FOCUS ON CITIZEN SCIENCE • VOLUME 19

Winter Bird Highlights

FROM PROJECT FEEDERWATCH 2022–23

Cornell Lab of Ornithology

BIRDS CANADA
OISEAUX CANADA

New Data Entry Opportunities!

The 2023–24 season may be one of the most exciting FeederWatch seasons. For many years we have wanted to collect information on mammals and more details about bird health, and our dreams have finally come true thanks to a grant from the U.S. National Science Foundation.

We have updated our data entry system to allow for these added types of data. We are also enabling participants to describe changes to their bird feeding set-ups throughout the FeederWatch season. So if you take down your bird feeders, don't stop FeederWatching–instead, keep counting while your feeders are down and make note of the changes to your count site when you enter your counts. FeederWatchers can even record how they feel about sightings to help us understand not only how we impact birds, but also how birds impact people's well-being.

We are especially grateful to all our participants for their enthusiasm for birds and for data collection, and we are excited to tell you in this issue of *Winter Bird Highlights* what we have learned from their fantastic observations last season.

Cover: Tufted Titmouse by Marie Lehmann
Below: Spotted Towhee by Joan Tisdale

Focus on Citizen Science is a publication highlighting contributions of citizen scientists. This issue, *Winter Bird Highlights 2023*, is brought to you by Project FeederWatch, a research and education project of the Cornell Lab of Ornithology and Birds Canada. Project FeederWatch is made possible by the efforts and support of thousands of citizen scientists. Thank you!

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Join Project FeederWatch!

Anyone in the U.S. and Canada with an interest in birds is welcome to join. Help monitor winter bird populations while you learn about the birds in your neighborhood. To join, contact the FeederWatch office in your country.

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Factors Impacting FeederWatch Participation

BY ANNE MARIE JOHNSON, CORNELL LAB OF ORNITHOLOGY

In a study that was recently published in *BioScience*, Cornell Lab of Ornithology researchers studied which factors may contribute to people returning to participate in FeederWatch from one year to the next. The researchers dug into FeederWatch data from the 2012–13 and 2013–14 seasons and found some interesting relationships among participant renewal rates, bird diversity, project participation, and more.

Researchers David Bonter, codirector, and Tina Phillips, assistant director, of the Center for Engagement in Science and Nature; Victoria Martin, a former postdoctoral research associate; and Emma Greig, FeederWatch project leader; speculated that participation rates over time would be higher for those reporting more birds and more bird species, as well as for those who have participated for more years. Researchers defined a renewing participant as someone who registered for both the 2012–13 and 2013–14 seasons and an unretained participant as someone who registered for the 2012–13 season but not the 2013–14 season.

Perhaps the most striking finding was that the probability of renewing increased with the diversity of species reported but not with the number of birds reported. Researchers also found that renewal rates were higher for long-time participants than for those who participated for fewer year. Similarly, participants who submitted more checklists in the previous season had higher renewal rates than participants who submitted fewer checklists in the previous season. In addition, the probability of renewing was greater for participants who submitted data in the 2012–13 season than for those who did not. Of the nearly 18,000 U.S. participants registered during the 2012–13 season, more than 9,600 (53.6%) submitted at least one checklist. The renewal rate between the 2012–13 and 2013–14 was 62.4%.

Gary Mueller

Hairy and Red-bellied Woodpeckers share a suet feeder.

Researchers found a number of factors that did not correlate with retention. They include:

- percentage of nonnative birds reported on an average count;
- geographical location of the participant;
- amount of time spent watching count site during each two-day count;
- total number of feeders;
- variety of feeder types;
- whether or not the participant fed birds year round.

In addition, the research team analyzed factors that correlated with the diversity of species reported on a count. Species diversity increased:

- with the total number of feeders maintained;
- with the diversity of feeder types maintained;
- from west to east and from north to south;
- with number of years participating;
- for people who fed birds year round.

We are grateful to all the FeederWatchers who make important research like this possible, and we hope that the diversity of birds at your feeders grows year after year!

Participant retention in a continental-scale citizen science project increases with the diversity of species detected. 2023. Bonter, David N.; Martin, Victoria Y.; Greig, Emma I.; and Phillips, Tina B. *BioScience*, 0, 1–8. doi.org/10.1093/biosci/biad041.

Creating Bird-Friendly Habitat

Tips for Transforming Your Landscape

BY HEIDI FAULKNER, CORNELL LAB OF ORNITHOLOGY

One of the many ways you can help birds is to make the habitat around you more bird-friendly. Because habitat loss is the leading cause of population declines in many bird species, planting native vegetation in your community is also one of the best ways you can help improve the environment and create a refuge for our feathered friends. With a few simple steps, you can help birds as they seek out food sources, nesting habitat, protection, and more.

Start With What You Have

Landscaping for birds doesn't have to involve buying plants and maintaining a garden. There are several things you can do with the habitat you already have to make it more bird friendly–and they all involve less work. Leaving a designated area of your lawn unmowed is a great way to cultivate wildflowers. Letting flowers and grasses go to seed, as well as leaving leaves unraked in a portion of your yard, will provide food for birds through the winter and attract insects, which will also attract birds. Having a "messy" yard (or at least messy areas) is excellent for birds!

Where to Find Plants

Where is the best place to find native, bird-friendly plants for your new garden? There are lots of suitable options available in many locations, from local and online nurseries to farmers markets and specialty plant sales. Try searching online for a list of popular garden plants that are native to your area, or ask the staff at your local nursery what native plant options they have. One great option is getting cuttings or "split" plants from friends who also have native plant gardens. Sharing plants is a great way to spread the joy of gardening without breaking the budget!

Landscaping Tips

By installing a few features, you can make your yard more natural and bird friendly than a formal, polished, and trimmed yard. Try to include plants with a variety of shapes and sizes with some that spill out of their boundaries to provide spaces for birds and insects to forage and take cover. Brush piles can serve as great hideaways for birds and protect them from predators while foraging for seeds and insects.

