Mountain Birdwatch Manual

Table of Contents

Overview 1

Bicknell's Thrush 1

The Survey 2

Goals 2

Mountain Birdwatch Five Species Procedures 3
Preparations at Home 3
In the Field
When do I conduct the survey? 3
How am I going to get there at such an early hour? 3
Can I bring along a friend? 3
How do I locate the survey stations? 4
Should I take photos and use a GPS unit? 4
What if the weather is bad? 4
How do I conduct the five-species survey? 4
What if I can't complete the survey? 5
How do I submit my data? 5
How do I contact the Mountain Birdwatch biologist? 5

Mountain Birdwatch Equipment List 6

Finding Your Way with Map and Compass 7

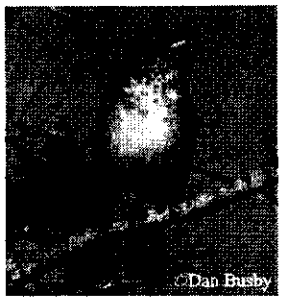
Identification Guide to the Northeast's Montane Songbirds 11

Sample Data Sheets 13

Mountain Birdwatch Mail-in Checklist 16

Field Data Sheets 18

Mountain Birdwatch



OVERVIEW

Mountain forests of the Northeast are under pressure from recreational development, cell tower construction, windfarm development, acid rain, and climate change. Of particular conservation concern is Bicknell's Thrush, a bird that breeds exclusively in the high-elevation forests of New York and northern New England, and in the spruce-fir highlands of Quebec, Nova Scotia, and New Brunswick. Because of its specialized habitat requirements, limited breeding range, and small population size, the species has been listed as the top conservation priority among neotropical migratory songbirds in the Northeast.

The Vermont Institute of Natural Science (VINS) launched Mountain Birdwatch in the spring of 2000 in order to establish a long-term monitoring program for Bicknell's Thrush and other montane forest birds. From the Catskills to Mount Katahdin, trained volunteers conduct dawn surveys along foot trails that pass through some of the region's most awe-inspiring forests. The typical time commitment is one to two mornings each June, with overnight camping recommended on remote routes. Participants receive training in bird identification, experience the thrill of alpine adventure, and help guide the stewardship of vulnerable mountain habitat. Results are used to measure population trends, monitor changes in bird distribution, identify conservation opportunities, evaluate proposed development, and project effects of climate change on mountain songbirds.

Mountain Birdwatch is an offshoot of the Vermont Forest Bird Monitoring Program (FBMP). It is funded by the U.S. Fish and Wildlife Service and is conducted with support from several conservation groups and government agencies. These include: the Adirondack Mountain Club, Appalachian Mountain Club, Appalachian Trail Conference, Audubon New York, Forest Watch, Green Mountain Club, Maine Appalachian Trail Club, Maine Audubon Society, Maine Bureau of Parks and Lands, Maine Department of Inland Fisheries and Wildlife, National Park Service, The Nature Conservancy, New York State Department of Environmental Conservation, Northeast Kingdom Audubon, Olive Natural Heritage Society, U.S. Forest Service, and the Vermont Agency of Natural Resources.

BICKNELL'S THRUSH

Bicknell's Thrush (*Catharus bicknelli*), recognized as a subspecies of the Gray-cheeked Thrush (*C. minimus*) since its discovery in 1881, was given full species status in 1995. Significant differences between the two taxa in morphology, vocalizations, genetics, and breeding and wintering distributions contributed to this designation. The new classification has led to the recognition of Bicknell's Thrush as one of the most at-risk passerine species in the eastern United States. Bicknell's Thrush is currently ranked by Partners in Flight as the top conservation priority among Neotropical migratory songbirds in the Northeast. The World Conservation Union considers the species vulnerable to extinction and has added it to the Red List of Threatened Species.

The breeding range of Bicknell's Thrush in the United States is limited to montane fir forests of New England and New York. In Canada it is found in highland spruce-fir forests in Quebec, Nova Scotia and New Brunswick. As a habitat specialist and the region's only endemic songbird, Bicknell's Thrush serves as a valuable indicator of montane forest health. Potential problems on the breeding grounds include atmospheric pollution (acid rain and mercury deposition), climate change, recreational development, communications tower construction, and wind power development. Since 1992, VINS has studied the distribution, ecology, and conservation status of Bicknell's Thrush in the northeastern United States. Similar efforts are underway in Canada.

