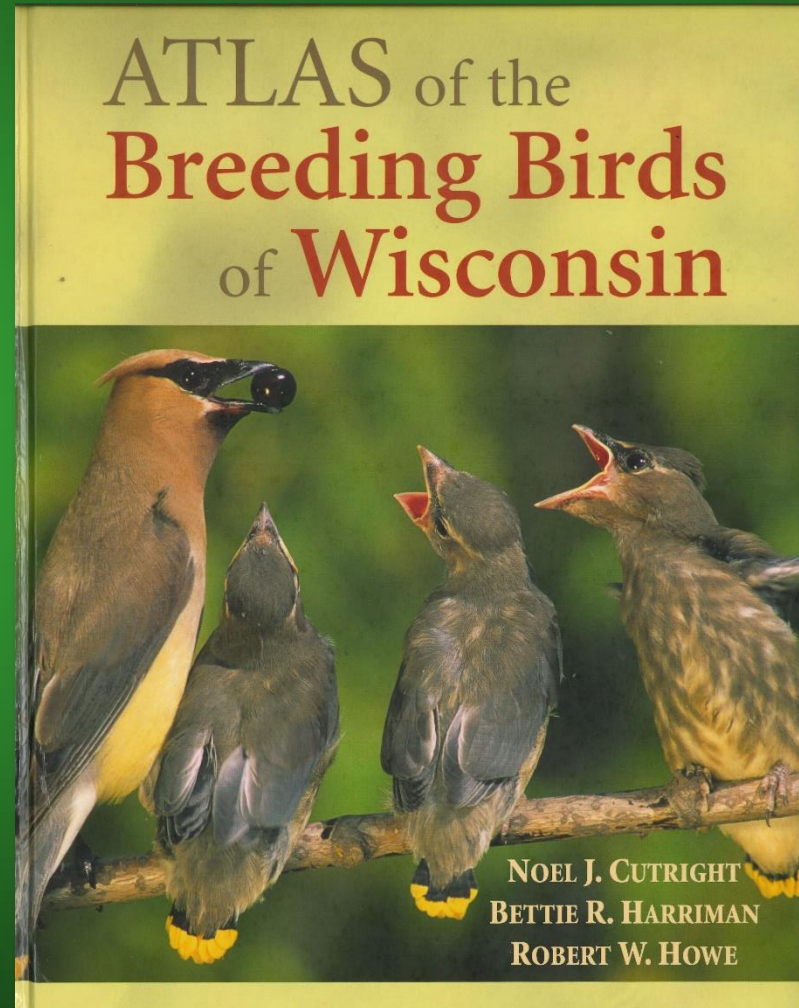


Wisconsin Breeding Bird Atlas II

Expected Products of Wisconsin
Breeding Bird Atlas II

Basic Outline of Products

- Book will be major product
- Book complemented by some version of online results
- Undecided whether all online results are within eBird or whether there is secondary online page



Raw Data Products

- All checklists in Atlas eBird will remain part of the global eBird Database (EBD)
- Atlas Point Count data archived with Midwest Avian Data Center (MWADC)
- Both are freely available to researchers

Cedar Waxwing	4	NA	United States	US	Wisconsin	US-WI	Walv
Gray Catbird	2	NA	United States	US	Wisconsin	US-WI	Walv
White-breasted Nuthatch	1	NA	United States	US	Wisconsin	US-WI	Walv
Blue Jay	1	NA	United States	US	Wisconsin	US-WI	Walv
Green Heron	2	NA	United States	US	Wisconsin	US-WI	Walv
American Robin	3	NA	United States	US	Wisconsin	US-WI	Walv
Pied-billed Grebe	2	NA	United States	US	Wisconsin	US-WI	Walv
Bald Eagle	1	NA	United States	US	Wisconsin	US-WI	Walv
American Crow	2	NA	United States	US	Wisconsin	US-WI	Walv
Wood Duck	43	NA	United States	US	Wisconsin	US-WI	Walv
Short-billed Dowitcher	1	NA	United States	US	Wisconsin	US-WI	Walv
Swamp Sparrow	7	NA	United States	US	Wisconsin	US-WI	Walv
Northern Rough-winged Sw	50	NA	United States	US	Wisconsin	US-WI	Walv
Killdeer	9	NA	United States	US	Wisconsin	US-WI	Walv
Belted Kingfisher	1	NA	United States	US	Wisconsin	US-WI	Walv
Common Grackle	1	NA	United States	US	Wisconsin	US-WI	Walv
Willow Flycatcher	1	NA	United States	US	Wisconsin	US-WI	Walv
Wilson's Snipe	2	NA	United States	US	Wisconsin	US-WI	Walv
American Goldfinch	8	NA	United States	US	Wisconsin	US-WI	Walv
Peregrine Falcon	1	NA	United States	US	Wisconsin	US-WI	Walv
Mallard	16	NA	United States	US	Wisconsin	US-WI	Walv
Common Yellowthroat	8	NA	United States	US	Wisconsin	US-WI	Walv
Northern Cardinal	3	NA	United States	US	Wisconsin	US-WI	Walv
Blue-gray Gnatcatcher	2	NA	United States	US	Wisconsin	US-WI	Walv
Blue Jay	1	NA	United States	US	Wisconsin	US-WI	Walv
Red-eyed Vireo	2	NA	United States	US	Wisconsin	US-WI	Walv
Cedar Waxwing	3	NA	United States	US	Wisconsin	US-WI	Walv
Gray Catbird	1	NA	United States	US	Wisconsin	US-WI	Walv
House Wren	1	FL	United States	US	Wisconsin	US-WI	Walv
Song Sparrow	1	NA	United States	US	Wisconsin	US-WI	Walv
Indigo Bunting	2	NA	United States	US	Wisconsin	US-WI	Walv
Black-capped Chickadee	3	NA	United States	US	Wisconsin	US-WI	Walv
Eastern Towhee	2	NA	United States	US	Wisconsin	US-WI	Walv
American Goldfinch	2	NA	United States	US	Wisconsin	US-WI	Walv
Eastern Wood-Pewee	2	NA	United States	US	Wisconsin	US-WI	Walv

Standing on the shoulders of giants

- Excellent foundation from WBBA I
- Many excellent recent atlases from US States, Canada, UK



Book Chapters

Similarities to Atlas I:

- Intro
- Methods
- Effort
- Synthesis of Results
- Conservation Implications

Differences:

- Less info on habitat types and associations
- Changes between Atlas I and II
- Information and maps from Point Counts

Species Accounts

- Typically includes text and graphics
- Any species with at least a Possible code
- Limited number of authors

AMERICAN THREE-TOED WOODPECKER

Pic à dos rayé
Picoides dorsalis

- ▶ UNCOMMON RESIDENT BREEDER
- ▶ RANGE: STABLE?
- ▶ POPULATION: TREND UNKNOWN

The surprisingly quiet and inconspicuous American Three-toed Woodpecker breeds farther north than any other North American woodpecker. Once considered a single species with the Eurasian Three-toed Woodpecker, it was split from its Eurasian congener and became a separate species in 2003. It occurs from Alaska to Newfoundland and Labrador, primarily in the Taiga and Northern Forests, as well as in the Northwestern Forested Mountains.

DISTRIBUTION AND ABUNDANCE

A typical boreal species, the American Three-toed Woodpecker is closely associated with coniferous forests over 120 years old (Imbeau and Desrochers 2002). It also breeds in disturbed habitats with many dead or senescent trees, particularly in forests affected by insect outbreaks and windthrows (Leonard 2001). Burns are another habitat used by the species, especially stands relatively untouched by fire, which contain greater numbers of the small bark beetles that constitute this woodpecker's preferred prey (Nappi 2009). According to the breeding evidence map, the American Three-toed Woodpecker is essentially confined to the spruce-moss domain, where its probability of observation is also highest, unlike the Black-backed Woodpecker, which is found across most of the atlas area. The probability of observation drops off sharply in the balsam fir-white birch domain, falling to nearly zero farther south. Beyond the atlas area, this woodpecker breeds as far as the northern limit of the spruce-lichen domain.