Reducing the amount of space in your yard that is covered by mowed lawn in favor of native shrubs and trees will provide more habitat that birds can use to rest during migration, build nests, and forage. For more tips to improve your yard or local habitat for birds, check out the Gardening for Birds page on the FeederWatch website at feederwatch.org/learn/gardening-for-birds.

LINDA CUNICO

American Robin in a crab apple tree.

2022–23 FeederWatch season statistics

35,685 PARTICIPANTS
243,388 CHECKLISTS
9,669,334 BIRD SIGHTINGS

Planting for Birds

Wild Bergamot or Bee Balm

BY LISA GALFORD, CORNELL LAB OF ORNITHOLOGY

Creating an attractive garden is an exciting process. There are many beautiful species of plants. With so many choices of annuals, perennials, trees, and shrubs, narrowing the choices can be challenging. There is a purpose for every plant within their native ecosystems, and a great plant to consider for attracting birds and pollinators is *Monarda fistulosa* L., commonly known as wild bergamot or bee balm.

Wild bergamot is widespread in North America, except for much of the West Coast, Alaska, and Hawaii. It is native to most of southern Canada and 45 U.S. states. It is also very common in cultivation either as a young plant from a nursery or started from seed. This species can reproduce on its own through self-seeding (a process where viable seeds fall from the plant and germinate) or through rhizomes (modified underground stems that produce shoots and roots). Although *M. fistulosa* grows best in well-drained soils, it will tolerate a relatively wide range of soil compositions including sand, clay, and chalk. While wild bergamot is flexible regarding soil preferences, it will not thrive in deep shade but needs partial shade to yield maximum bloom production during the growing season.

Richard Hoeg

Ruby-throated Hummingbird on wild bergamot, also known as bee balm.

M. fistulosa is a superstar species to try in any backyard oasis not only for its ease of cultivation but also because it adds very important habitat for birds and other wildlife. This perennial bears attractive lavender, pink, or white flowers from May to October. Its nectar feeds butterflies and hummingbirds in summer while oils from its lovely tubular shaped petals attract native bees. Even in the fall and winter, when food can be hard to find, the seeds (aka nutlets) of bee balm serve the ecosystem by becoming food for songbirds like goldfinches and sparrows. While unfortunately there are no plants that are guaranteed to repel all unwanted wildlife species, wild bergamot is deer and rabbit-resistant, so it is more likely than many native plants to be left alone by these garden nibblers.

When choosing plants for a home or family garden, it is can be hard to resist planting every species you see at a local greenhouse or nursery. There are so many colors, life cycles, shapes, sizes, and growth habits. Many types of plants can look quite nice in the landscape. However geographic location, temperature, pests and diseases, and moisture levels can and do determine the likelihood of plant survival and growth. With all the mesmerizing garden choices, *Monarda fistulosa* checks lots of boxes on most gardeners' wish lists, from ease of growth to beauty to wildlife benefit. This native, bird-friendly plant would make a great addition to any FeederWatch count site.

Blue Jay by Harry Foster

Your Legacy for Birds

Contributing data to Project FeederWatch is an important way to leave a lasting legacy. A pledge of financial support through a gift in your estate plans is a way to help ensure that FeederWatch thrives into the future.

To learn more about planned giving, in the U.S. please visit birds.cornell.giftplans.org, and in Canada please visit birdscanada.org/legacy. Or donate to FeederWatch by visiting feederwatch.org and clicking on the Donate button on the home page. Thank you!

Does Extreme Winter Weather in Canada Impact Feeder Visits?

FeederWatchers Help Shed Light on Possible Impacts of the Epic Christmas Storm of 2022 on Dark-eyed Juncos

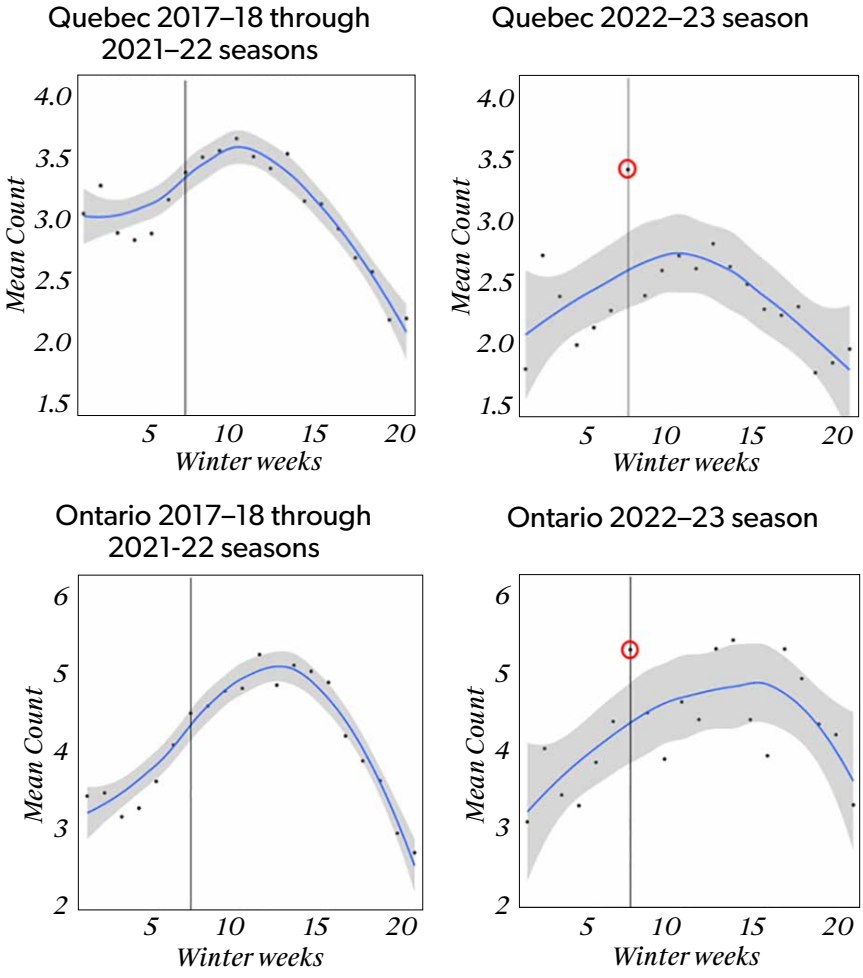
BY KERRIE WILCOX, BIRDS CANADA

Shirley Rushforth Guinn

Dark-eyed Junco in Winnipeg, Manitoba.