Most of the wintering population of Bicknell's Thrush is found in wet, broadleaf forests of the Dominican Republic. These forests have been reduced to less than 8% of their historic extent in the last 30 years. VINS has conducted research and conservation in the Dominican Republic since 1994 to help address these problems.

Despite habitat loss on the wintering grounds and multiplying human impacts on the breeding grounds, few data are available to assess the conservation status of Bicknell's Thrush. Baseline and long-term data sets are needed to monitor population change across the species' breeding range. To fill the information gap, VINS enlists volunteers to survey montane forest sites in New York, Vermont, New Hampshire, and Maine.

THE SURVEY

Mountain Birdwatchers choose between two different survey protocols, depending on their bird identification skills. In Mountain Birdwatch Five Species, novice and intermediate birders concentrate on five focal species: Bicknell's Thrush (BITH), Swainson's Thrush (SWTH), Blackpoll Warbler (BLPW), White-throated Sparrow (WTSP), and Winter Wren (WIWR). This group contains both long-distance migrants (BITH, SWTH, BLPW) and short-distance migrants (WTSP, WIWR). It also includes species that only or primarily breed in montane forests (BITH, BLPW) and others found in mixed or conifer-dominated habitats at all elevations (SWTH, WTSP, WIWR). The songs and calls of these five species are learned through repeated study of the Mountain Birdwatch training tape. In Mountain Birdwatch FBMP, volunteers with advanced identification skills survey all species, in accordance with Forest Bird Monitoring Program protocols.

Surveys consist of 10-minute counts (formerly 5-minute counts) at each of five listening stations. Spaced at 250-m intervals, these stations form a 1-km route that passes through forests dominated by balsam fir (*Abies balsamea*), red spruce (*Picea rubens*), and heartleaf paper birch (*Betula papyrifera var. cordifolia*). A few routes pass through a transition zone and into upper-slope northern hardwoods. Mountain Birdwatchers use audioplaybacks (broadcasts of tape-recorded vocalizations) to improve the likelihood of encountering the elusive Bicknell's Thrush. This technique is employed only when the species escapes detection by point count or by chance. Mountain Birdwatchers double as "squirrelwatchers", keeping a tally of red squirrel observations along their routes. As the main nest predator in this habitat, red squirrels limit songbird reproduction every other year, when their numbers in high-elevation forests are elevated due to biennial booms in the cone crop.

GOALS

Mountain Birdwatch Five Species and Mountain Birdwatch FBMP help advance two primary objectives.

1. To monitor populations of the montane forest birds of northern New England and New York.
2. To describe the influence of landscape and habitat features on avian distribution and abundance in montane forests.

Although emphasis is placed on Bicknell's Thrush, records of all species are considered important and are examined carefully.

Adherence to the following procedures will ensure that Mountain Birdwatch achieves its aims in a scientifically rigorous fashion. To avoid confusion, protocols for only one of the two survey types are included in this manual. If the survey type does not match your skill level or your interests, please notify the project biologist.

MOUNTAIN BIRDWATCH FIVE SPECIES PROCEDURES

The five-species survey is appropriate for novice and intermediate birdwatchers who build their identification skills with assistance from the training materials. It is also for advanced birdwatchers who wish to concentrate on the focal species.

Preparations at Home

___1. Register for Mountain Birdwatch to receive a manual and a route assignment.
___2. Subscribe to the Mountain Birdwatch listserv at http://groups.yahoo.com/group/MountainBirdwatch.
___3. Set aside two or three survey dates between June 1 and 21. Second and third dates will serve as backups in the event of poor weather or failure to detect BITH on your first attempt.
___4. Study the "Identification Guide to the Northeast's Montane Forest Songbirds" (pages 11 and 12).
___5. Using an illustrated field guide and online resources, learn to identify the five focal species by sight, focusing on the field marks that distinguish these birds from similar species.
___6. Listen to the training tape repeatedly until the vocalizations of all five species become instantly recognizable. Score 100% every time on the taped quiz.
___7. Familiarize yourself with the data sheets and route maps.
___8. Review survey protocols. If you are a repeat surveyor, make note of updates.
___9. If you do not know how to use a map and compass, learn and practice this skill. Consult the tutorial on pages 7-10.
___10. If you are surveying your route for the first time, scout it in advance. If necessary, establish point count stations as described on page 4.
___11. If planning an overnight in the backcountry, learn about the local camping regulations. Please consult the project biologist if permissibility of camping is unclear.
___12. Pack judiciously for the field, referring to the equipment list on page 6.
___13. Check the weather forecast before your survey. If high winds and/or moderate to heavy precipitation are forecasted, schedule your survey for another day. To ensure calm conditions, conduct survey during a stable pattern of fair weather. For detailed forecasts, visit: www.mountwashington.org/weather/ (White Mountains); www.fairbanksmuseum.com/eye_recreational.cfm (Green Mountains); or www.adirondacks.com/weather.html (Adirondacks).

