



Monitoring Birds at Important Bird Areas



Instructions - 2021

Welcome to IBA Bird Monitoring: Birding with a Purpose!

Monitoring bird populations in Maryland's network of 43 Important Bird Areas is an important task which can help bird conservation in several ways. Bird data can help land managers apply the most appropriate habitat management for the bird species present or help to build a case for protecting a site from development. At most IBAs the birds are not monitored, and it is only with the help of volunteers that we can begin to track bird populations. So, thanks for being an IBA Champion!

Monitoring birds with Point Counts

We will use point counts to measure the abundance of birds in IBAs. This is the most commonly used bird count method in habitats like forests where it is easier to hear the birds than to see them. Point counts work particularly well in the breeding season when birds are singing. The goal of our bird counts is to monitor breeding populations at the sites, rather than migrating or wintering birds.

Point counts are easy to do – you stand at an assigned point for a specified length of time and record every individual bird that you see or hear. For monitoring at IBAs we will count for 5 minutes at each point. The points are arranged along a route that can be walked by the observer and there are a specified number of points that should be completed in a morning's survey. We will use paper field forms to record bird data.

In this document, you will find:

- I. How to find your survey routes and survey points
- II. Considerations before you survey
- III. Survey protocol instructions
- IV. Entering and submitting data

Documents you will need (available at :

- 1) PDF Maps of your IBA routes and/or close-up maps of specific routes
- 2) Volunteer route assignments
- 3) Excel file containing point names and coordinates
- 4) Datasheet
- 5) Volunteer & Protocol Instructions (*this document*)
- 6) Vehicle placard

I. NAVIGATION OF ASSIGNED ROUTES AND SURVEY POINTS

Each IBA monitor is assigned a survey route(s) with specific survey points. It is your responsibility to make sure your point counts are done in the correct location. There are various methods to navigate to your assigned points.

These include:

- 1) Using smart device and easy to use geo-coded maps (preferred method, instructions below)
- 2) Using a GPS with the provided coordinate points & paper map for the trail routes
- 3) Using already flagged points along with the paper map for the trail routes

We strongly recommend you use the smart device app; it is very easy to use and learn. Another option is to use a GPS if you have one. See below for instructions.

- **Using the smart- device app called Avenza Maps**

Avenza Maps is a **free, user-friendly app** that can be downloaded to **any smart phone or tablet** (iOS, Windows, Android). This application displays PDF maps, places them correctly spatially (like a GPS unit or Google Maps), and tracks your location on the map. The PDF maps of the IBA you were provided are geo-coded, which means they contain spatial information that Avenza can use to locate you spatially on the map as you are walking the routes. To use this map:

- 1) Download the app from your device's app store. Search for "Avenza Maps"
- 2) When you open the app, it will prompt you to create an account. You can skip this step by clicking the cross in the top right corner. You do not need an account to use this app.
- 3) Go to your email and find the map of your assigned IBA we provided you. Or go to marylandbirds.org/iba-monitoring-resources. The IBA maps are all located here.
- 4) On iOS products, you can click and hold the PDF map, and it will give you an option to open it with Avenza. Select "Import with Avenza Maps" and the app will open it.
 - a. Tip: You have a limit of 3 maps in Avenza before you need to upgrade to a paid account, so if you already have 3 imported maps in the app, you will need to delete these first before importing.
- 5) On Android Products, download the app from the Google Play store. Then, open your email and click on the map PDF. Once it is opened, find the menu to download the map. Open Avenza, and close the prompt window that asks you to sign in. Click on the orange plus sign at the bottom of your screen to import a map. Select "stored on device" and "internal storage", then find your download folder and select the PDF map you downloaded. It will upload it on the Avenza Map app.
- 6) The rest is very user-friendly! The arrow in the left corner is to track you as you are walking the route (it will not work if you aren't on the site).
- 7) If you are having trouble using this app, you can contact us or visit the Avenza support site: <http://www.avenza.com/pdf-maps/support>

- **Using a GPS to locate survey points and a paper map**

Our monitors are welcome to use GPS units if they are familiar with how to use them and have a unit available. Parks associated with IBAs may have a few to lend volunteers.

You should have received an excel table with point coordinates and names in the email also containing the PDF maps. Import these points into the GPS units to find them as you are doing your survey. You can print out the PDF maps to guide you on your route.

- **Using flagged points and a paper map**

Depending on the IBA you are monitoring, the associated park staff may have flagged the points for our volunteers. Check with us at the volunteer training. If so, you are welcome to use the printed PDF map to navigate your route(s) and survey points.