The winter of 2022–23 will be remembered throughout most of Canada for its epic Christmas storm, which traversed a 3,000 km path and dumped mounds of snow. The blowing winds and snowfall were prolonged and lasted well past three days in many areas. While people were dealing with power outages, road closures, and limited ability to travel during the holiays, birds and wildlife also faced their own challenges.

Many FeederWatch participants were concerned about the birds at their feeders and rightly so. Storms can be hard on birds not only because of exposure, but also because food sources can disappear or become inaccessible. Erica Dunn (founder of FeederWatch) noted that she had about a dozen birds coming to her feeders in Port Rowan, Ontario, before the storm. During the days of terrific wind, snow and cold, she only saw one bird and after the storm no birds whatsoever. Many FeederWatchers across Canada echoed this observation in emails and on social media. Because this storm was both long and widespread, we wondered if it may have had a detectable impact on visitation at feeders at regional scales. We specifically looked at Dark-eyed Juncos, which are known popularly as "snowbirds" in part because they are more often observed in snowy weather.



Weekly mean counts (black dots) across all feeders reporting from Quebec (top) and Ontario (bottom). Gray zones indicate 95% confidence intervals for the curves fitted to the weekly patterns. For each province, the graph at left shows average weekly means for the five winters 2017–18 through 2021–22. At right are the weekly values for 2022–23 alone. The vertical lines indicate the week closest to the date of the winter storm in 2022–23. The circled counts for 2022–23 are far above the expected values, indicating probable effects of the storm.

Dark-eyed Juncos are widespread across Canada, visiting 81% of FeederWatch sites last season. During a typical season, their numbers at feeders peak in mid-winter. We looked at the mean number of Dark-eyed Juncos at FeederWatch sites as well as the percentage of feeders visited in each province throughout the season. We were interested to see if the typical pattern in flock sizes and numbers of FeederWatch sites visited changed because of the storm.

Response to Storms

When birds sense changes in air pressure, they tend to eat more and flock to feeders. Some birds will travel several miles looking for reliable food and shelter before a storm. Dark-eyed Juncos are a ground feeding species and as such need to forage prior to the onset of a storm because food may become less accessible once it is covered in snow. We therefore predicted that more juncos would visit feeders and more feeders would be visited by juncos during the Christmas week storm, because their natural food sources would be difficult to access.

What We Found

We noticed an obvious bump in the numbers of Dark-eyed Junco at feeders and in the percentage of feeders visited during the December 22–25 period when the snow storm hit. The bump in numbers was most noticeable in Quebec and Ontario (Figure 1), but also showed in British Columbia, Alberta, and Saskatchewan. We saw no obvious sign of the storm in the junco trend data for the other provinces.

Unusual high/low counts could occur for a variety of reasons, such as variation in the sample of sites reporting, weather effects that are local to only a portion of the province, or variation in feeder-watching effort (as during holidays or the Great Backyard Bird Count). It would take a very detailed study across many winters to draw definitive conclusions about effects of weather events. Nonetheless, it seems more than coincidental that the Christmas week increases in junco reports in 2022–23 occurred at the same time as the very widespread storm. Juncos are probably adapted to gathering at food sources in harsh weather, and feeders make this easy for them.

You Can Help!

Recent research involving radio tracking has shown that winter supplemental feeding significantly increased junco survival during winters[1]. What does this mean for FeederWatchers? It means that you can help Dark-eyed Juncos by keeping your feeders stocked during storms—your feeders may give them that added boost to get them through. If you are going to be away during a storm, consider having someone fill your feeders. A Dark-eyed Junco's favorite foods include mixed seed, millet, hulled sunflower, and cracked corn.

Remember, birdseed alone won't make your yard a haven for songbirds during winter. Be sure to plant native shrubs close to your feeder to provide perches and shelter. Native plant species are adapted to your local climate, resist local diseases, and are familiar to birds. Dense evergreens are great for shelter, and they keep the ground underneath snow-free, giving birds shelter and a place to forage. Plants such as buckweed, chickweed, lamb's quarters, and sorrel provide food with their numerous seeds.

We are so grateful to FeederWatchers who continue to watch their feeders, both when there are lots of birds visiting, and also when few or no birds visit. The only way we can know if birds are declining is if people seeing few or no birds collect and submit their counts.

Kerrie Wilcox

This Dark-eyed Junco in Long Point, Ontario, is fluffed up to stay warm. When a bird fluffs its feathers, air trapped between the bird's skin and feathers retains heat generated by the bird's body.

[1]Radiotracking refines the role of food supplementation on overwinter survival of the Dark-eyed Junco (*Junco hyemalis*). 2020. Spellmeyer, A.J.; Rogers, C.M.; and Schneegurt, M.A. *Avian Biology Research,* Vol. 13(4), 92–99.

Regional Roundup

Trends and Highlights from the 2022–23 FeederWatch Season

BY EMMA GREIG, CORNELL LAB OF ORNITHOLOGY

Thanks to all our participants for another wonderful year of FeederWatching! The 2022–23 season was one of the best ever: you counted 9,669,334 birds on 243,388 checklists, and you reported birds from 17,990 different counting locations. Perhaps what is most amazing is that nearly 12,000 of those locations had bird counts from prior years. Participants who submit counts year after year give us an especially valuable picture of how bird populations change over time, so if you have just started participating, know that your data will become more valuable the more you contribute. Thank you so much!

We have another exciting update from last season. For the past two years we have been asking people to FeederWatch without bird feeders. That's right–you don't need bird feeders to observe birds around your home and contribute to FeederWatch. The first year we had 114 people count without feeders–a small number, but significant. This past year we had a whopping 562 people contribute data without bird feeders! That's five times as many as the year before–a fantastic increase! The more reports we get from sites without feeders, the more reliably we will be able to assess the impacts of feeders on bird communities.