In the Field

When do I conduct the survey?

Schedule your survey for an early morning between June 1 and 21. (Don't forget to include backup dates!) This period corresponds with the seasonal peak in vocal activity. Begin your survey between 4:30 and 5:30 a.m. and complete it, if possible, before 6:30 a.m. An early start is important because the frequency of bird vocalizations declines as the morning progresses. The decline is particularly abrupt for BITH on small mountains, where vocalizations may be infrequent after 5:00 a.m. Including travel time between listening stations, the survey should take between 75 and 90 minutes.

How am I going to get there at such an early hour?

Some Mountain Birdwatchers choose to hike to the starting point before dawn by the light of a headlamp or flashlight. Others elect to camp nearby on the night before the survey. Whichever approach you choose, be sure to allow yourself plenty of time, exercise safety precautions, and observe local camping regulations.

Can I bring along a friend?

As a safety measure, we encourage you to invite a friend to join you. However, it is important that you perform the counts on your own, without assistance from your companion. The consistent use of a single, trained observer increases the reliability of monitoring results. Whether working alone or with a friend, be sure to move quietly between survey stations to avoid spooking the birds.

How do I locate the survey stations?
Each survey route contains five survey stations along a section of trail that measures about 1 km. Because the survey stations are not (and should not be) flagged, locating the same points each year can be a challenge. Consult the map showing your survey route. Previously surveyed routes are accompanied by a description of each point's location, with detailed reference to enduring and distinctive features such as boulders, stream channels, etc. Navigation by GPS is possible on those routes for which coordinates are provided. In most cases, the starting point is located at an easily recognizable location such as a trail junction, summit, or dramatic change in a trail's slope. If your route has not been surveyed before, you will be required to establish points two through five on your own and submit a detailed description of each point in order to facilitate their location in future years. The distance between each point should be about 250 m. This amounts to approximately 325 steps for a person of average height walking on flat or gently rolling terrain. Please adjust the number of steps upward if 325 steps place you short of the mapped point location. This is likely to occur on steep slopes or where footing is poor. If the trail you find in the field deviates from the mapped course, it may have been relocated since the map was produced. Please do your best to map the trail's relocation and submit a revised map with your data sheets and point location form.

Should I take photos and use a GPS unit to identify my point count stations?
By all means! Photographs and exact coordinates will help pinpoint survey locations in the future. Print photos are useful and welcome, however digital or scanned photos on an IBM-formatted disk (floppy or compact) are preferred. Email submissions are also welcome. Please note compass bearing of each frame. For GPS locations, report your unit's settings (map datum and coordinate system), as well as the estimate of each point's error, if available.

What if the weather is bad?
The route should be run in temperatures above 35° F and when rain and wind do not interfere with the intensity or audibility of bird sounds. Occasional drizzle or a brief shower is acceptable, but steady drizzle or prolonged rain is not. A light wind is acceptable, but a breeze blowing strong enough so that small trees sway (>20 mph) is not. If you encounter cold temperatures, rain, and/or high winds, delay the survey until 30 minutes after the conditions have improved. If poor conditions persist, the survey should be rescheduled for another morning. Note that strong winds aloft may result in relatively little tree movement and audio interference at the forest level. If you encounter these conditions, proceed with the survey, but describe the wind speeds blowing aloft and in the trees.

How do I conduct the five-species survey?
The main objective is to record the number of BITH, BLPW, WTSP, WIWR, and SWTH seen or heard during five 10-minute listening periods, or point counts (formerly 5-minute counts). The specific steps are as follows.