The American Three-toed Woodpecker is a relatively uncommon species that vocalizes less often than the other members of its family, making it particularly difficult to detect. Consequently, it was found so rarely on point counts that a relative abundance map could not be generated for the species, which was not the case for the Black-backed Woodpecker. The American Three-toed Woodpecker is rare south of the St. Lawrence River, where it was reported in only 15 or so squares. The southernmost confirmed breeding record comes from Saint-Just-de-Bretenières, in the Chaudière-Appalaches region, where breeding was also confirmed several times in 2015 and 2016 (F. Chabot, pers. comm.).

STATUS

The probability of observation increased only slightly from the first atlas, even though atlasers were able to find the species in five times the number of squares (290 versus 60). This apparent contradiction is due to the fact that the calcu-



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DATA SUMMARY

	1994-1999	2010-2016
POSSIBLE BREEDING	43	191
PROBABLE BREEDING	7	31
CONFIRMED BREEDING	12	47
SQUARES WITH RECORDS	60	290
PROPORTION OF SQUARES VISITED	2.4%	7.2%

POINT COUNTS (NUMBER)	N/A	46
POINT COUNTS (ELEVATION IN METRES)	N/A	123,484

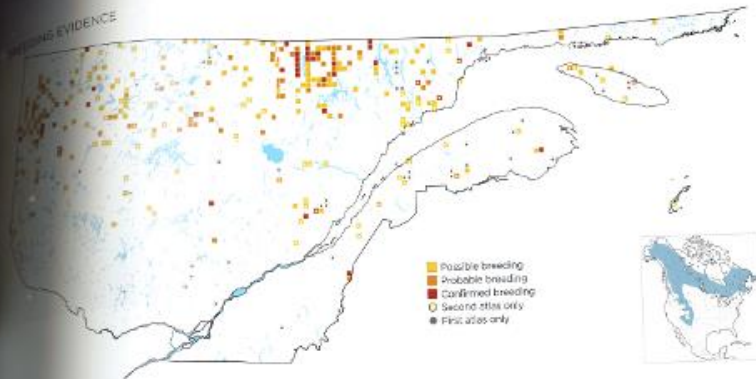
lation of this probability is not affected by the survey effort, which was much greater in the boreal region in this atlas. Unfortunately, the BBS data cannot be used to monitor populations in Québec, since most of the BBS routes in the province are south of the species' breeding range. Data for Canada and North America as a whole, although incomplete and fragmentary, suggest that the population increased between 1990 and 2014.

Some researchers consider the American Three-toed Woodpecker to be the bird species most negatively affected by commercial forestry in eastern Canada (Imbeau et al. 2002; Imbeau and Desrochers 2002). The analysis provided in Chapter 4 shows that net losses of mature forests in the study area since the first atlas have been greatest in the spruce-moss domain. The number of fall and winter records of Three-toed Woodpeckers in extreme southern Québec has also decreased somewhat since the 1990s (P. Blain, pers. comm.). This finding, although it cannot be linked directly to threats to forest integrity in the spruce-moss domain, raises concerns about the future of the species.

Samuel Desrochers

AMERICAN THREE-TOED WOODPECKER

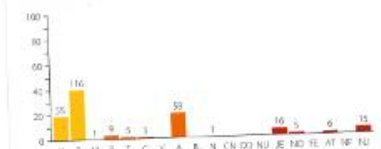
BREEDING EVIDENCE



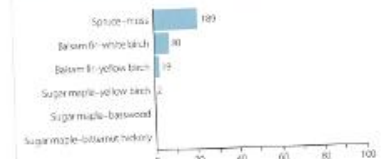
PROBABILITY OF OBSERVATION



BREEDING EVIDENCE (higher: breeding evidence: % of squares)



BIOCLIMATIC DOMAIN (% of squares visited with records)



The American Three-toed Woodpecker shows a preference for mature or old-growth coniferous forests.

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Species Accounts

WBBA I

Cutright et al. 2006

- Quad level
- Displays phenology
- For sale in the back of the room!

American Kestrel (*Falco sparverius*)

Neal Niemuth



Photographer Dennis Holmgren

Fledglings

The smallest and most brightly colored of North America's falcons, the American Kestrel is a common breeding bird across Wisconsin. Formerly referred to as the "Sparrow Hawk," American Kestrels feed primarily on large insects such as grasshoppers and beetles, although they will eat a wide variety of food including small birds, mammals (including bats), reptiles, and amphibians (Palmer 1988).

Populations of American Kestrels might have declined somewhat during the DDT era, but evidence is contradictory (Fuller et al. 1987). Environmental contaminants such as organochlorines and heavy metals can reduce the survival and reproductive success of American Kestrels, depending on dosage and timeframe of ingestion (Wiemeyer and Lincer 1987). However, American Kestrel populations did not decline as dramatically as populations of eagles, Osprey, and Peregrine Falcons. This is likely because American Kestrels eat prey that are lower on the food chain and occur primarily in upland areas. The potential for bioaccumulation is reduced relative to species that feed on larger or aquatic prey.

American Kestrels are common migrants in Wisconsin, and they also are fairly common winter residents in the southern half of the state. In northern Wisconsin winter records are uncommon (Robbins 1991). American Kestrels begin migrating north in early March and begin moving south in August, although some are present in the state throughout the year (Robbins 1991). During the Atlas, territorial/courtship behavior was observed as early as 22 March.

The American Kestrel is a widespread breeder in Wisconsin, with confirmed breeding in more than a third of the quads and possible or probable breeding in another quarter of the quads. American Kestrel typically lays 4 to 5 eggs, has a 28 to 30 d incubation period, and a 28 to 31 d fledging period (Smallwood and Bird 2002). The female does most of the incubation, but the male occasionally assists, more often on sunny days (Smallwood and Bird

2002). Normally only one brood per season is produced, but double-brooding has been reported as far north as Ontario (Smallwood and Bird 2002).

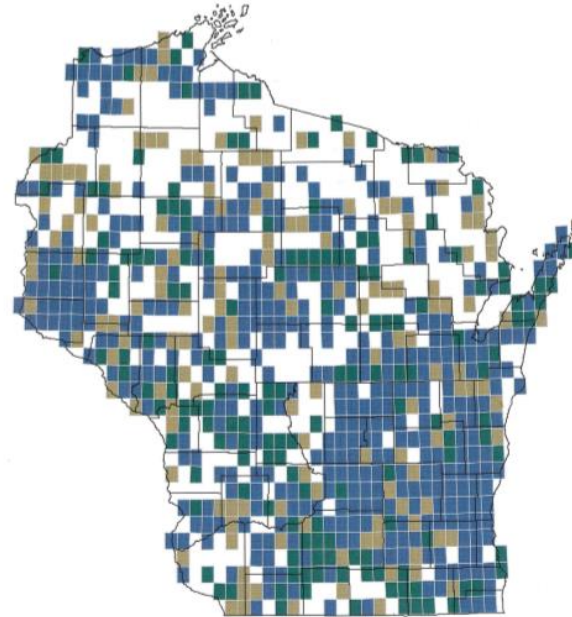
American Kestrels usually are associated with savannas and grasslands, but they can be found in almost any semi-open habitat where prey and nest cavities are available; during the Atlas, kestrels were found in 106 specific habitat types. Atlas data show higher numbers of confirmed breeding American Kestrels in the heavily agricultural and urban southeastern part of the state and few breeding American Kestrels in heavily forested areas such as Vilas, Oneida, Washburn, Bayfield, and Sawyer Counties. Observation of fledged young was the most common means of determining breeding status (228 observations) followed by feeding of young (143 observations). There were relatively few observations of nests with young or eggs, which would be expected given that American Kestrels nest in cavities. Kestrels often were seen in open agricultural uplands, particularly hayfields, pastures, and uncultivated fields, as well as shrubby uplands dominated by hardwoods, clearcuts, rural residential areas, and miscellaneous habitats such as highway interchanges.

American Kestrels will nest in cavities in live or dead trees, as well as in rock fissures, buildings, chimneys, and drainpipes (Palmer 1988). Sufficiently large cavities often are limiting, and American Kestrels will use readily nest boxes erected for their use (Niemuth 1990) as well as Wood Duck nest boxes. Many species of wildlife compete with American Kestrels for nest cavities, and European Starlings frequently evict kestrels from cavities (Wilmers 1987). Starling use can be reduced by decreasing cover above nest boxes and orienting nest box openings to maximize light entering the cavity (Curley et al. 1987).