As in previous Roundups, the Trend column of the Top-25 tables shows how a species was doing in the most recent FeederWatch season compared to the average across previous seasons. One arrow (up or down) indicates an increase or decrease in percentage of sites visited by 5–10%, and two arrows indicates an increase or decrease by more than 10%. You can use these arrows to get an idea of how different the counts were last season compared to what is typical for that species.

Thank you for participating in Project FeederWatch and building this one-of-a-kind dataset that helps us better understand birds.

HAWAII TOP-10 LIST: 3 SITES

Rank	Species	*Average flock size*	*Percent of sites*
1	Spotted Dove	8	100
2	Northern Cardinal	2	100
3	Java Sparrow	22	67
4	Zebra Dove	12	67
5	House Finch	2	67
6	Red-crested Cardinal	2	67
7	House Sparrow	5	33
8	Red-whiskered Bulbul	2	33
9	Red-billed Leiothrix	2	33
10	Common Myna	2	33

This past year three people counted from Hawaii (on the islands of Oahu and Maui). It may not seem like much, but sightings from these participants are valuable because they give us insight into the types of birds that visit yards in Hawaii. The top species last year were Spotted Doves and Northern Cardinals, two introduced species that thrive in the lower altitude Hawaiian climate and enjoy food and habitat that people might provide. You may be surprised to learn Northern Cardinals, a common mainland species, also lives on Hawaii, but they didn't cross the Pacific on their own. In the 1920s they were brought to Hawaii as caged birds and deliberately released.

Jamin Taylor

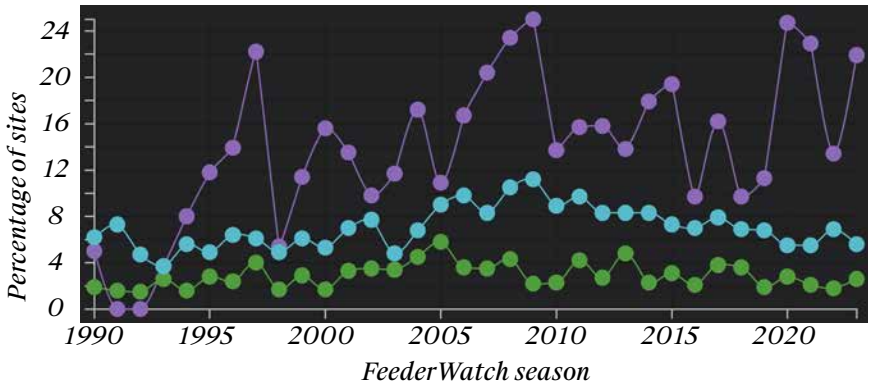
This male Northern Cardinal was photographed on the island of Maui.

Far North Region

TOP-25 LIST: 72 SITES REPORTING

Rank	Species	*Average flock size*	*Percent of sites*	*Trend*
1	Black-capped Chickadee	5	86	▲
2	Red-breasted Nuthatch	2	68	▲▲
3	Downy Woodpecker	1	65	▲▲
4	Black-billed Magpie	2	64	▲
5	Dark-eyed Junco	5	61	▲
6	Boreal Chickadee	2	57	
7	Pine Grosbeak	8	53	
8	Hairy Woodpecker	1	50	
9	Common Redpoll	11	49	▼▼
10	Common Raven	2	49	
11	Canada Jay	2	42	
12	Steller's Jay	3	27	▼
13	Pine Siskin	9	23	
14	Bohemian Waxwing	69	22	▲
15	White-winged Crossbill	4	22	
16	Red Crossbill	8	16	
17	White-crowned Sparrow	5	15	
18	American Robin	10	12	
19	Varied Thrush	3	12	
20	Northern Shrike	1	12	
21	Chestnut-backed Chickadee	4	11	▼
22	American Crow	12	9	
23	American Tree Sparrow	2	9	
24	Ruffed Grouse	1	9	
25	Fox Sparrow	1	9	

Percentage of Sites Reporting Bohemian Waxwing



Bohemian Waxwings are most common in the Far North region (purple), but also show up in the Northwest (blue) and Central (green) regions in the winter.

It is always fun to see the Top-25 birds in the Far North region, because that list has some fascinating species that have amazing adaptations to the cold climate. Canada Jays and Bohemian Waxwings are a couple of our favorite cold-thriving species, and they each have different strategies to survive in that climate. Canada Jays cache food, but not just any food: they will often cache energy-rich food. This is a great adaptation–to have nutrient-dense food available when times are tough, but they can only cache the food in cold weather because this kind of food might spoil in warmer conditions. In addition, they have a clever way of caching food in snowy climates: they use sticky saliva to attach their cached food bits to tree branches above the snowline, rather than burying their caches like many other species. That way they can get to their stored food even after a big snowstorm.

Bohemian Waxwings have a different strategy for surviving in cold climates. Rather than caching food and staying in one place all winter, Bohemian Waxwings are always on the move, looking for new sources of berries. They travel in flocks, and perhaps having many eyes looking for the same food source helps them more efficiently find trees or bushes with fruit in the fall and winter. They will often flock with Cedar Waxwings and American Robins, so it's worth checking for them in flocks of these species.

Donald L'Heureux

This Canada Jay was photographed in the subalpine forest of Vancouver Island.

Northeast Region

The number-one ranking "species" in the Northeast this past season is actually two species, a combination of the familiar favorites Carolina Chickadees and Black-capped Chickadees. Chickadees are among the most recognizable birds, and they love visiting feeders for a sunflower seed or two (or 200!). For our trend graphs and Top-25 lists, we combine these two species of chickadee because they are difficult to distinguish from one another where their ranges overlap. In fact, they are so hard to distinguish that even the chickadees have a hard time telling one another apart! In places where they co-occur they often hybridize. You can see range maps for the two species and find tips for telling them apart on our website at feederwatch.org/learn/tricky-bird-ids/black-capped-chickadee-and-carolina-chickadee.