1. Survey the route in sequence, starting at point 1 and ending at point 5.
2. Fill out a detailed description of each point on the point location form (if not already described or if description is incomplete).
3. Complete the information at the top of the data sheet (observer, route name, date, weather, etc.). Note that start time refers to the start of point count 1 and end time refers to the end of point count 5.
4. Upon arriving at each point, take 30 seconds to catch your breath and tune your ear.
5. Record the start time and begin your count.
6. Stand still and listen quietly for exactly 10 minutes. Break the count into periods of 3, 2, and 5 minutes. This will require close attention to your watch.
7. Record each individual seen or heard, the time period in which it was first encountered (A = 0-3 min, B = 3-5 min, C = 5-10 min), and the bird's activity at the time of detection. Only count a bird the <u>first</u> time you see or hear it, not separately in each time interval. Do your best to

monitor the movement of vocalizing, but unseen birds, in order to avoid double-counting. For visual observations of BLPW, note the bird's sex. See sample data sheet on page 13. Please note: a bird heard or seen at two different points should be recorded at the first encounter only. To minimize the risk of counting a bird twice, keep track of vocalizing individuals as you move between stations.

8. Once ten minutes have elapsed, mark the approximate location of each BITH on the map that is provided. Use your compass as an aid to determine the appropriate bearing from your own position.
9. Proceed to the next point count station.
10. For Red Squirrels (RESQ), keep a running tally of individuals encountered between the start time (start of point count 1) and the end time (end of point count 5). There is a line at the bottom-right corner of the data sheet for this purpose. Be careful to avoid counting the same squirrel twice. Unfortunately, Red Squirrel vocalizations were unavailable when the training tape was produced. Listen for one or a combination of its distinctly mammalian vocalizations. These include a chirp, a rattle, a screech, a growl, and a buzz.
11. When you're finished with the last point count, note your end time, the number of point-counted individuals for each species, and the red squirrel tally. Review your data sheet for thoroughness and legibility.
12. If you detected one or more BITHs during the 5-point survey, then your work is complete.
13. If you detected no BITHs during any of the 10-minute point counts, but detected one or more either before your survey *or* between listening periods, describe your observation(s) and mark the location of each bird on the map.
14. If you detected no BITHs before, during *or* between point counts, use side B of the training cassette to broadcast the bird's recorded vocalization for one minute at point five (formerly three minutes). The volume should be set high. Listen quietly for two minutes after the broadcast period. Repeat this procedure at stations 4 through 1 or until the species is detected. On the playback data sheet, record the following information: time of playback, point number, type of response (song, call, visual), and number of BITHs responding. Refer to sample on page 14. Mark the location of responding BITHs on the black and white map.
15. If audioplaybacks fail to elicit a response from BITH, please help verify the presumed absence on a follow-up search of the area before June 30. Conduct this search at dusk and/or dawn, employing the audioplayback protocol (as described above) at 100-m intervals along your survey route. Report your observations on the follow-up playback data sheet.
16. If you are unable to conduct a follow-up search for BITH, please notify the project biologist as soon as possible so that a substitute can be found without delay.

What if I can't complete the main survey or a follow-up search for Bicknell's Thrush?
Foul weather, busy lives, and unforeseeable events sometimes conspire to frustrate the most intrepid Mountain Birdwatcher. If you know in advance that you will be unable to complete the main survey or a follow-up search for BITH, please notify the project biologist as soon as possible. It may be possible to arrange a substitute. If you miss the main survey window without the opportunity to notify the project biologist, proceed with an audioplayback search for BITH, using the follow-up survey protocols described above.

How do I submit my data?
First, enter your data online at www.vinsweb.org/cbd/mtn_birdwatch.html, following instructions provided separately. Then, make copies of your field data for your files. Next, complete the mail-in checklist on page 16. Finally, mail the checklist with the requested information, as soon as possible, to: Mountain Birdwatch Vermont Institute of Natural Science 27023 Church Hill Rd. Woodstock, VT 05091

How do I contact the Mountain Birdwatch biologist?
Email Dan Lambert at dlambert@vinsweb.org or call (802) 457-2779, ext. 132. Please leave a message!

MOUNTAIN BIRDWATCH EQUIPMENT LIST

The following materials are required to prepare for and conduct your mountaintop survey. Refer to this list when packing for the field.