Populations of American Kestrels in Wisconsin probably are secure, and BBS data for Wisconsin show a slight increase (0.5%) from 1966 to 2002 (Sauer et al. 2003). They are, of course, highly dependent on having foraging areas and nest cavities, but American Kestrels also are quite adaptable and will co-exist readily with humans, even capturing prey and living in urban areas. Local American Kestrel populations can be increased by erecting nest boxes (Niemuth 1990, Varland and Loughin 1993). Numerous "kestrel trails" have been developed nationally, including a successful one along Interstate 39 in central Wisconsin, where nest boxes are placed on the back of highway signs, and another in the vicinity of Goose Pond in Columbia Co.

The greatest limitation or threat to this species may be the elimination of large dead trees that supply cavities of sufficient size for nesting. Because of the kestrel's strong association with agricultural lands, particularly in southern Wisconsin, pesticide applications also are a concern for maintaining healthy populations.

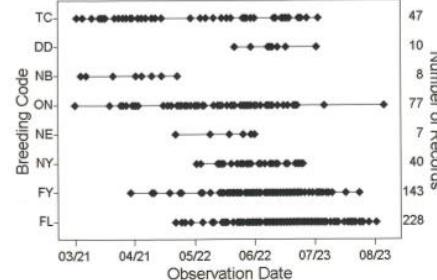
American Kestrel



Breeding Status	# of Quads	% of Total (1132)
Confirmed	397	35.07
Probable	165	14.58
Possible	149	13.16
Total	711	62.81

Habitat	# of Records
Forest Upland	42
Forest Lowland	7
Shrub Upland Hardwood	75
Shrub Upland Mixed	26
Shrub Upland Conifer	6
Shrub Lowland Hardwood	13
Shrub Lowland Mixed	7
Shrub Lowland Conifer	1
Open Upland Agriculture	295
Open Upland Native	15
Open Upland Uncropped	65
Open Lowland Agriculture	29
Open Lowland Native	12
Open Lowland Uncropped	15
Open Lowland Wetland	6
Urban	143
Total	757

Breeding Phenology



BBS Trend - Wisconsin



Canadian Atlases

Cadman et al. 2007 – 2nd Ontario

Red-breasted Nuthatch

Sittelle à poitrine rousse
Sitta canadensis



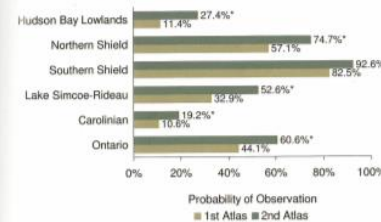
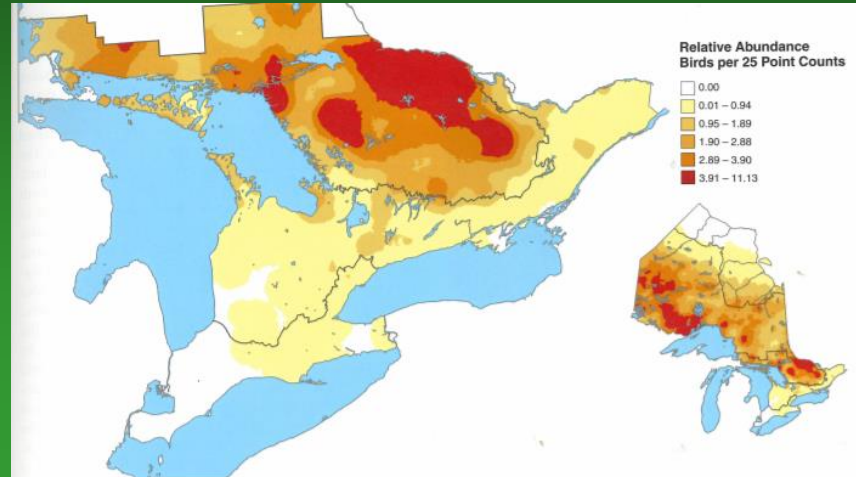
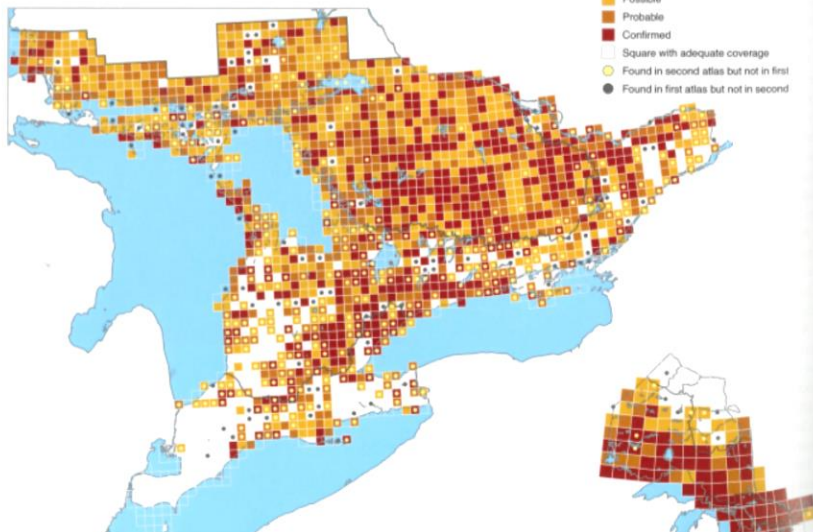
George K. Fitch

Like all nuthatches, the Red-breasted Nuthatch often forages for insects and spiders by moving head first down tree trunks and branches with acrobatic flare. It spends considerable time in the crowns and areas of dense growth on conifers, especially spruce and fir trees. It caches food items in fall and winter for later retrieval, which may be essential to the survival of birds that remain for the winter in the Boreal Forest. The

species undergoes irruptive migrations roughly biennially mirroring the seed-crop cycle in the Boreal Forest.

True to its specific name *canadensis*, the majority of the species' global range is in Canada, from Newfoundland to British Columbia and southern Yukon. This diminutive passerine also occurs across the most northern parts of the continental US, extending as far south as Mexico at high altitudes in the west, and in the east along the Appalachians into North Carolina (Ghalambor and Martin 1999).

Distribution and population status: As predicted by Mill (in Cadman et al. 1987) in the first atlas, the Red-breasted Nuthatch has expanded southward in the past 20 years, likely in response to habitat provided by maturing conifer plantations across southern Ontario. Largely absent in southern Ontario a century ago (Macoun and Macoun 1909), the species is only absent today in extreme southwestern Ontario where conifer plantations and woodlots are scarce in the intensively agricultural landscape, and in the extreme north, perhaps because there are few coniferous forests of adequate stature. The probability of observation of the Red-breasted Nuthatch increased significantly by 38% in the province as a whole. There were significant increases in all five regions, with the greatest increase occurring in the Hudson Bay Lowlands where the probability of observation more than doubled. As well as this increase in the far north, there was a significant 1.5 km southward shift of the core range of this species in southern Ontario since the first atlas, caused by large increases in the



Carolinian and Lake Simcoe-Rideau regions. BBS data suggest a small but significant increase in the species' Ontario population since 1968 (Downes et al. 2005) but with no significant changes since the first atlas. This discrepancy is difficult to explain but may be due to the particular habitat sampled by BBS roadside routes.

The primary reason for the species' expansion south of the Shield over the past half-century is likely the increase and maturation of conifer plantations in many areas, which create attractive breeding habitat for this and other species; the Yellow-rumped Warbler, Hermit Thrush, and Golden-crowned Kinglet have also seen significant increases in these regions. Even small clumps of mature spruce in an urban setting have enticed Red-breasted Nuthatches to nest nearby (Cheskey 1990). The reasons for the increases farther north are unclear.

Breeding biology: The Red-breasted Nuthatch begins nesting in March or early April. Excavation is started by the male but primarily completed by the female while the male aggressively defends the territory. Nests average 3-9 m high in a dead

deciduous tree and are never far from conifer trees (Peck and James 1987; Ghalambor and Martin 1999). Unique to cavity-nesting passerines in North America, the Red-breasted Nuthatch smears conifer resin around the cavity opening, apparently a tactic to deter potential nest predators (Ghalambor and Martin 1999).