Another special species on the Top-25 list is the Common Grackle. Sadly, Common Grackles have been in decline for many years in all three regions where they occur (Northeast, Central and Southeast regions), as shown by the trend graph below. It isn't clear why they are in such decline, but it means we should appreciate seeing them when they stop by, even if they temporarily displace other species. Common Grackles form huge flocks in fall and winter (potentially with millions of individuals), and their large size can make them intimidating to other birds. But these grackles are still a wonderful birds to have visit your feeders. You can distinguish them from other species by their dark, glossy, iridescent plumage.

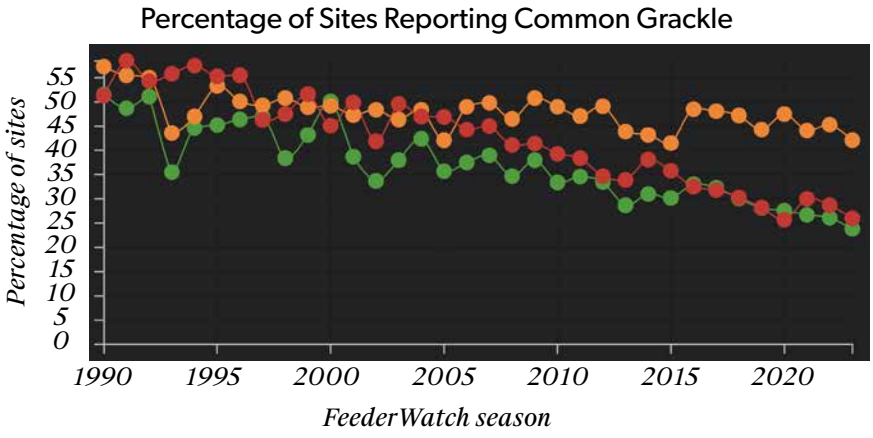
Cyndi Shepherd

A male Common Grackle in Ohio showing off his glossy plumage and striking yellow eye.

TOP-25 LIST: 10,367 SITES REPORTING

Rank	Species	*Average flock size*	*Percent of sites*	*Trend*
1	Chickadee*	3	94	
2	Dark-eyed Junco	6	90	
3	Northern Cardinal	3	90	
4	Downy Woodpecker	2	89	
5	Mourning Dove	5	87	
6	Blue Jay	3	86	
7	White-breasted Nuthatch	1	86	
8	American Goldfinch	6	81	↘
9	House Finch	4	74	
10	Red-bellied Woodpecker	1	73	↗
11	Tufted Titmouse	2	66	
12	American Robin	3	64	
13	Hairy Woodpecker	1	63	
14	European Starling	6	62	
15	House Sparrow	8	61	
16	Red-winged Blackbird	6	50	
17	White-throated Sparrow	3	50	
18	Song Sparrow	2	49	
19	Common Grackle	7	49	
20	American Crow	3	47	↘
21	Carolina Wren	1	47	
22	Red-breasted Nuthatch	1	45	↗
23	Brown-headed Cowbird	4	39	
24	Chipping Sparrow	2	34	
25	Northern Flicker	1	31	

*Chickadee combines Black-capped Chickadee and Carolina Chickadee.



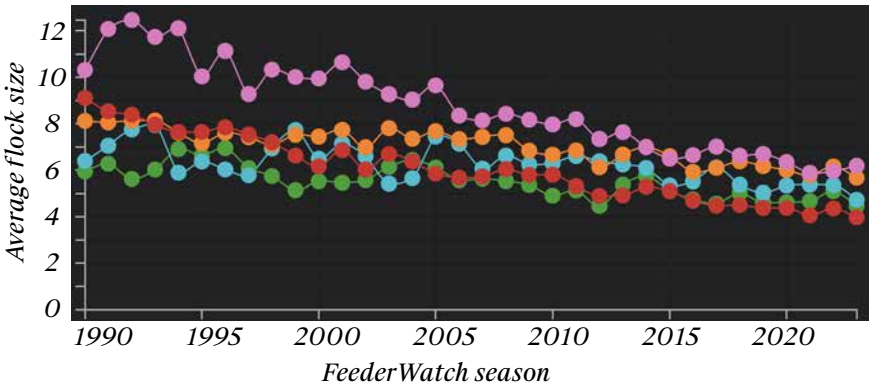
Common Grackles are in decline in the Northeast (orange), Central (Green) and Southeast (red) regions.

Southeast Region

TOP-25 LIST: 2,423 SITES REPORTING

Rank	Species	*Average flock size*	*Percent of sites*	*Trend*
1	Northern Cardinal	3	93	
2	Carolina Chickadee	2	80	
3	Carolina Wren	1	77	
4	House Finch	4	77	
5	Mourning Dove	4	76	↓↓
6	Tufted Titmouse	2	74	↓
7	Blue Jay	2	73	
8	Red-bellied Woodpecker	1	70	
9	Downy Woodpecker	1	69	
10	American Goldfinch	6	67	↓↓
11	Northern Mockingbird	1	62	
12	American Robin	4	58	
13	Yellow-rumped Warbler	2	53	↑
14	Eastern Bluebird	2	52	
15	Dark-eyed Junco	4	51	↓
16	Chipping Sparrow	6	49	
17	American Crow	3	44	
18	White-throated Sparrow	3	40	↓
19	Brown-headed Cowbird	6	40	
20	Pine Warbler	2	37	
21	White-breasted Nuthatch	1	37	
22	House Sparrow	6	36	
23	Brown Thrasher	1	36	
24	Red-winged Blackbird	10	34	↓
25	Ruby-crowned Kinglet	1	33	

Average Flock Sizes for Mourning Dove



Mourning Dove flock sizes are in decline in the Southeast (red), Central (Green), Northeast (orange), Northwest (blue), and Southwest (pink) regions.