Materials Provided by VINS

___Mountain Birdwatch manual
___cassette recording of songbirds (training tape – side A, BITH vocalizations –side B)
___survey route maps (1 in color for orientation, 1 in black and white for mapping BITH)
___point location form
___data sheets

You Provide

___watch/time piece
___compass
___thermometer
___clip board
___2 pencils
___binoculars
___field guide
___tape recorder with spare batteries
___sense of humor

For a Day Hike

___food and water
___sturdy boots
___wind jacket / rain gear
___warm layer (wool or synthetic fleece)
___ hat
___ flashlight with extra batteries
___first-aid kit
___waterproof matches
___insect repellent and/or bug net
___sunscreen
___toilet paper and trowel
___whistle
___pocket knife

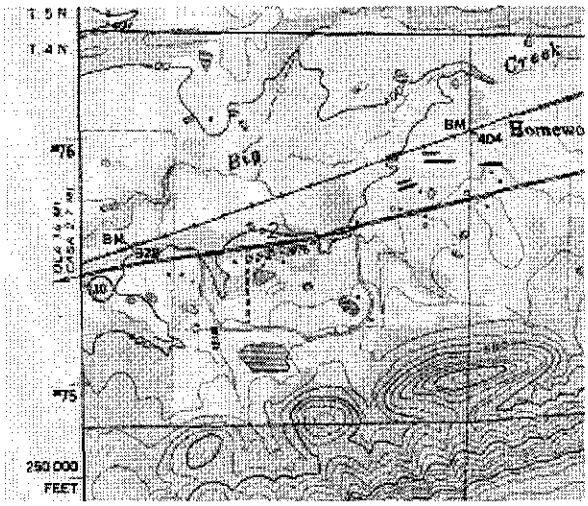
For an Overnight – all of the above plus

___permission to camp, where required
___backpacking stove and fuel
___cook kit and eating utensils
___sleeping bag in waterproof sac
___sleeping pad
___tent
___extra clothes and socks

USGS
science for a changing world

Finding Your Way with Map and Compass
Fact Sheet 079-99 (February 2000)

| From Near to Far: Distance | From Here to There: Determining Direction |
| A Word of Caution | Information |



Part of a 7.5-minute topographic map at 1:24,000 scale

A topographic map tells you where things are and how to get to them, whether you're hiking, biking, hunting, fishing, or just interested in the world around you. These maps describe the shape of the land. They define and locate natural and manmade features like woodlands, waterways, important buildings, and bridges. They show the distance between any two places, and they also show the direction from one point to another.

Distances and directions take a bit of figuring, but the topography and features of the land are easy to determine. The topography is shown by contours. These are imaginary lines that follow the ground surface at a constant elevation; they are usually printed in brown, in two thicknesses. The heavier lines are called index contours, and they are usually marked with numbers that give the height in feet or meters. The contour interval, a set difference in elevation between the brown lines, varies from map to map; its value is given in the margin of each map. Contour lines that are close together represent steep slopes.

Natural and manmade features are represented by colored areas and by a set of standard symbols on all U.S. Geological Survey (USGS) topographic maps. Woodlands, for instance, are shown in a green tint; waterways, in blue. Buildings may be shown on the map as black squares or outlines. Recent changes in an area may be shown by a purple overprint. a road may be printed in red or black solid or dashed lines, depending on its size and surface. A list of symbols is available from the Earth Science Information Center (ESIC).

| Top | Table of Contents |

From Near to Far: Distance

Maps are made to scale; that is, there is a direct relationship, a ratio, between a unit of measurement on the map and the actual distance that same unit of measurement represents on the ground. If, for instance, 1 inch on the map represents 1 mile (which converts to 63,360 inches) on the ground, the map's scale is 1:63,360. Below is a listing of the scales at which some of the more popular USGS maps are compiled.

