

PIEDMONT BIRD SURVEY PROTOCOL

Survey dates: May 24 – June 22

Time of day to conduct surveys: 5:30 am – 9:00 am



Pre-survey Wait Period	2	Wait 2 minutes prior to starting survey
Number of minutes at each point:	5	Separated into 3- and 2-minutes
Number of visits per point:	2	One for scouting, one survey
Bird surveys	1	One at each point, May 24 – June 22
Habitat surveys	1	One during scouting or bird survey

Minimum number of points surveyed in one day: 10-15 points

Total number of points assigned per person 10-30 points, to be completed in one or two days

All citizen scientists are required to attend a training workshop. During this workshop, survey sites and points will be assigned and corresponding maps will be handed out. **Each point on the map will have a unique ID number that is composed of the Quad Number (2 or 3 digits), the block number (1 digit) and the point number (2 digits). This site ID is what links your birds data to its map location in our Geographic Information System (GIS).** We will make every attempt to match volunteers to their preferred counties. Volunteers are asked to survey at least 20 points, over a two day period. Do not try to be too ambitious and take on more than you can handle. If you feel that you are not able to survey that many points, please let us know. It will be much more difficult to reassign points after the surveys have been initiated.

2008 Piedmont bird survey
Developed by Nellie Tsipoura, New Jersey Audubon Society, and
Amanda Dey and Sharon Petzinger, NJ Division of Fish and Wildlife, Endangered
and Nongame Species Program

Introduction

(Excerpted from the NJ Wildlife Action plan)

The Piedmont Plains landscape spans a diagonal zone across New Jersey from the southwest and the Delaware River estuary to the northeast at Sandy Hook and north to the Palisades. This expansive landscape runs across Salem, Gloucester, Camden, Burlington, Mercer, Monmouth, Middlesex, Somerset, Morris, Union, Essex, Hudson, and Bergen counties. The Delaware, the Raritan, and the Hudson are the prominent rivers and watershed regions in the Piedmont Plains.

The Piedmont Plains landscape includes the Coastal Plain and Piedmont physiographic provinces of New Jersey. The New Jersey Inner Coastal Plain is within the Coastal Plain physiographic province and the subsection consists of terraced lowlands rising to crest-like hills and varies in elevation from sea level to 119 meters (390.4 feet). The average temperature varies from 10.5 to 12.2°C (51 to 54°F) and there are typically 165 to 225 days when the air temperature above 32°F (the growing season). The average annual precipitation is between 101.6 and 116.8 centimeters (40 and 46 inches).

The Piedmont Plains Landscape received nearly half of all development that occurred in New Jersey during the period between 1984 and 1995 – approximately 45,000 hectares (177.6 sq. mi.). Eight of the 10 most populated cities and municipalities in New Jersey are located in the Piedmont Plains Landscape, including Newark, Jersey City, Elizabeth, Edison Township, Woodbridge Township, Hamilton Township, Trenton, and Camden

Although extensive loss and fragmentation of grassland and forest habitats has increased the prevalence of smaller habitat patches, the Piedmont Plains Landscape still has extensive grasslands and agricultural areas (115,537 hectares, 446 sq. mi.), fragmented deciduous and mixed deciduous-coniferous woodlands of pine-oak, mixed-oak, oak-hickory, and hardwood swamps (107,848 hectares or 416.4 sq. mi. of forest, 74,866 hectares or 289 sq. mi. of forested wetlands), tidal freshwater and brackish marshes (40,954 hectares or 158.1 sq. mi. of wetlands), and extensive riparian areas through the entire landscape. It is important to note that habitats identified as “grassland” within the Landscape Map and throughout this document include agricultural lands and therefore, are not necessarily suitable habitats for grassland species. Similarly, scrub-shrub habitat is included in the “forest” and “forested wetlands” habitats on the Landscape Maps. The Delaware, Raritan, and Hudson are the prominent rivers and watershed regions in the Piedmont Plains. The tidal tributaries and wetlands of the Delaware River are characterized by a brackish estuary, from the Cohansey River to Camden, and freshwater tidal wetlands, from Camden north to Trenton.

Reporting Time

All volunteer hours spent performing piedmont bird surveys must be recorded on the provided timesheet. The project name is Piedmont Bird Surveys. In addition to the project name please record the Site ID, especially if you are working on more than one route/site. Make sure that all information is filled in every time you go into the field to work on this project. This includes scouting, habitat assessments, bird surveys, data entry, etc. Also be sure to record the miles traveled during each survey. NJAS must provide this timesheet to our partners at the Division of Fish and Wildlife. It is essential that this form be completed and returned to NJAS with you data sheets at the end of the field season. Thank you.

Scouting

Prior to the first bird survey, every point in each site needs to be scouted to determine suitability and accessibility. This initial visit must take place sometime between the workshops and the end of May.