One species near the bottom of the Top-25 list in the Southeast last season was the Brown Thrasher. Brown Thrashers are consistently seen at around 30–35% of FeederWatch sites in the Southeast, and last year was no exception: thrashers were reported from 31% of sites. However, that number is on the lower end for this species. Thrashers have plumage that resembles thrushes–such as Hermit Thrushes, which many of you may also see in the Southeast region, but thrashers are members of the family Mimidae, which includes mockingbirds and catbirds. That family gets its name from the tendency of its members to mimic–they copy sounds they hear and have extensive vocal repertoires.

Suvata Roy

The Brown Thrasher can sing up to 2,000 different songs!

One species in decline in the Southeast region was the Mourning Dove. Although a very common species, they were reported at only 75% of sites compared to their historical average of being reported at 85% of sites in the Southeast. Mourning Doves are a popular game bird, and hunters are estimated to shoot more than 20 million every year, but whether hunting contributed to their decline is not known. However, we do know from behavioral interaction reports submitted by FeederWatchers that these doves are one of the most peaceful species for their body size, making the saying "peaceful as a dove" ring true.

Another common feeder visitor, American Goldfinches, have also been showing declines across their range. The cause of this decline remains unknown as well.

Northwest Region

In the Northwest region last FeederWatch season, we saw some subtle changes in the Top-25 species: Red-breasted Nuthatches and Chestnut-backed Chickadees were reported at slightly fewer sites than usual, and Anna's Hummingbirds and Varied Thrushes were reported at slightly more sites. Many of the species that we observe have consistent patterns over time, which is good news because it means their populations are relatively stable. For example, Downy Woodpeckers show slightly increasing population trends in the Northwest, Southwest, and Southeast regions and stable trends in the Central and Northeast regions. Maintaining an insect-friendly yard is helpful to Downy Woodpeckers (and basically every other bird species!) because they eat lots of insects hidden in tree bark when they aren't feasting on seeds and suet.

Another species of woodpecker that is doing well in the Northwest region is the Northern Flicker. In the West, they are sometimes called "red-shafted" flickers because the feathers of their underwings and tails are red. In the East, they are called "yellow-shafted" for the same reason. They used to be considered different species, but it turns out that they hybridize so extensively where their ranges overlap that we now consider them to be different forms of the same species.

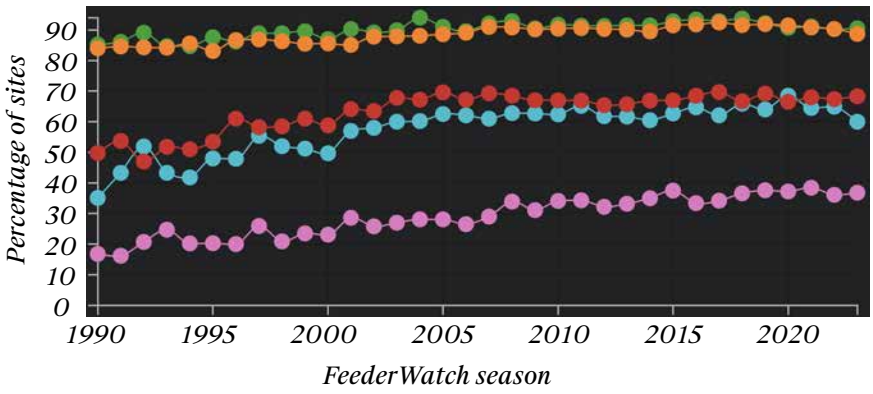
Laura Frazier

A female Downy Woodpecker on a snowy suet feeder.

TOP-25 LIST: 1,610 SITES REPORTING

Rank	Species	*Average flock size*	*Percent of sites*	*Trend*
1	Dark-eyed Junco	8	89	
2	Northern Flicker	2	81	
3	Black-capped Chickadee	3	81	
4	House Finch	6	72	
5	American Robin	3	64	
6	Downy Woodpecker	1	61	
7	Red-breasted Nuthatch	1	59	↘
8	Spotted Towhee	2	58	
9	Song Sparrow	1	56	
10	Anna's Hummingbird	2	55	↗
11	European Starling	6	51	
12	Steller's Jay	3	46	↘
13	American Crow	3	45	
14	American Goldfinch	6	45	
15	Varied Thrush	2	44	↗
16	House Sparrow	10	42	↘
17	Chestnut-backed Chickadee	2	41	↘
18	Bushtit	11	37	
19	White-crowned Sparrow	4	36	
20	Golden-crowned Sparrow	4	32	
21	Hairy Woodpecker	1	30	
22	Eurasian Collared-Dove	4	27	
23	Mourning Dove	4	25	
24	Fox Sparrow	2	24	↘
25	Black-billed Magpie	3	24	

Percentage of Sites Reporting Downy Woodpeckers

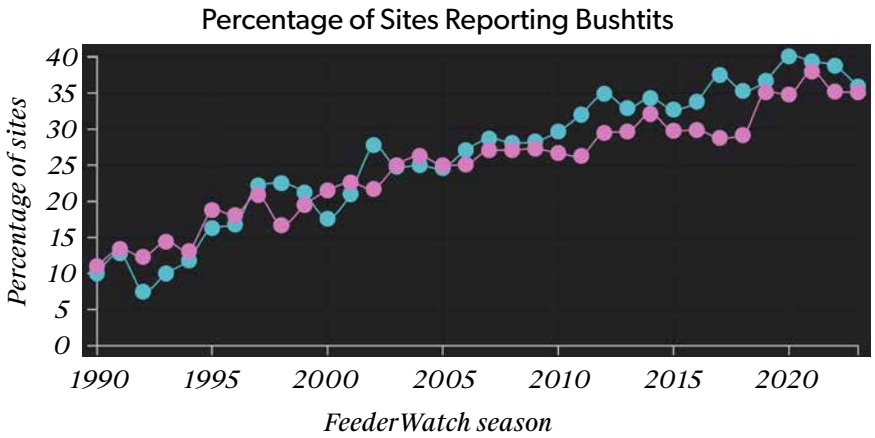


Downy Woodpeckers show stable or slightly increasing population trends throughout their range in the Northwest (blue), Northeast (orange), Central (green), Southwest (pink), and Southeast (red).