Map Name Series	Scale	1 inch represents	1 centimeter represents	Map area (approximate square miles)
Puerto Rico 7.5 minute	1:20,000	1,667 feet	200 meters	71
7.5-minute	1:24,000	2,000 feet	240 meters	40 to 70
7.5- by 15-minute	1:25,000	2,083 feet	250 meters (about)	98 to 140
Alaska	1:63,360	1 mile	634 meters (about)	207 to 281
Intermediate	1:50,000	0.8 mile	500 meters (about)	County
Intermediate	1:100,000	1.6 mile	1 kilometer (about)	1,568 to 2,240
United States	1:250,000	4 miles	2. 5 kilometers (about)	4,580 to 8,669

A convenient way of representing map distance is by the use of a graphic scale bar. Most USGS topographic maps have scale bars in the map margin that represents distances on the map in miles, feet, and kilometers. The table below shows the corresponding area of coverage for each scale and the linear distance that each scale represents in inches and centimeters.

| Top | Table of Contents |

From Here to There: Determining Direction

To determine the direction, or bearing, from one point to another, you need a compass as well as a map. Most compasses are marked with the four cardinal points —north, east, south, and west— but some are marked additionally with the number of degrees in a circle (360 north is 0 or 360, east is 90, south is 180, and west is 270). Both kinds are easy to use with a little practice. The illustrations on the reverse side show how to read direction on the map.

One thing to remember is that a compass does not really point to true north, except by coincidence in some areas. The compass needle is attracted by magnetic force, which varies in different parts of the world and is constantly changing. When you read north on a compass, you're really reading the direction of the magnetic north pole. A diagram in the map margin will show the difference (declination) at the center of the map between compass north (magnetic north indicated by the MN symbol) and true north (polar north indicated by the "star" symbol). This diagram also provides the declination between true north and the orientation of the Universal Transverse Mercator (UTM) grid north (indicated by the GN symbol). The declination diagram is only representational, and true values of the angles of declination should be taken from the numbers provided rather than from the directional lines. Because the magnetic declination is computed at the time the map is made, and because the position of magnetic north is constantly changing, the declination factor provided on any given map may not be current. Contact the National Geophysical Data Center (NGDC) to obtain current and historical magnetic declination information for any place in the United States.

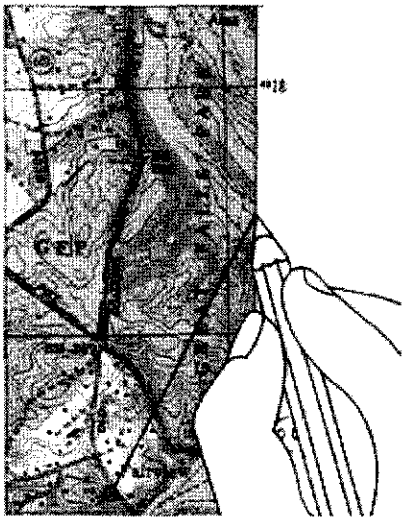
NGDC General Information: 303-497-6826
E-mail: info@ngdc.noaa.gov
Web site: http://www.ngdc.noaa.gov/ or http://www.ngdc.noaa.gov/seg/potfld/geomag.shtml

Taking a compass bearing from a map:

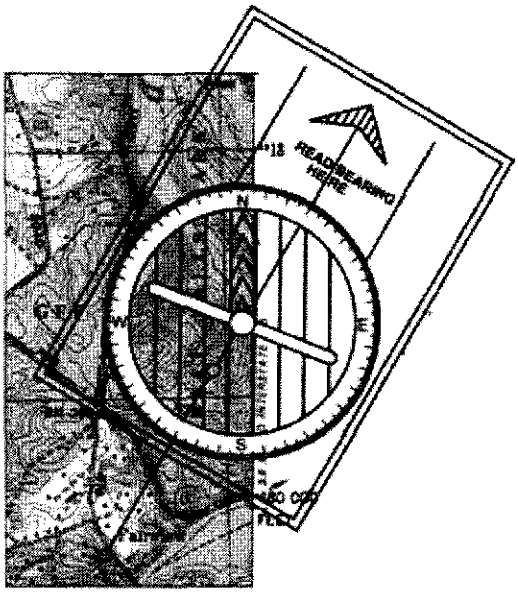
1. Draw a straight line on the map passing through your location and your destination and extending across any one of the map borders.

2. Center the compass where your drawn line intersects the map border, align the compass axis N-S or E-W with the border line, and read on the compass circle the true bearing of your drawn line. Be careful to get the bearing in the correct sense because a straight line will have two values 180° apart. Remember north is 0, east is 90, and so on.

3. To use this bearing, you must compensate for magnetic declination. If the MN arrow on the map magnetic declination diagram is to the right of the true north line, subtract the MN value. If the arow is to the left of the line, add the value.