More nasal than the White-breasted Nuthatch, the loud, high-pitched "junks" and incessant series of "aii aii aii aii" notes of the Red-breasted Nuthatch are easily detected. Most possible or probable evidence was of calling or territorial birds, and the species' presence is unlikely to have gone undetected in most squares, except possibly in some in the Lake Simcoe-Rideau and Carolinian regions, where its occurrence may be highly localized or ephemeral. Although confirmed breeding was recorded in 44 of 47 atlas administrative regions, breeding was confirmed in only 22% of the squares in which the species was found. Confirmation was usually in the form of fledged young; while nest holes may be concealed and difficult to spot in dense forest, family groups are quite vocal and relatively easy to locate.

Abundance: The Red-breasted Nuthatch is found in high-est abundance in the central and upper Ottawa River valley and the Algonquin Highlands in eastern Ontario, and northwest of Lake Superior to the Berens River and Sandy Lake. Densities are often over 3.9 birds/25 point counts in these areas. This likely reflects the prevalence in these areas of coniferous forest, its preferred habitat. In contrast, north and south of the Shield, less than 1 bird/25 point counts was observed. – Edward Cheskey

FIRECREST

Regulus ignicapilla

RTO CODE: FC



THE WINTER DISTRIBUTION is concentrated into southern Britain and associated with coastal or lowland inland locations.

Elsewhere, widely scattered records in Scotland, Ireland and northern England are virtually all in coastal areas. The winter distribution has more than doubled in extent since the 1981–84 *Winter Atlas*, involving a substantial shift inland and also northwards to the extremities of Scotland. Squares occupied only in November account for 12% of the 'winter' distribution and these include all records in the Northern Isles and most of those in Ireland. These are likely to be passage birds, involving mainly continental immigrants, as the autumn migration period continues until late November (Riddiford & Findley 1981). The greatest winter abundance was found in southern Britain, associated mainly with coastal areas between southwest Wales and East Anglia.

The breeding distribution is heavily concentrated within southeast and eastern England between Hampshire and Norfolk, with scattered records in Wales, southern and northern England. The breeding abundance map highlights the high density in southern England, with further local concentrations in East Anglia, Wales and Gloucestershire. The breeding distribution is typically inland compared with the much more coastal winter distribution, indicating that the breeding sites are largely vacated in winter. However, some locations are occupied in both summer and winter and there are ringing records confirming that some individuals remain at breeding territories throughout the year (Conway 2010).

The change in breeding distribution is astounding, with a 935% increase in occupation of 10-km squares since the 1968–72 *Breeding Atlas*. Following the first proven breeding in Britain, in Hampshire in 1962 (Adams 1966), there has been a near-continual increase in breeding numbers logged by RBBP with a peak estimate of 1,000 pairs in 2010 (RBBP 2010). Around a third of all territories in Britain are in the New Forest (Wynn *et al.* 2012). Despite recent severe winter weather, the breeding population there was little affected, suggesting that most individuals were migratory. Further population growth and range expansion is anticipated in Britain, given the ongoing northward and eastward breeding range expansion through mainland Europe since the 1960s, including colonisation of the Netherlands in the 1970s and subsequent rapid population growth there (Hustings 2002).

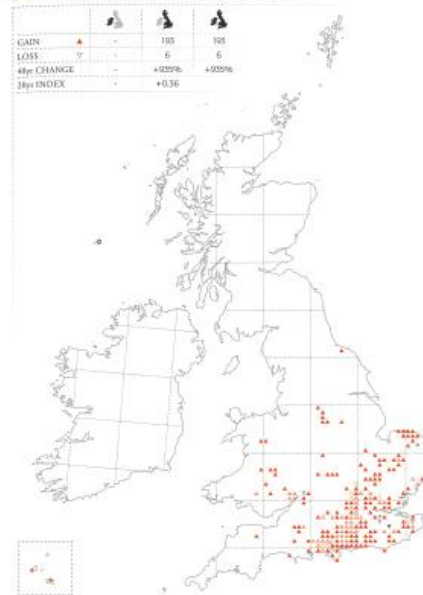
BREEDING DISTRIBUTION 2008–11



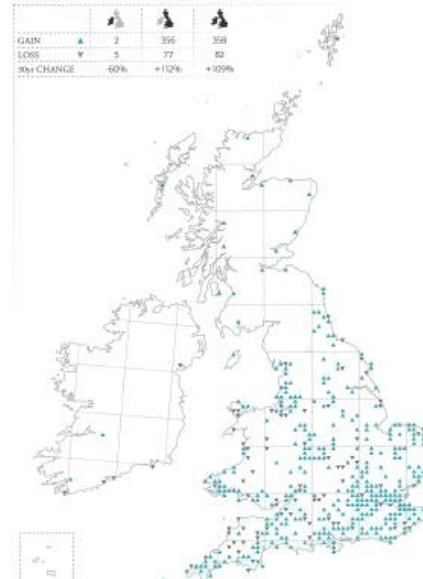
WINTER DISTRIBUTION 2007/08–2010/11



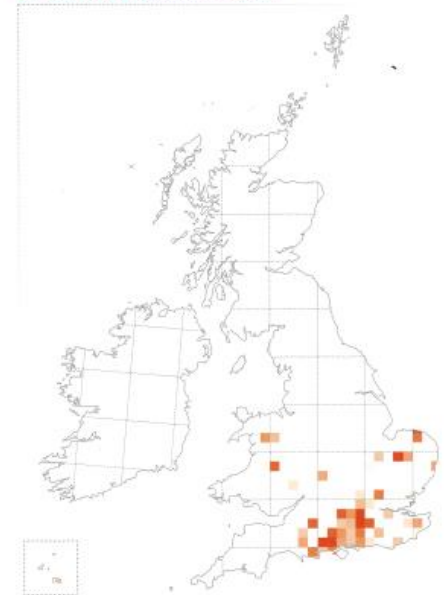
BREEDING DISTRIBUTION CHANGE since 1968–72



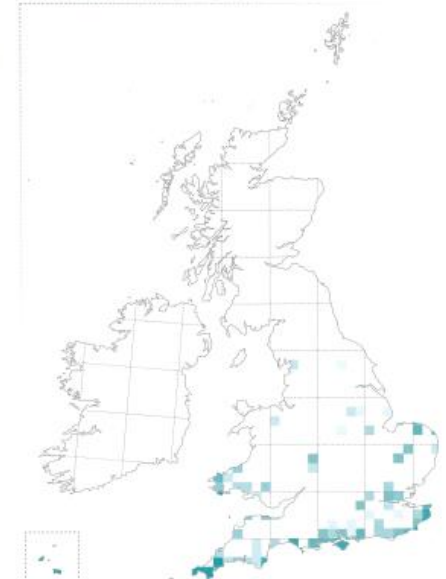
WINTER DISTRIBUTION CHANGE since 1981–84



BREEDING RELATIVE ABUNDANCE 2008–11



WINTER RELATIVE ABUNDANCE 2007/08–2010/11



Recent US Atlases

Rodewald et al. 2016, 2nd Ohio Atlas

Species Accounts



EASTERN TOWHEE *Pipilo erythrophthalmus*

With males arriving as early as late February in Ohio (Peterjohn 2001), the Eastern Towhee's *drink your tea* song is a sure sign of spring. Using their strong feet, Eastern Towhees shuffle through leaf litter in thick forest understorey in search of food. Boldly colored males emerge from the dense undergrowth to sing from understorey perches. Although territorial males are easily detected, the species can be retiring and inconspicuous at times. When young are in the nest, adults are less vocal and may fly silently through the understorey to avoid detection (Greenlaw 1996). Eastern Towhees also become inconspicuous in late summer during periods of molt, when they are more vulnerable (Bent 1968).

Eastern Towhees exhibit apparent monogamy, and there is little evidence for extrapair copulation (Greenlaw 1996). Pair formation begins in late March, and eggs for first nests are typically laid by mid-April. Most pairs initiate 2 nests per season, and the first nest is usually placed on the ground, as the understorey is still bare of leaves (Peterjohn 2001). Subsequent nests are usually placed higher in shrubby vegetation and can be as high as 5.5 m (18 ft; Greenlaw 1996).