Southwest Region

TOP-25 LIST: 1,603 SITES REPORTING

Rank	Species	*Average flock size*	*Percent of sites*	*Trend*
1	House Finch	7	89	
2	Dark-eyed Junco	5	74	
3	American Robin	3	61	↗
4	Mourning Dove	6	60	↘
5	White-crowned Sparrow	6	55	
6	Lesser Goldfinch	6	55	
7	Northern Flicker	2	50	
8	House Sparrow	7	45	↘
9	Spotted Towhee	2	45	
10	Anna's Hummingbird	2	44	
11	Eurasian Collared-Dove	3	42	
12	White-breasted Nuthatch	1	39	
13	American Goldfinch	6	39	↘
14	Downy Woodpecker	1	37	
15	American Crow	4	37	
16	Bushtit	7	36	
17	Yellow-rumped Warbler	2	34	
18	California Scrub-Jay	2	33	
19	Black-capped Chickadee	2	32	
20	Cooper's Hawk	1	32	
21	California Towhee	2	31	
22	European Starling	5	26	
23	Bewick's Wren	1	25	
24	Oak Titmouse	1	23	
25	Pine Siskin	7	23	↘↘



Bushtits have been consistently increasing in the Southwest (pink) and Northwest (blue) regions.

The Southwest region saw a big decrease in Pine Siskins last season, a pattern observed across the continent. Siskins are an irruptive species, meaning some years they show up in high numbers in the Southwest and some years they are almost completely absent, staying instead in the more northern parts of their range or at higher elevations. They are a cold-weather-loving species, and they have some neat adaptations for surviving in cold climates. One of those adaptations is the way they nest: females brood their eggs continuously, and the male will feed her while she is on the nest. Another adaptation is that on especially cold nights they can raise their metabolic rate to stay warm, a strategy that comes at a cost: they need energy reserves, so they put on much more winter fat than other songbirds of similar size. No wonder they love nyjer seed so much!

A species that is on a consistent rise in the Southwest and Northwest regions is the Bushtit. These little gray birds are exceptionally social, staying in large flocks and even sleeping together in communal nests when they are not breeding. When they are breeding, the sociality doesn't cease. It isn't just a pair that raises offspring but also "helpers" that are typically other adult males. This phenomenon is called cooperative breeding and is something that happens in only about 3% of bird species.

Hui Sim

Bushtits are an especially social species, as can be seen here with this snuggling family group.

Central Region

The big change in the Central region last season was in Red-breasted Nuthatches. They showed a big increase compared to the average across previous seasons, which was also true in the Northeast region. It is normal for them to show irruptive patterns—common at feeders some years and rare other years—because they follow fluctuating natural food sources. Their relative, the White-breasted Nuthatch, doesn't show such irruptive movements and tends to stay in one place its whole life. In fact, pairs stay together and defend territories year round, which is why you typically won't see more than one or two White-breasted Nuthatches at your feeder at one time; most sites only have room for one pair.

One species that has not changed its place in the top rankings of the Central region since FeederWatch started is the Blue Jay. We often forget to write about species like Blue Jays in the Regional Roundup because they don't show big changes in their numbers year after year. That often means their populations are relatively stable, which is good news! Nevertheless, Blue Jays have been in very subtle decline for several decades, perhaps not noticeable at your count site, but if you look at a graph of the average flock size over time, you can see that the steady decline. What is causing this decline is unclear.

Laura Frazier

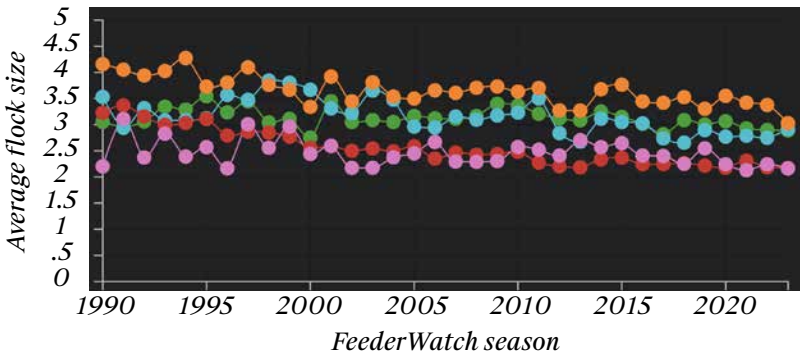
Red-breasted Nuthatches tend to show up in greater numbers in the Central and Northeast regions every couple of years.

TOP-25 LIST: 1,258 SITES REPORTING

Rank	Species	*Average flock size*	*Percent of sites*	*Trend*
1	Chickadee*	3	94	
2	Dark-eyed Junco	6	91	
3	Downy Woodpecker	2	90	
4	Blue Jay	3	86	
5	White-breasted Nuthatch	2	78	
6	House Finch	5	75	
7	American Goldfinch	7	74	
8	Northern Cardinal	4	73	
9	House Sparrow	11	71	
10	Red-bellied Woodpecker	1	67	
11	Hairy Woodpecker	1	64	
12	American Robin	3	61	↘
13	Mourning Dove	4	57	
14	European Starling	6	52	
15	Red-breasted Nuthatch	1	52	↗↗
16	Northern Flicker	1	45	
17	American Crow	3	43	
18	White-throated Sparrow	3	36	
19	Common Grackle	6	35	↘
20	Red-winged Blackbird	7	33	
21	Purple Finch	4	31	↘
22	Tufted Titmouse	2	29	
23	Pileated Woodpecker	1	26	
24	American Tree Sparrow	4	25	
25	Brown-headed Cowbird	3	24	

*Chickadee combines Black-capped Chickadee and Carolina Chickadee.

Reported Flock Sizes for Blue Jay



Blue Jays have been in a slow and steady decline for at least as long as FeederWatchers have been collecting data. Graph shows flock sizes in the Northwest (blue), Northeast (orange), Central (green), Southwest (pink), and Southeast (red) regions.