II. CONSIDERATIONS BEFORE YOUR SURVEY

- Collecting Accurate Scientific Data

- 1) Please carefully **review the survey protocol** provided. To collect valuable data, it is important that you are completely aware of guidelines, collection method, etc.
- 2) Try to **keep your data consistent**- clear days with no or little wind are the best days to collect data. Each route should be surveyed twice- once at the beginning of the breeding season, once at towards the end, so try to keep to the same time for both and similar weather.
- 3) **Refine your identification skills**- if you are an intermediate birder and could use some training, you may want to bring along a more advanced birder to help you identify birds by sound and sight. Try to practice before your survey, review the songs of the local breeding birds you are likely to encounter. Bring good birding guides and smart apps (like Merlin, Audubon Birds, iBird etc) on your device to help assist your survey.

III. POINT-COUNT SURVEY PROTOCOL:

When to count?

Each route must be surveyed twice at least a week apart during the bird breeding season:

First visit: May 25 – June 10

Second visit: June 11 – June 30

The goal is to count birds that are nesting at each site and avoid migrant individuals. Before May 25 migrating individuals are still passing through and we do not want to count these. After June 30, singing activity declines significantly and many birds would be missed.

Each point should be counted **twice** during the season so we can use the average count of the two visits. Visit your site **once before June 11** (May 25-June 10) and then again **between June 11 and June 30**. Please time your surveys to be **one week apart or more**.

Be sure to check the **weather forecast** before your survey visit. Bird surveys should not be conducted when it is raining or when it is windy (>12mph) because rain and wind reduce bird activity so much that you will not be getting an accurate sample of the bird community. For more details see “Weather” section below.

Complete your point counts **between 5:45am (sunrise) and 9:30am** – these are the hours of greatest bird activity. Each array of points should take about 2 hours to cover so as long as you arrive at the first point by 7am you should have time to complete the route before 9:30.

Field equipment you will need:

- 1) *Binoculars.*
- 2) *Clipboard.*
- 3) *Point count data forms.* You will need up to 1 form per point for a morning’s survey.
- 4) *Survey route map:* The route map, provided to you by the IBA program, shows the location of the points and the walking route between them.
- 5) *Sharp pencil and eraser:* It is best to use pencil, not pen, on the data form in case you need to make corrections.
- 6) *Wrist watch or other time-keeping device:* You will need to time your count at each point to exactly 5 minutes. A wrist watch is recommended as it is quicker and to check than digging out your phone from a pocket.
- 7) *Smart Phone, Tablet, or GPS unit:* Needed for navigating between points if you have selected this method of navigation.

In the field

Filling in the data form – When you begin a new data form fill in the site name (same name as on field map), observer (put both names if 2 people are present), date and the sequence of this visit (1st of season or 2nd of season).

At each survey point:

Point ID – Write the correct identification code for the point (as it appears on the survey route map) in the first column.

Weather - Use the Beaufort scale (below) to record **wind** strength on the survey form. Only conduct the bird count if the wind is less than 13 miles/hour (Codes 0-3). The Beaufort scale codes are also described at the bottom of the data form.

<i>Code #</i>	<i>miles/hr</i>	<i>Description</i>
0	<1	Smoke rises vertically
1	1 - 3	Wind direction shown by smoke drift
2	4 - 7	Wind felt on face; leaves rustle
3	8 - 12	Leaves, small twigs in constant motion; light flag extended
4	13 - 18	Small branches move (DO NOT SURVEY)
5	19 - 24	Small trees begin to sway (DO NOT SURVEY)

Also fill in the condition of the **sky** in the appropriate column at each point as you arrive at it. Sky codes are described at the bottom of the data form.

Survey Time - At each point note the time at the beginning of your count. Be sure to limit your count to exactly 5 minutes. **We are dividing this 5-minute count into two separate recording periods:** the first 3 minutes and the final 2 minutes. The reason for this is that it provides a

measure of how detectable each species is within a given timeframe (birds are silent/hidden for some of the time and may go undetected), and this will enable us to get a better estimate of how many birds of each species are actually present at the site.

Recording bird using the split-time count– You will need to keep a close watch on the time so as not to miss when the first time period ends at **3 minutes**. For all birds detected in the first 3 minutes place a check mark in the 0-3 mins column. When 3 minutes has passed and you begin the 3-5 minute period, remember to record all detections in the 3-5 minute time period columns.

The example completed data sheet illustrates how to record birds in the two time periods. On the example, at point E1 the observer heard a Hooded Warbler singing in the first (0-3 mins) time period and then detected a second singing Hooded Warbler after 3 mins. The observer detected Gray Catbird and Carolina Chickadee in the 3-5 mins period, which had not been detected in the first (0-3 mins) period.

Counting and recording birds – Identify and record all birds that you detect during the count period, whether you see or hear them. As you see or hear each new species write it clearly in the appropriate column. For each species keep a tally of the number of individuals you detect – tally those singing separately from those not singing, by marking them in the appropriate columns. You can tally each bird as you first detect it with separate strokes but make sure to total these in each column and indicate a clear total for those singing and not singing for each species at the end of each count. See the example completed data sheet below.

IF you are familiar with and comfortable using the 4-letter alpha codes for species, you can use those. See https://marylandbirds.org/s/4-letter-codes-2020_english-name.pdf for the complete list of codes for North American birds.