Record habitat characteristics and dominant plant species at each point during this initial visit. Recording habitat is not meant to bog you down, it is a quick assessment of the dominant vegetative species, the habitat structure and habitat type. It should only take 20 to 30 seconds at each point (see habitat protocol for further details).

If a point is inaccessible or unsuitable, the point may be moved to suitable habitat at a nearby location. To move a point, choose a location with suitable habitat on your route map that is at least 0.5 mile (straight distance) from any other point. Points should be relocated to the nearest secondary road, and to the same habitat type as the original point (forest, shrub scrub, open field, wetland.) When you find the new point location, draw an arrow on the route map from the old point location to the new one and indicate why it was moved (developed, inaccessible, etc). Make sure to mark the new location on the route map or the aerial map and record the GPS coordinates and the units (UTM, decimal degrees, etc.). If there are no other suitable locations that meet the criteria to move a point, then mark it on the map with an X and indicate why it was not surveyed (developed, inaccessible, etc.).

PLEASE LET US KNOW (Nellie.tsipoura@njudubon.org) about any points that you move. If the area around the original point has been developed, please let us know immediately.

Bird Surveys

Make sure you are familiar with the songs of species likely to be seen during your surveys, and the points on identification. Some species are rather difficult to see through the vegetation or do not allow close approach for visual identification. We will provide CDs of songs to all participants in the training workshops, and you are encouraged to keep practicing. We recommend you use a good field guide for visual identification.

Each volunteer will be responsible for 10-30 roadside points along the road. Each point is a pre-determined location from which the observer conducts a survey.

Surveys should not be conducted during rain. Surveys should also not be conducted during high winds (greater than 12mph {Beaufort 3}, which is enough to constantly move leaves or twigs and to extend a light flag.) Try to survey all your points during a two day period (not necessarily consecutive days). Surveys will take place a half hour before to three hours after sunrise (approximately between 5:30 am and 9:00 am), during the breeding season, preferably from May 26th until June 24th.

Once the observer arrives at the survey point wait 2 minutes before beginning the count. This enables the observer to prepare for the count and allows the birds to calm down and return to normal activity. During the survey the observer stands at the point for 5 minutes and records on the data sheet all grassland bird species seen or heard. This 5-minute period is divided into two periods; a 3- and a 2-minute period. The observer records the species and number of birds seen or heard during the first 3 minutes separately from those encountered during the next 2 minutes. Record all birds as less than 100 meters or greater than 100 meters away from the survey point on the data sheet. ***Do not count longer than five minutes.*** Do not exceed the 5-minute time limit because you are sure a certain "good bird" is there and not calling -- it will probably be recorded some other year, and valid negative data are as important as positive data in this survey. Species recorded that are not found on the form should be added at the bottom. ***If you observe any birds before or after the 5-minute survey, write it down in the margin or blank spaces on the bottom of the datasheet with a "before" or "after" next to it.***

One and only one observer should conduct the count. Counting should be done from outside the car from a stationary point. Absolutely no method of coaxing birds should be used during the 5-minute survey period. This means no "spishing", tape playbacks or any other method of enticing a bird to sing or call or make itself visible. It is crucial that all surveys be done consistently. Target birds observed between stops should not be counted, but may be noted in the margin of the route map with a line indicating the location of the species. Such birds are of interest, but do not spend extra time pursuing them, as it is important to finish within the time limit; bird activity changes drastically after this time.

Be sure you record the survey site code, survey point number, observer, recorder (if applicable), date, start time and weather conditions on every datasheet.

Each survey will be undertaken singly or by two people. We prefer single observers because we do not want the volunteer's ability to concentrate on the birds to be compromised by the presence of another person. However, if you want to undertake the surveys with your birding partner, please take all precautions to avoid being distracted. Remember, only one person should be the primary observer. The second person can act as the recorder in this situation. If there are two observers, the primary observer says what she/he sees or hears to the recorder in a quiet voice and the recorder repeats back what she/he heard as the date is recorded. Only the birds seen and heard by the primary observer get recorded on the forms. ***If the recorder sees or hears a target species before or after the 5-minute survey, write it down in the margin or blank spaces on the bottom of the datasheet with a statement that this is a recorder observation.***

*****Note on Counting the Same Bird: The same bird seen/heard in the 3-minute portion of the survey, then seen/heard again in the 2-minute portion is ONLY recorded in the 3-minute period as this is definitely a single individual. If you are sure that a bird observed in the 2-minute period is different from the one observed in the 3-minute period, by all means record it as a different individual in the 2-minute time slot. Noting on the data sheet that you were sure two different birds were observed will help with our data entry.***

In all situations, avoid biasing the data by disturbing the birds. Walk out of your car quietly, approach the survey point cautiously, avoid unnecessary movements and try to blend in as much as possible.