DISTRIBUTION Eastern Towhees breed throughout most of the eastern United States from southernmost Florida, north to southern Ontario and Maine, and from the Atlantic coast west to eastern Nebraska, where the range of the Spotted Towhee begins (Greenlaw 1996). Eastern Towhees are short-distance migrants that predominantly overwinter in southeastern states, extending north to Ohio. Wintering Eastern Towhees range from uncommon to fairly common in southern Ohio, rare to uncommon in northeastern Ohio, and scarce in northwestern locales (Peterjohn 2001; eBird 2014).

The Eastern Towhee has historically been a relatively common breeder throughout Ohio. Jones (1903) remarked that "no one who visits the woods can have failed to make the acquaintance of this strong-voiced bird." However, as agriculture expanded and intensified in western Ohio during the 20th century, the species became more locally distributed and less numerous within those regions (Hicks 1935a). During the first Atlas, Eastern Towhees were found in 94 percent of priority blocks, with slightly lower representation in the Prairie Peninsula and Upper Great Lakes Plain. Priority block occupancy significantly declined by 8 percent between atlas periods. Most block losses occurred in the intensively farmed areas of the

Prairie Peninsula and Upper Great Lakes Plain (9% and 37% declines, respectively), suggesting an ongoing influence of agricultural intensification within these regions.

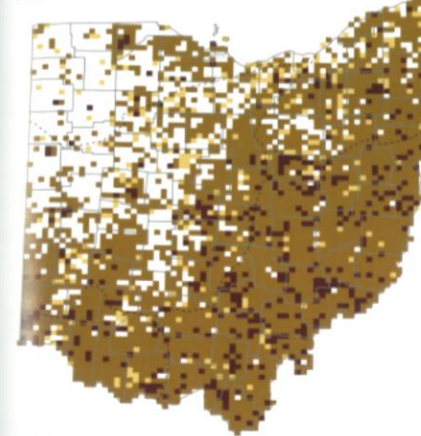
ABUNDANCE AND POPULATION STATUS Second Atlas abundance data yielded a statewide population estimate of 315,000 singing males, with the highest densities occurring in the Ohio Hills and eastern Prairie Peninsula. Breeding Bird Survey (BBS) data indicated that, although the overall population within Ohio has remained relatively stable, the survey-wide population has declined by 1.4 percent per year since the mid-1960s (Sauer et al. 2014).

Central Ohio represents a transition between the open landscapes of the Midwest and the forested landscapes of Appalachia and contains a matrix of land cover suitable to the species. Eastern Towhee population declines in the eastern portion of its range are among the highest recorded for this species (Sauer et al. 2014). However, these declines are likely artifacts of a population boom caused by extensive timber harvesting in the early 1900s that created a surplus of successional habitat (McWilliams and Brauning 2000). Eastern Towhee populations in agriculturally dominated landscapes are likely of more concern if intensive farming eliminates shrubby fencerows, old fields, or other woody vegetation.

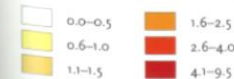
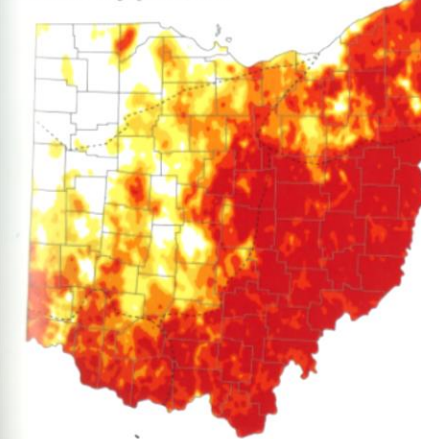
CONSERVATION AND MANAGEMENT Eastern Towhees occupy a variety of forest habitats but tend to thrive in early- to mid-successional habitats with high structural complexity. Agricultural intensification, urban development, and even forest maturation can all negatively influence Eastern Towhee numbers. The loss of this species from atlas blocks in New York was strongly correlated with a decrease in suitable breeding habitat (McGowan and Corwin 2008), highlighting its dependence on shrub and thicket habitat. Suburban sprawl may create potential habitat by increasing edges, but it more often acts as an ecological trap by magnifying numbers of predators (e.g., feral cats, raccoons) and brood parasitic Brown-headed Cowbirds (Greenlaw 1996). Management practices that maintain a mixture of forest successional habitats with a dense undergrowth of native shrubs will likely benefit Eastern Towhees.

MATTHEW B. SHUMAR

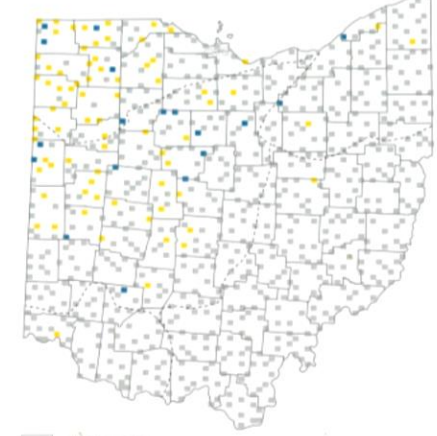
BREEDING EVIDENCE



DENSITY singing males per km²



CHANGE MAP

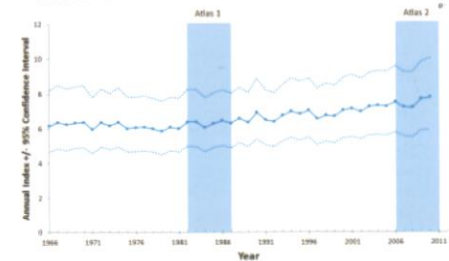


NUMBER OF BLOCKS DETECTED

	2006–11		1982–87	
	All Blocks	Priority Blocks	All Blocks	Priority Blocks
	No.	%	No.	%
Possible	275	6.2%	28	3.7%
Probable	2592	58.4%	510	66.8%
Confirmed	400	9.0%	126	16.5%
Total	3267	73.6%	721	94.4%

Population estimate, singing males (95% CI)
315,000 (300,000–330,000)

BREEDING BIRD SURVEY TREND



Rough draft of Species account page



Red-eyed Vireo *Vireo olivaceus*

BBS WI: 1.6 ↑ US: 0.7 ↑

A familiar voice of Wisconsin woodlands, the Red-eyed Vireo has a vigorous and incessant robin-like song that can be heard at any time of the day. Dubbed the “preacher bird”, the Red-eyed Vireo’s song is a long series of utterances, given in short, emphatic phrases, going on for hours (Bent 1950). These short phrases, punctuated by deliberate pauses, may be repeated as often as 40 times per minute. In contrast to its conspicuous song, this olive-green bird with contrasting gray cap is difficult to see as it forages in the canopy of trees.

The Red-eyed Vireo is an abundant Neotropical migrant in Wisconsin, traveling 8,000 km from its wintering grounds in the Amazon Basin of South America (Cimprich et al. 2000). Migrating at night, they arrive in Wisconsin from early May to early June, dominating the last of the major passerine migration waves in spring. During peak migration they can be found in almost any grove of deciduous trees, blanketing the state with a veritable flood of birds (Robbins 1991).

Fall migration begins in mid-August and continues to mid-October (Robbins 1991). Red-eyed Vireo migration is heavy in the northern counties through mid-September, dropping off to a trickle by 25 Sept. In the southern counties peak migration occurs between 10 and 25 September.