We also want you to record Priority Species you encounter *between* points in the bottom section of the sheet. If you see or hear one of these species (listed at the bottom of this sections), record the two points you are between, the species, and whether you heard or saw it. There is room for short notes if needed.

Hints and advice:

- Most of the birds you detect will be by ear, either singing or calling. You will see only a few of the birds. Before you head out into the field be sure to review the songs and calls of the birds you expect to encounter so that you can identify them quickly in the field.
- You will need to listen and watch carefully not only for each new species but also for additional individuals of species you have already recorded. We want to measure abundance of all species. It can be tricky to know if a bird in a new location is a new bird or one that has moved – try to keep track of all individual birds, and use your best judgement.
- Record even individuals that are distant from the point where you are standing but focus first on those nearby. We have made sure that the points are at least 300m (approx.300 yards) apart, so it is unlikely that a bird heard at one point will also be heard at an adjacent point.
- If a lot of birds are active, then your count can get busy and there will be a lot to keep track of (birds and time) and write down – 5 minutes can fly by! It is a good idea to do several practice surveys the day before you do your assigned survey.
- You can record observations for several points on one sheet in order to save time and paper, but if you think you may need more lines for a point than are available it is a good

idea to start on a new sheet so you are not switching back and forth between data sheets. You will likely be able to fit two points on a data sheet, or maybe 3 on a quiet day.

- If you make a mistake it may be quicker to cross it out and go on to the next line on the data sheet than to erase.

IV. ENTERING & SUBMITTING DATA

We would greatly appreciate it if you could enter the data from your field datasheets into the computer, using the excel data template that we provided. *When entering the species name, please select the species name from the drop-down menu.* Our analysis tools are case sensitive and require capitalized species names (e.g., Red-bellied Woodpecker, Blue Jay, etc.).

In addition, please send in your field data sheets. Scan your datasheets and e-mail the PDFs to David Curson at dcurson@audubon.org. If you do not have a scanner, the Adobe Scan app works very well on smartphones. If you prefer to mail the original paper field data sheets, please photocopy the forms first as a back-up. You can mail them to David Curson at the address provided below.

Thank you for counting birds at Maryland's IBAs! If you have any questions, please call or e-mail us.

David Curson Audubon MD-DC 2901 East Baltimore Street, Box #2 Baltimore, MD 21224 <i>Telephone:</i> 410-558-2473 <i>E-mail:</i> dcurson@audubon.org	Chris Eberly Maryland Bird Conservation Partnership 177 Admiral Cochrane Drive Annapolis, MD 21401 <i>Cell phone:</i> 540-270-5248 <i>E-mail:</i> director@marylandbirds.org
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Example point count data sheet.

IBA Point Count Data Form - 2021 Audubon MD-DC / MBCP	Count for 5 minutes total, in two time-periods.
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Site Name: Parkers Creek / ACLT

Date: 5/27/2021

Observer(s): Chris Eberly

Survey Visit (circle): 1st 2nd

Point ID	Start time	Sky	Wind	Bird Species (Record all species)	0-3 minutes		3-5 minutes	
					singing	not singing	singing	not singing
E-1	0612	0	1	Northern Cardinal	11 (2)			1
				Downy Woodpecker	1			
				Red-eyed Vireo	111 (3)			
				Tufted Titmouse		1		
				HOWA [Hooded Warbler]	1		1	
				NOPA [Northern Parula]	1			
				CARW [Carolina Wren]	11 (2)			1
				Gray Catbird			1	
			Caroline Chickadee				11 (2)	
E-2	0623	0	1	Gray Catbird	11 (2)			
				NOCA [Northern Cardinal]	1			
				WATH [Wood Thrush]	11 (2)			
				ACFL [Acadian Flycatcher]	1			1
				BLJA [Blue Jay]	11 (2)			
				HOWA			1	
			American Redstart			1		

Species ¹ Observed Between Points (Priority Species only - see list below)				
Between Pt	and Pt	Species	# singing	# seen
E-1	E-2	Wood Thrush	1	
E-2	E-3	Barred Owl	1	

¹ Cerulean / Kentucky / Hooded / Prothonotary / Black-and-white / Worm-eating / Prairie / Blue-winged Warblers, Louisiana Waterthrush, Northern Parula, American Redstart; Summer Tanager; Barred Owl; Broad-winged Hawk; any nightjar species; Red-headed Woodpecker; Black-billed Cuckoo; Brown Creeper; Wood Thrush

Sky code: 0=clear, few clouds; 1=partly cloudy; 2=cloudy or overcast; 4=fog or smoke; 5=drizzle; 7=snow; 8=rain

Wind code: 0=smoke rises vertically; 1=wind direction shown by smoke drift; 2=wind felt on face, leaves rustle;

3=leaves, small twigs in constant motion, light flag extended;

4*=raises dust and loose paper, small branches are moved, 5*=small trees in leaf sway *DO NOT SURVEY