The method by which the bird was observed can be recorded as S (seen) H (heard) or SH (both seen and heard). Make sure you record flyovers (birds flying over, not through habitat).

If females or juveniles are seen please note that information. Unless otherwise noted, we will assume that all detections are of singing males.

Habitat Surveys

At each point please describe general habitat characteristics of the area. Appendix I. (below) is a listing of the broad habitat categories. You can use the codes and record in the front of your data sheet, or circle the categories in the back of the data sheet.

First, write in the habitat class code (forest: F, scrub/shrub: SC, open field: O, emergent wetland: W, or developed: D). Next enter the type (for example, for forest type options are C: coniferous, D: Deciduous, M: Mixed), and the hydric (wetland) status. Then enter information on stand density or shrub cover. Finally enter as much information as possible on what the dominant species at the site are.

Data Entry

This year all observers will have access to NJAS's online data entry website. Contact Nellie Tsipoura for more instructions on how to use the data entry system. The system may not be set up yet.

Go to http://www.njaudubon.org/Research/CitizenScience/Piedmont_Surveys.html. At the bottom of the page you can click on **Enter Data**. This will send you to a new page. Click on the link: <http://www.njaudubon.org/PiedmontWeb>. At the bottom of the page click **Create a New Account**. Enter a User ID for yourself. Enter a password (at least 5 characters) and confirm that password. Enter your name, phone number and email address in the appropriate box. Nellie Tsipoura will provide **Site Password**. A page will open that asks you for the new User ID and password. Type them in, hit enter and you should be relocated to the data entry page. If you have any technical difficulties with this please let me know immediately so we can correct the problem. Once you have entered all of your data mail your hard copies to:

Nellie Tsipoura
New Jersey Audubon Society
Scherman-Hoffman Wildlife Sanctuary
11 Hardscrabble Road
P.O. Box 693
Bernardsville, NJ 07924

Thank you for your assistance and good luck with all of your surveys.

PLEASE MAIL ALL DATA SHEETS BY JULY 31, 2008

Appendix I.

Please use the following codes (in bold) to classifying the predominant habitat at each point.

HABITAT ASSESSMENT CATEGORIES

1. Habitat classes

F Forest -- area with at least 25% woody vegetation taller than 20'

<u>Type</u>	<u>Wetland</u>	<u>Stand density</u>
C – coniferous > 75% coniferous species	W - wetland	Closed (>75% canopy cover)
D – deciduous > 75% deciduous species	U -upland	Open (50-75% cover)
M – mixed	Unk - unknown	Sparse (<50%)

SC Scrub-shrub – are with at least 25% woody vegetation less than 20' tall

<u>Type</u>	<u>Wetland</u>	<u>Stand density</u>
C – coniferous > 75% coniferous species	W - wetland	Closed (>75% shrub cover)
D – deciduous > 75% deciduous species	U -upland	Open (50-75% cover)
M – mixed	Unk - unknown	Sparse (<50%)

O Open Field – open area with < 25% woody species cover

<u>Type</u>	<u>Wetland</u>
AF Abandoned Field	W - wetland
CR Cropland	U -upland
O/N Orchard/Nursery	Unk - unknown
P Pastureland	
L/S Lawn or Sod	
B Barren soil	

W Emergent wetland: open body of permanently standing water

<u>Type</u>	<u>Shrub cover</u>	<u>Wetland type</u>
F – freshwater	Heavy – > 50%	For example: Sphagnum bog, cranberry bog, Spartina, Phragmites, Cattail, Marsh elder, Open water
S – salt	Light – < 50%	

DE Developed 95% of area in housing, commercial, other human activities

Appendix II.

Weather conditions (from Breeding Bird Survey)

Beaufort Scale	Wind Speed in miles per hr.	Indicators of Wind Speed
0	Less than 1	Smoke rises vertically
1	1 to 3	Wind direction shown by smoke drift
2	4 to 7	Wind felt on face; leaves rustle
3	8 to 12	Leaves, small twigs in constant motion; light flag extended
4	13 to 18	Raises dust and loose paper; small branches are moved
5	9 to 24	Small trees in leaf sway; crested wavelets on inland waters

SKY CONDITION CODES:

0	Clear or a few clouds
1	Partly cloudy (scattered) or variable sky
2	Cloudy (broken) or overcast
4	Fog or smoke
5	Drizzle
7	Snow
8	Showers