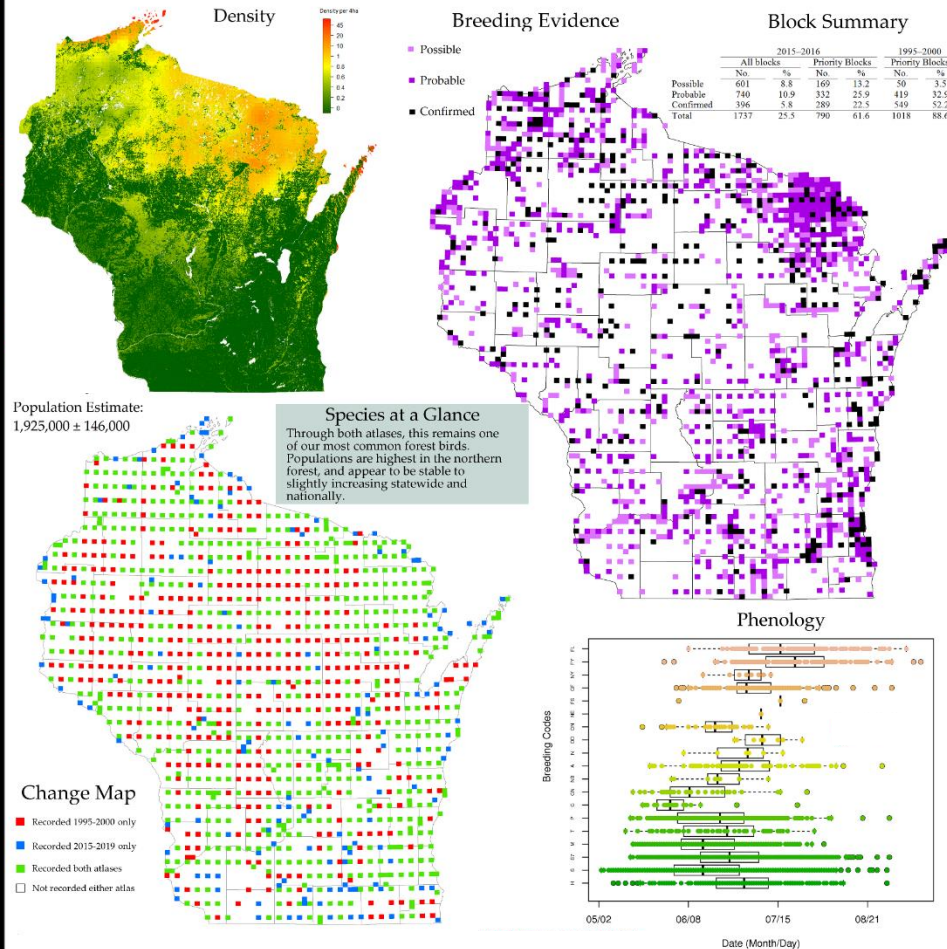
Red-eyed Vireos are the most common nesting bird in the North Woods and are especially abundant in upland forest of poplars, birches, and maples. Robbins et al. (1989) noted that on breeding grounds, Red-eyed Vireo presence is related to forest area; although it may be found in forest fragment as small as 0.5 ha, it may be sensitive to isolation of forest fragments. Although not as abundant as in the north, Red-eyed vireos are still common in the southern and central parts of the state (Robbins 1991). They are far less numerous in the more open spaces of southern Wisconsin; however, enough woodlots occur to support birds in all BBS transects in Wisconsin (Sauer et al. 2003). In the northern forests Red-eyed Vireos can occur in large numbers (88 on one BBS transect, Robbins 1991). In Wisconsin, Red-eyed Vireos are found primarily in deciduous forest, northern maple-hemlock-pine forest, and upland shrub habitats (Robbins 1991). During the Atlas project red-eyed vireos were found in a wide variety of habitats but most abundantly in upland hardwood forests (83% of records).

Nesting for Red-eyed Vireos begins in late May and continues through July. The female appears to select the nest site while the male sings nearby (Cimprich et al. 2000). The nest is built in a terminal or sub-terminal fork or branch in a live midstory to understorey tree or shrub. Nests are frequently shaded and concealed by vegetation above. Feeding of young may still be occurring as migration time approaches in mid-August (Robbins 1991). Nest building and incubation are performed by Red-eyed Vireo females. The female also does most of the brooding and feeding of young. Red-eyed Vireos have one brood per year in Wisconsin, laying three or four eggs. They are, unfortunately, frequently parasitized by Brown-headed Cowbirds (Friedman 1963). The Atlas recorded 28 instances of cowbird parasitism. After a 12 to 14 d. incubation, altricial young are hatched. Young leave the nest 10 to 12 d. after hatching (Lawrence 1953).

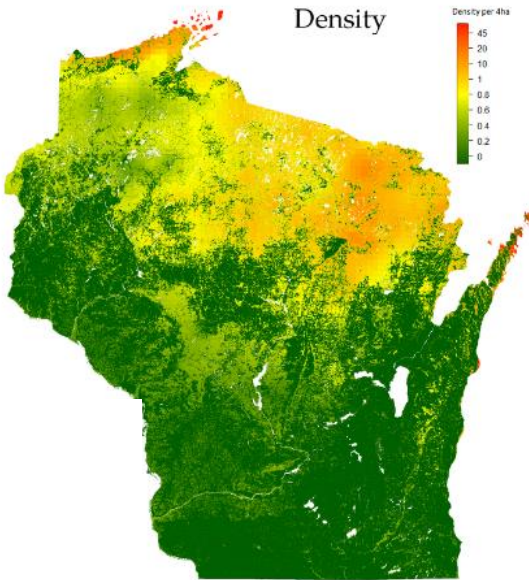
Red-eyed vireos nest primarily in deciduous trees but also have been found in pines and spruces. Nest height is most often between 3 and 8 m, but nests have been found as low as 1.5 m and as high as 11 m (Robbins 1991). During the Atlas project occupied nests were found as early as 22 May and as late as 30 July. Nests with eggs were found from 10 June until 14 July and nests with young were found from 18 June through 30 July. Fledged young were observed as early as 10 June and as late as mid-September.

Julie Van Stappen

Kathleen and Charlie Marn

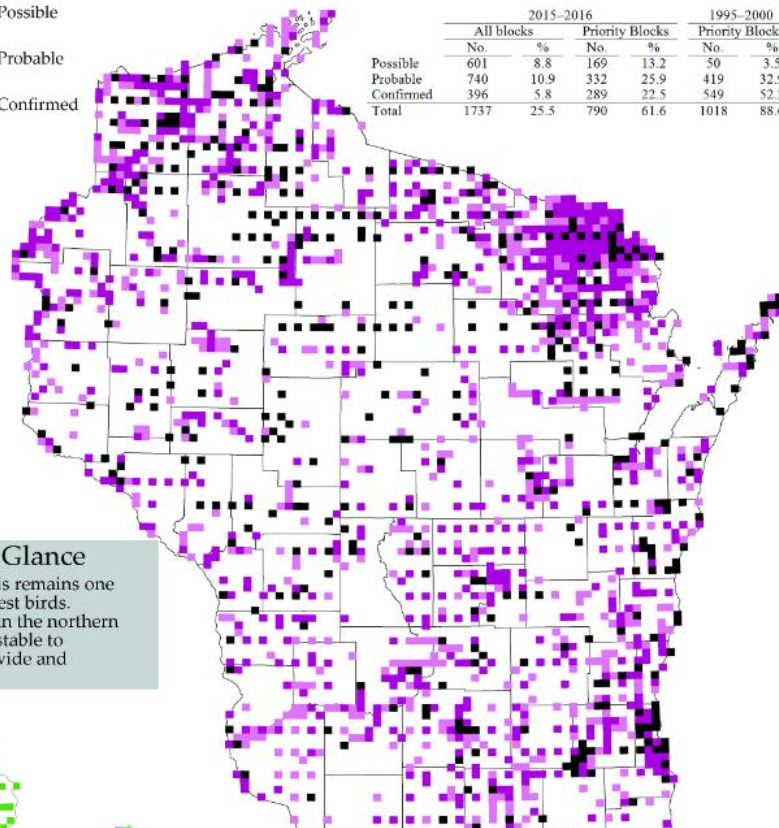


Density



Breeding Evidence

- Possible
- Probable
- Confirmed



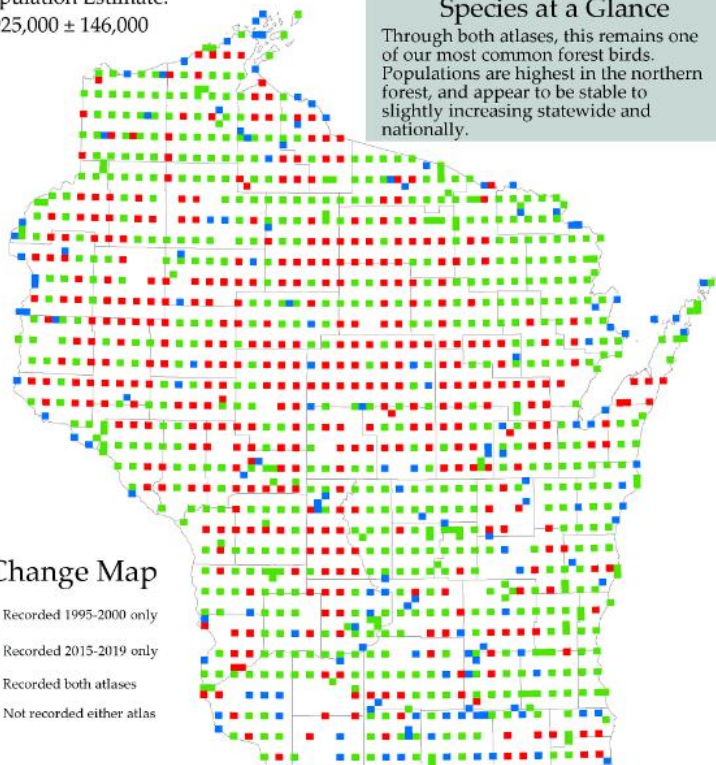
Block Summary

	2015-2016		1995-2000	
	All blocks	Priority Blocks	No.	%
Possible	601	8.8	169	13.2
Probable	740	10.9	332	25.9
Confirmed	396	5.8	289	22.5
Total	1737	25.5	790	61.6

