

Data Collecting at Your Favorite Local Birding Spot

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Most of us spend time birding in the normal hot spots: Plum Island in the late summer in search of shorebirds, Bolton Flats in the fall looking for sparrows and warblers, Halibut Point in the winter searching for ducks and alcids. Many of us also have our favorite patch of land near our homes where we walk two or three times a week, checking out the birds while getting some exercise. Here we have some sense as to what is around and when.



But do we truly understand the avian life in our favorite patch? Do we know that the Gray Catbird in late October is an unusual occurrence? Do we know that the large number of Golden-crowned Kinglets in November is an exceptional number, or that it actually corresponds to counts found typically in the area? Do we know what birds use our patch to breed in and what birds only use it as a place to feed while raising young elsewhere? What do we really know about our favorite patch?

In this article, I will share with you the censusing methods that we use at the Broad Meadow Brook Wildlife Sanctuary in Worcester, and then will give you some ideas on how you can apply them to your own favorite patch. In addition, I hope to give you some ways to use the data recorded, and some places to send these data to help others make the most of the information that you record.

History

Since June 1990, the birding volunteers at Broad Meadow Brook have been taking a census of the birds that appear in the Sanctuary, and we now have over 50,000 records on file, representing over 175 species. Most of the data have been recorded during spring and fall migration, with many other reports scattered throughout the summer and winter months, including those from an annual breeding bird survey done one day each June and the annual Worcester Christmas count.

After ten years of collecting data, we are beginning to get a good picture of the use of the sanctuary and of the changes that have occurred even during this short period, both locally and more globally. We are especially seeing the importance of this large area of open space during migration. Broad Meadow Brook is a green oasis in an otherwise urban sprawl, just as Mount Auburn Cemetery is to the Boston/Cambridge area and Central Park is to New York City. We get a good number of migrants stopping over on their way north and especially south. In fact, Broad Meadow Brook has become one of the most consistent places to find Connecticut Warbler in the state in recent years.

In addition to the regular monitoring, we are carrying out a number of other projects. In conjunction with a Breeding Bird Atlas, we have identified over sixty-five species as being confirmed or probable breeders on the Sanctuary. Also, I am actively involved in the Birds of Forested Landscapes project that is jointly being carried out by the Cornell Laboratory of Ornithology and Partners in Flight. This project, which is a continuation of Project Tanager, has the purpose of seeing what effects forest fragmentation has on forest species. The study groups are thrushes and accipiters. Finally, another volunteer is regularly monitoring our bluebird boxes.

Methods

The basic method we use is actually quite simple, and although not totally scientific, is still effective. What's more, it allows anyone who wishes the chance to participate, since any data collected are added to the database. While out in the sanctuary, we count all birds seen and heard, just as on a Christmas count. The sanctuary is broken up into four separate regions, and records are kept for each region during a given walk. Even if a person only covers a couple of regions, or even only part of one region, the data are still recorded and turned in.

In addition, any odd sightings, such as unusual species, species seen at unusual times of year, or interesting behavior, are documented. One thing that we especially watch for is any sign of breeding behavior. Using the criteria established for the standard Breeding Bird Atlas (possible, probable, confirmed), we try to determine what species breed on the sanctuary and how commonly they breed.

Because we do not use a scientific method such as point or transect counts, we cannot draw the specific conclusions that either of these methods would allow. However, since there is no formal procedure, our method allows any person who birds the sanctuary a chance to participate in the study, whether that person has been birding for years or is just starting out. This is especially nice for beginning birders because it encourages them to get involved with and contribute to an ongoing study, even though they may not be able to identify all of the birds they see or hear. Although we do not get an actual population number for most species, we are still able to see any trends developing. Also, by having four separate regions, we have a chance to learn more about what birds utilize which areas of the Sanctuary.

Storing and Analyzing Data

Once collected, data need to be conveniently stored. In the age of technology, this is certainly much easier than copying down copious notes in a notebook. Our data are currently entered into a Microsoft Excel file. Since Excel is a spreadsheet program, it allows handy manipulation of the data.

With ten years of data collected, we now have just enough to begin looking at what we have recorded. Recently, I have redone the sanctuary's bird checklist, using both data collected at the sanctuary and other known information about Worcester County and Massachusetts. This checklist is available at the sanctuary's Visitor Center. In addition, I am in the process of completing a much longer and more

involved project: a booklet on the birds of Broad Meadow Brook. This booklet will give a summary of the data collected in an easy-to-read form so that volunteers as well as others can see what has been recorded. (The booklet may be in print as of the publication of this article.) Finally, we are now able to begin looking for long-term trends for individual species. The future is certainly exciting.