Appendix III

Equipment Checklist

Clipboard Pencils

Forms

Bird count datasheet
Habitat Category Form

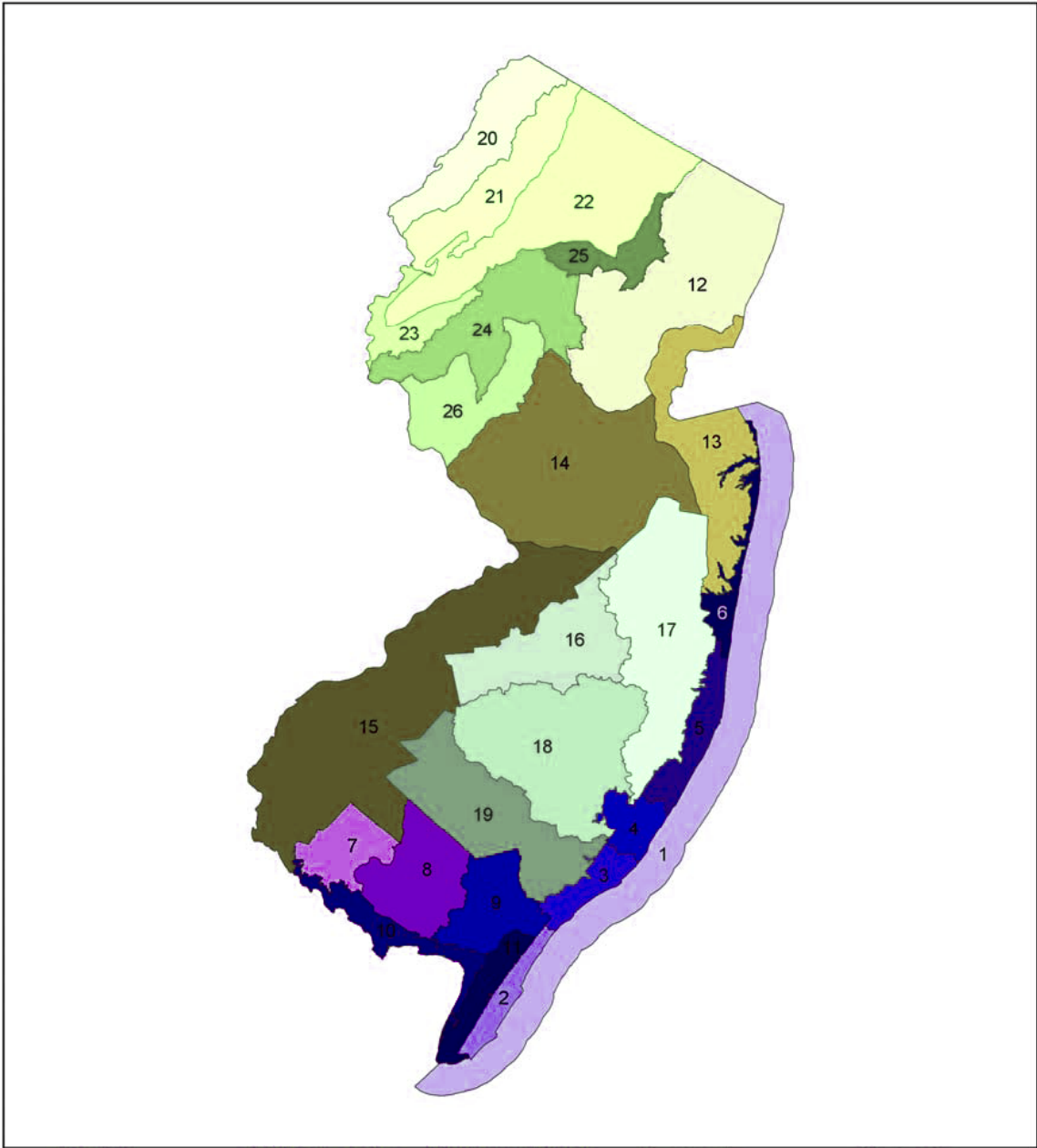
Route map

Binoculars

Watch with second hand (or timer)

Thermometer (optional)

Appendix IV



- | Coastal | Delaware Bay | Piedmont Plains | Pinelands | Skylands |
|---------------------------------------|----------------|------------------|------------------------------|---|
| (01) The Atlantic Ocean | (07) Cohansey | (12) Northern | (16) Western | (20) Upper Delaware River Valley & Kittatinny Ridge |
| (02) Atlantic Coastal Cape May | (08) Maurice | (13) Raritan Bay | (17) Northern | (21) Kittatinny Valley |
| (03) Atlantic City Area | (09) Tuckahoe | (14) Central | (18) Mullica River Watershed | (22) Northern Highlands |
| (04) Brigantine - Great Bay | (10) Shoreline | (15) Southern | (19) Southern | (23) Upper Delaware/Musconetcong River Valley |
| (05) Barnegat Bay - Little Egg Harbor | (11) Peninsula | | | (24) Central Highlands |
| (06) Northern Atlantic Coastal | | | | (25) Urban Highlands |
| | | | | (26) Southern Highlands |