Population Estimate:
1,925,000 ± 146,000

Species at a Glance

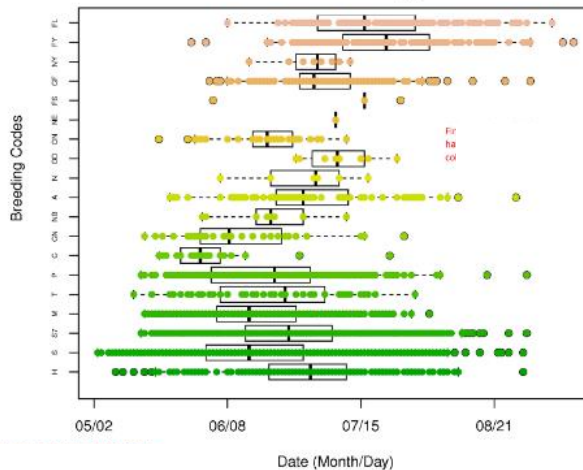
Through both atlases, this remains one of our most common forest birds. Populations are highest in the northern forest, and appear to be stable to slightly increasing statewide and nationally.



Change Map

- Recorded 1995-2000 only
- Recorded 2015-2019 only
- Recorded both atlases
- Not recorded either atlas

Phenology



We will need some great photos!

- For use in species accounts, elsewhere in book
- Species demonstrating breeding behaviors (displays, feeding young, juvenile plumage, nests, etc.)
- Also habitat images
- After this year's surveying and data entry, take time to prep and submit images
- <https://wsobirds.org/atlas-photos>
- Look for more guidance next fall/winter



The latest atlas books are beautiful

Stewart et al. 2015, 2nd Maritimes Atlas

Peregrine Falcon

Faucon pèlerin
Falco peregrinus

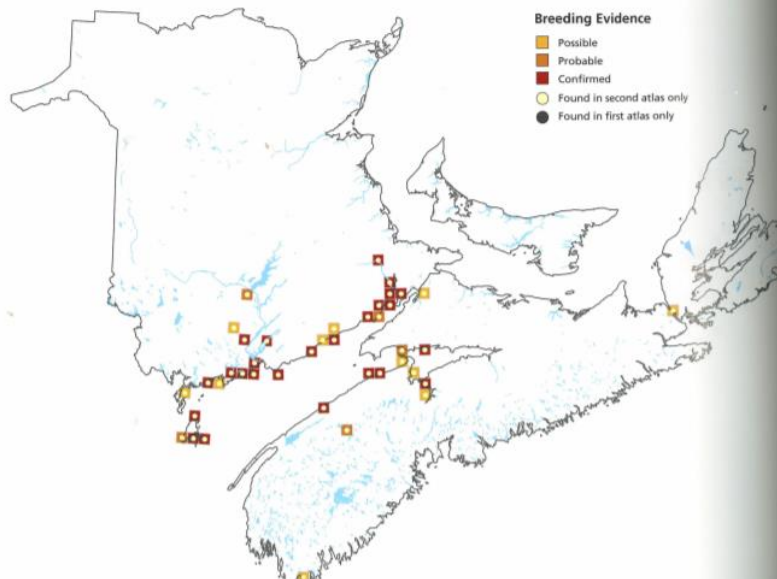


John Chardine

In recent decades, no bird species has experienced a more dramatic recovery than the Peregrine Falcon. Long famed for the speed and power of its predatory attacks on birds, it originally enjoyed worldwide distribution and ranged throughout North America from the Arctic to Mexico. Though never common in the Maritimes, it was virtually wiped out by the mid-1960s, its reproductive success disrupted by bioaccumulation of DDT and other pesticides.

Its current distribution reflects a remarkable comeback thanks to a ban on DDT and extensive management efforts for the species. It is found primarily along NB's Fundy Coast which provides all the essentials: appropriate nesting habitat on shoreline cliff faces and an abundance of migrating shorebirds as a ready prey source during brooding and fledging. A nest on the Saint John Harbour Bridge and another atop an office building in downtown Moncton attest to the fact that Peregrines adapt well to urban environments, where Rock Pigeon is a preferred prey species.

In the 1980s the Peregrine Falcon became the focus of a major captive breeding and re-introduction program. Release sites along the Bay of Fundy such as Fundy National



and Cape d'Or, NS, had preferred habitat of nesting cliffs facing open hunting areas. The first atlas reported on the progress of this initiative, and since then, the trend has been steadily upward. The breeding evidence map in the second atlas reveals confirmed breeding in 25 squares, probable in 5, and possible in 11 more, marking a regional range expansion to much of the Fundy Coast and extending inland along tidal rivers and into the surrounding uplands. Records have tripled from the first atlas, which reported three confirmed records and eight others, all but one along the northern coast of the Bay of Fundy.

The history of the bird's COSEWIC assessments also reflects this population increase: subspecies *anatum* was designated as Endangered in 1978, Threatened in 1999, and Special Concern in 2007.

— Sandy Burnett



Science and rigor + “coffee table” appeal — 9” x 13” format (bigger than WBBA I)


Online Results

Atlas I website at UWGB

- will soon shut down, archived at WSO

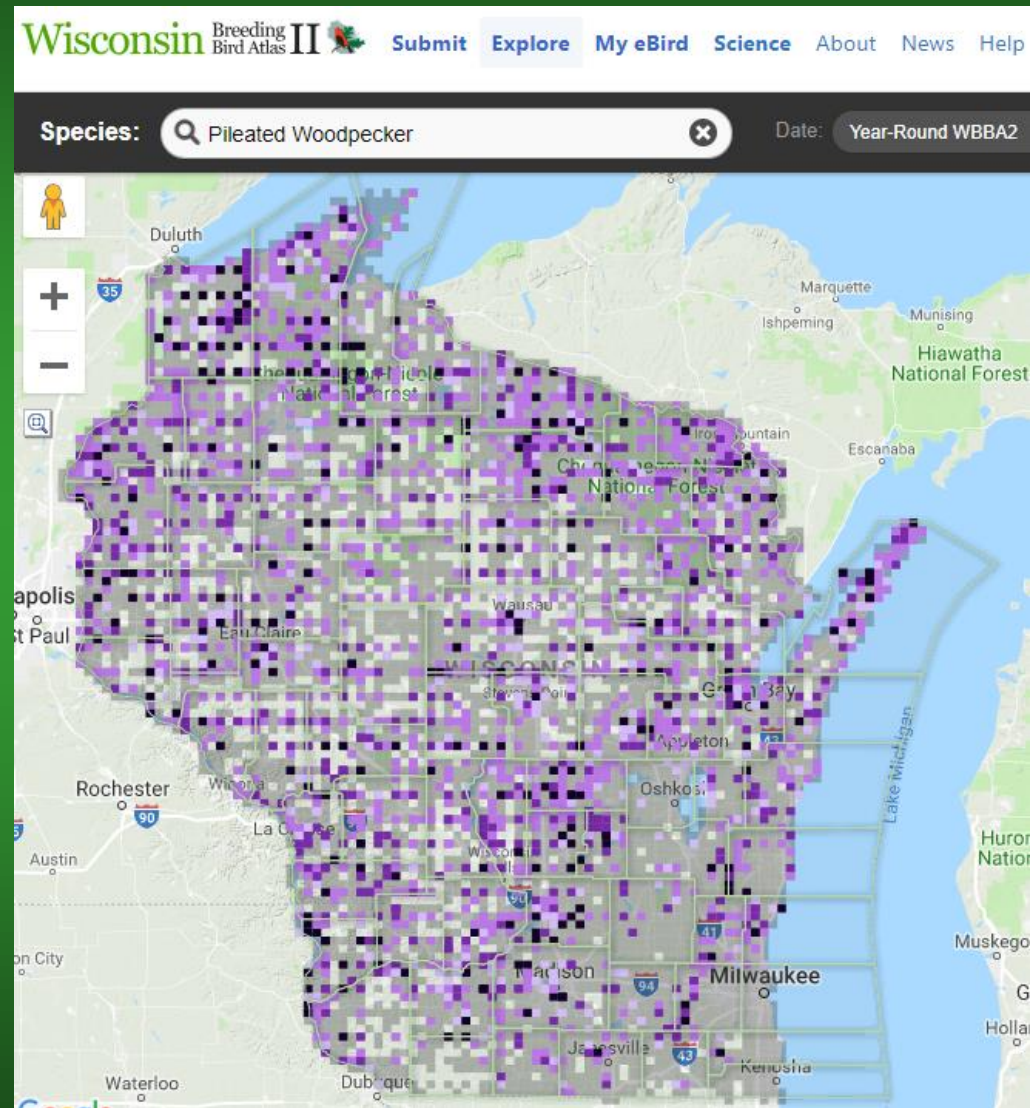
About WBBA Credits Methodology Results Libraries Web Links