A good example of a change in the sanctuary, and one that corresponds with data recorded around the state, involves the Red-bellied Woodpecker. The first record of Red-bellied Woodpecker at Broad Meadow Brook was in April of 1992, two years after we began monitoring the sanctuary. For the next several years, Red-bellieds were occasionally recorded. Then, in 1997, a breeding pair was found bringing food to young. In 1998 we had two pairs of breeding Red-bellieds, and in 1999 we may have had three different pairs. Now this species is being recorded on almost every trip out. Red-bellied Woodpeckers seem to be moving in at Broad Meadow Brook, just as they are everywhere else in Massachusetts. (For more information on this species, see the article written by Jerome Jackson and William Davis in the February 1998 issue of *Bird Observer*.)

Applying the Methods to Your Local Patch

As you can see, the methods we use are quite simple to work with. All you need is a pen or pencil, a recording notebook, and the ability to count what you see and hear (and, of course, your binoculars and field guide). Then off you go!

If your local patch is quite large or has more than one habitat, you may wish to break it up into more than one region. For example, if part of the walk takes you through woods, part of it takes you along a set of power lines, and part takes you around a pond, you may want to keep separate counts for each of these three habitats. Keeping track of what happens in a given habitat can be quite useful, especially if direct change such as succession, or indirect change such as nearby development, takes place. And of course, keep track of any bird behavior that you observe, especially when it comes to breeding.

At Broad Meadow Brook, we have a set form that all data are transferred to at the end of a walk, and you might want to create something like this yourself. Then the data you collect will be on a neater hard copy. You will want to include information such as date, time, and weather, since this information is just as important as numbers. (An abbreviated version of our form is shown below.)

Again, once you record your data, you need a place to store it. Obviously, you will want to keep it on a computer if you can. If you enjoy playing around with computer software, then you can design your own database templates to enter your data. If not, you can either find someone else to do the dirty work for you, or you can work with something simpler such as a spreadsheet program. Many of these, such as Microsoft Excel, also have a database application. Finally, there are several bird-listing programs out there. Since I have a Macintosh, I keep my life lists using Bird Brain. However, if you work with PCs, you have more options, such as AviSys or BirdBase. The one problem with these listing programs, though, is that there is not

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|---|----|----|----|---|-------------------------|----|----|----|---|
| DATE: _____ ROUTE: _____ OBSERVERS: _____ | | | | | | | | | |
| TIME: _____ WEATHER: _____ | | | | | | | | | |
| SPECIES | 1A | 1B | 1C | 2 | SPECIES | 1A | 1B | 1C | 2 |
| Cormorant, D.-crested | | | | | Phoebe, Eastern | | | | |
| Heron, Great Blue | | | | | Flycatcher, Gr. Crested | | | | |
|Green | | | | | Kingbird, Eastern | | | | |
| Vulture, Turkey | | | | | Vireo, Blue-headed | | | | |
| Goose, Canada | | | | |Yellow-throated | | | | |
| Duck, Wood | | | | |Warbling | | | | |
| TOTAL SPECIES: _____ | | | | | | | | | |
| REMARKS: | | | | | | | | | |

the flexibility that you get by doing things yourself, so make sure to ask around before choosing one of these programs.


Now that you have these data stored, what do you do with them? Well, to begin with, compare your numbers with those recorded by others in your area or around the state. This information is available on MassBird, the Voice of Audubon, and in *Bird Observer's* bimonthly Bird Sightings. See whether your numbers correspond to what others have recorded. Most of what you record will be similar, but you may come across a few surprises that may tell you more about the habitat and the birds' use of the habitat in your patch.

As for in-depth analysis, you will have to wait for several years. After about five years, you will begin to get a good idea of the avian life of your patch. Five years allow for any normal annual fluctuations in populations. After about ten years (two sets of five years), you can begin to look for any trends that are developing. That's when the real analysis begins.

More importantly, though, and long before you have to wait for the serious analysis to begin, you can share your data with others. As many of you know, I post my sightings from Broad Meadow Brook over MassBird (e-mail discussion list for Massachusetts), and ultimately these sightings find their way into *Bird Observer* and onto the Voice of Audubon (888-224-6444). I also send my sightings to Recent Sightings in Central Massachusetts, which is an excellent website put together by Rick Quimby: <<http://www.WPI.EDU/~rsquimby/birds/recent.html>>. Finally, at the end of the year, I send my sightings to *The Chickadee*, an annual publication of sightings in Worcester County put out by the Forbush Bird Club. Check with other birders in your area if you do not know which destinations you should include.

Conclusion

Although the search for rarities does bring personal enjoyment, I find that regularly monitoring a single site is just as rewarding, if not more so. Becoming familiar with a location and watching the avian life change, both seasonally and over many years, adds considerable information to my understanding of the life of birds. What's more, ornithology is very dependent on data gathered by amateurs, and thus the information collected is quite valuable to the scientific community.

I would strongly encourage anyone who has an hour or two a couple of days a week to regularly monitor one location, counting everything seen and heard, keeping track of the data over time, and sharing the information with others. Not only will you learn a lot about the birds in that location, but you will also be adding information to the ornithological community. Better, you will ultimately help in the preservation of birds. 

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