Distinguishing Chipping and Clay-colored Sparrows in Winter

BY ANNE MARIE JOHNSON, CORNELL LAB OF ORNITHOLOGY

KERRY PRENDERGAST

Clay-colored Sparrow, left, and a ChippingSparrow, right, on the same feeder in Brown Mills, New Jersey.

Many sparrows can be difficult to tell apart, and perhaps two of the most challenging sparrows to distinguish are Clay-colored (*Spizella pallida*) and Chipping (*Spizella pusilla*) Sparrows in winter. Clay-colored Sparrows look about the same year round, but Chipping Sparrows have fairly different winter and summer plumages, and it's primarily in winter when they look very similar to Clay-colored Sparrows.

During the breeding season, the Chipping Sparrow's unstreaked chestnut crown, bold white eyebrow stripe, black eyeline, and dark bill are fairly easy to distinguish from the more muted colors of the Clay-colored Sparrow. However, in winter their eye stripes are much duller, the chestnut cap is often obscured, and the bill may look pink, making it look very much like a Clay-colored Sparrow. The best way to distinguish the two species in winter is the length of the eyeline, which extends to the bill in Chipping Sparrows but stops at the eye in Clay-colored Sparrows. However, this field mark can be maddeningly hard to see on a little sparrow foraging on the ground. There are a few other differences, listed in the chart below, but they are subtle, variable, and often also hard to see.

Fortunately, these two species don't overlap much in winter, with the winter range of the Clay-colored Sparrow limited primarily to portions of Texas, New Mexico, and Mexico, so most FeederWatchers don't have to worry about identifying them for most of the FeederWatch season. However, occasionally Clay-colored Sparrows have been found in winter in coastal regions of the continental United States and as far north as southeastern and southwestern Canada. Chipping Sparrows winter throughout the southern U.S. and as far north as southern New England in the East, making them much more likely to show up at a FeederWatch site than Clay-colored Sparrows.

JEAN AUBÉ

A rare Clay-colored Sparrow in La Sarre, Quebec, this past April. Note that the dark eyeline doesn't extend to the bill.

BOB VUKNIC

Chipping Sparrow in Crossville Tennessee. Note how dark eyeline extends to bill.

More Confusing Sparrows

Chipping Sparrows also look similar to Field and American Tree Sparrows in winter. See the 2019 issue of *Winter Bird Highlights* for an article about how to distinguish these three species at feederwatch.org/explore/year-end-reports/. Find tips for distinguishing Chipping and American Tree Sparrows at feederwatch.org/learn/tricky-bird-ids/american-tree-sparrow-and-chipping-sparrow.

Distinguishing features in winter

Clay-colored Sparrow

- brown crown with black streaks and a central buffy or white stripe
- gray nape
- mostly white breast with buffy sides
- dark stripe that starts at back of eye and extends to nape

Chipping Sparrow

- brown and tan crown with black streaks and sometimes a buffy central stripe
- gray nape that typically extends to and blends in with grayish breast
- black or dark brown eyeline that extends from bill to nape

FeederWatcher Stories

Habitat that Benefits Backyard Birds

When FeederWatchers submit counts through the Your Data section of the FeederWatch website, they are invited to submit stories in response to monthly prompts and be entered in a drawing to win prizes. One of the prompts asked participants how they make their backyard bird friendly. We posted all the drawing winners at feederwatch.org/blog, but we received so many great responses to this prompt that we wanted to share a few more.

Adding Native Plants

This past year, my husband and I took our first steps toward providing a more bird-friendly backyard. We carved out some space in our lawn to plant native and Florida-friendly plant species. Pentas, lanceleaf, Chipola coreopsis, lakeside sunflowers, milkweeds, firespike, beautyberry, brickellia, and arrowwood viburnum blessed us with beautiful flowers, berries, and a few new visitors. Our summer was full of discovering new butterflies, spiders, flies, and other insects attracted by the new food sources. And during the FeederWatch season, we were privileged to host our first Rufous Hummingbird, which enjoyed our pentas; our first American Robin, which enjoyed our water feature; and our first House Wren, which dropped by our bird feeder. While adding these plants may not have been the sole reason we saw new species, I like to think it made our yard feel a little more like home to them. We look forward to adding more native habitat this year and seeing who stops by to check it out."

–Lisa Halladay, Tallahassee, Florida

ROSALIE JENSEN

Hermit Thrush at a birdbath in Dahlonega, Georgia.

Maintaining a Bird-Friendly Habitat

We have a variety of foods and feeders to appeal to different species of birds. We also keep water available year round, using a variety of fountains and birdbaths in the summer and a heated birdbath in the winter. We planted several species of native shrubs, which produce berries that birds eat, and we also have mountain ash and crab apple trees. In addition, there are numerous mature trees of four native species, which provide shelter and food sources. Our garden contains both seed-bearing plants for birds and nectar flowers favored by hummingbirds. The leaves are left in the garden in spring and fall, for the benefit of birds that like to forage in the leaf litter, and leaf mulch is used in the summer as a natural ground cover. We try as much as possible to make our yard welcoming to birds, and we are rewarded by year round avian visitors.

–Virginia Stephenson, Winnipeg, Manitoba

Improving a Bird Haven

Three years ago I moved into a new home with a small but lovely garden, and when spring arrived I noticed many more bird species than what I had seen in my previous garden. Being homebound during the COVID-19 pandemic, I had more time to watch the birds and began to learn to identify species and songs. To attract more birds, I set out different types of feeders and tested a variety of seed types. I have a birdbath and a running water feature that birds drink from and bathe in. There are hedges along the back of the yard that the sparrows and cardinals enjoy hanging out in. We have a large tree that attracts warblers and is used as a perch by many birds as they decide which feeder to visit. I have attracted hummingbirds with a variety of flowers that bloom from April through October. This winter I added a heated birdbath, and my garden became popular for birds when the temperatures dropped below freezing. They enjoy the warmed water and suet that are always out there for them.

–Leigh-Ann Bedal, Erie, Pennsylvania