Species Distribution Maps

ORDER: Anseriformes	ORDER: Passeriformes	 Wisconsin Breeding Bird Atlas
FAMILY: Anatidae - Ducks/Geese/Swans Canada Goose Mute Swan Trumpeter Swan Wood Duck Gadwall American Wigeon American Black Duck Mallard Blue-winged Teal Northern Shoveler Northern Pintail Green-winged Teal Redhead Ring-necked Duck Lesser Scaup Common Goldeneye Hooded Merganser Common Merganser Red-breasted Merganser Ruddy Duck	FAMILY: Tyrannidae - Tyrant Flycatchers Olive-sided Flycatcher Eastern Wood-Pewee Yellow-bellied Flycatcher Acadian Flycatcher Alder Flycatcher Willow Flycatcher Least Flycatcher Eastern Phoebe Great Crested Flycatcher Western Kingbird Eastern Kingbird FAMILY: Laniidae - Shrikes Loggerhead Shrike FAMILY: Vireonidae - Vireos White-eyed Vireo Bell's Vireo Yellow-throated Vireo Blue-headed Vireo Warbling Vireo	

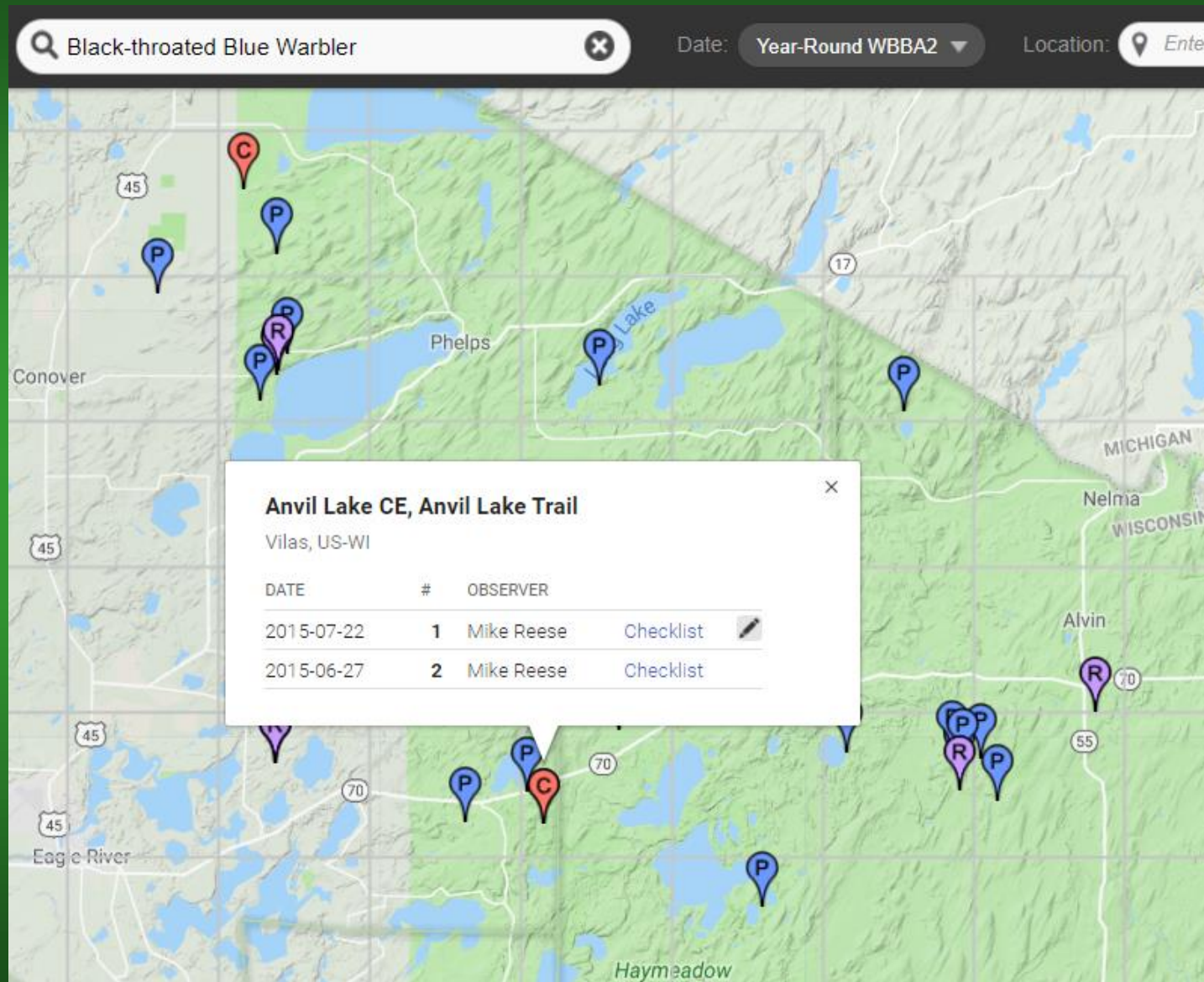
Online Results

- Some atlases publishing results entirely online
- Will depend on what eBird platform is capable of providing
- Want to avoid undercutting the book
- Ideally book and web will be complimentary



Online Results

High priority
to keep
eBird map
functionality



Online Results

Minnesota Breeding Bird Atlas

Home Using the Atlas Exp

Menu

Breeding evidence for custom region

List the breeding evidence for this

Show all Sort options: taxonomic breeding evidence

Center: [Lat: 45.66589°, Long: -94.37384°]
Radius: 10 miles

41 blocks have centers inside this circle.

Change the radius of the circle: miles

135 species were recorded in this region:

Whistling-Ducks, Geese, Swans, and Ducks

Canada Goose	confirmed
Trumpeter Swan	confirmed
Wood Duck	confirmed
Blue-winged Teal	confirmed
Gadwall	confirmed
Mallard	confirmed
Hooded Merganser	confirmed
Common Merganser	confirmed

Perhaps there are other custom queries that would be useful to online users

- Portal will be inactivated so no new data can be entered
- Major parts of Atlas II content: (eBird stories, maps, block summaries, your Atlas stats) will be available after data entry is over
- To record breeding activity in the post-Atlas world, use breeding codes in regular eBird
 - If a particularly unusual record, then please alert us
- Finished online eBird Atlas format still being developed

Timeline...(tentative)



2019: Data collection/entry/synthesis, status check

2020: Incorporate other data sets, data quality review, outline book and web content, recruit authors, gather photos

2020–2022: Writing, editing, web development

2023: Finalize publication of book (Penn State Press) & online



*QUESTIONS,
RECOMENDATIONS?*