(1) Drawing a straight line over the map edge



(2) Reading the compass on the map



(3) Using the magnetic declination diagrams

| Top | Table of Contents |

A Word of Caution

Compass readings are also affected by the presence of iron and steel objects. Be sure to look out for—and stay away from—pocket knives, belt buckles, railroad tracks, trucks, electrical lines, and so forth when using a compass in the field.

Information

For information on these and other USGS products and services, call 1-888-ASK-USGS, use the Ask.USGS fax service, which is available 24 hours a day at 703-648-4888, or visit the general interest publications Web site on mapping, geography, and related topics at http://mapping.usgs.gov/mac/isb/pubs/pubslists/index.html.

Please visit the USGS home page at http://www.usgs.gov/.

Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

This document has undergone official review and approval for publications established by the National Mapping Division, U.S. Geological Survey.

Some figures have been modified or added to improve the scientific visualization of information.

U.S. Department of the Interior
U.S. Geological Survey
509 National Center, Reston, VA 20192, USA
URL: *http://mapping.usgs.gov/mac/isb/pubs/factsheets/fs07999.html*
Page Maintainer: *USGS Mapping Applications Center*
Contact: *macweb@usgs.gov*
Last modified: *15:31:11 Wed 08 Mar 2000*
USGS Privacy Statement

Identification Guide to the Northeast's Montane Forest Songbirds

adult breeding plumage only, surveyed species highlighted, asterisk denotes sporadic breeder in montane forest

Species	Visual identification[1]	Vocalizations[2]
Yellow-bellied Flycatcher	Small flycatcher. Triangular head. White eye ring. Lower mandible orange. Brownish-olive upperparts. Breast has olive wash. Yellowish throat, belly and undertail coverts. Wing bars-white in adults, buffy in immatures. Fall birds have yellower underparts than Spring birds.	song a liquid *che-lek*, also a rising *per-wee*; call a long emphatic, rising, *chewee*
Blue Jay*	Black sturdy bill. Blue crest and upperparts. Black eyeline and breastband. Grayish-white throat and underparts. Bright blue wings with black bars and white patches. Long blue tail with black bars and white corners. Dark legs. Migrates during the day in small flocks.	piercing *jay jay jay jay*; also a musicle *weedle-eedle*; mimics calls of hawks
Black-capped Chickadee*	Short bill. Black crown and throat. White face. Pale gray upperparts. White edges to wing coverts. Grayish-white underparts. Rusty flanks. Sexes similar Often found in small flocks.	*chick-a-dee-dee-dee* song is a clear, whistled *fee-bee* or *fee-bee-ee*
Red-brested Nuthatch	Straight gray bill. Black crown and eyeline with white supercilium. White lower face and throat. Blue-gray upperparts. Reddish underparts. Short tail. Sexes similar but female duller. Feeds by hopping along tree trunks and branches often hanging upside down. Most often found in pine trees.	high pitched nasal call, like a toy tin horn
Brown Creeper	Small size. Thin, decurved bill. Bold white supercilium. Brown upperparts with white spots. Rusty rump. White underparts. Fairly long tail. Sexes similar. Feeds by creeping along tree trunks and branches.	song is a high-pitched *see see see titi see*; call note is a soft, sibilant *see*
Winter Wren	Short, thin bill. Indistinct supercilium. Reddish-brown upperparts (more reddish in eastern United States birds). Buffy breast with dark barring on belly and undertail coverts. Wings and tail barred with black. Very short tail frequently held upright. Pink legs. Sexes similar. Frequently found very near the ground in brush piles, root tangles and along stream banks.	song is a rapid series of melodious trills, call an explosive *chimp-chimp*
Golden-crowned Kinglet	Very small, active bird that often flicks its wings. Thin bill. Yellow crown surrounded by black. White supercilium. Black eyeline and whisker. Grayish-olive upperparts. Whitish underparts. White wing bars. Yellow edges to flight feathers and tail. Male has orange patch in center of yellow crown.	call is a high thin *tsee* note; song is a series of *tsee* notes accelerating into a trill.
Ruby-crowned Kinglet*	Very small, active bird that often flicks its wings. Thin bill. Broken eye ring. Olive upperparts. Pale olive underparts. White wing bars. Yellow edges to flight feathers and tail. Male has red patch in center of crown (not always visible).	song begins with several high, thin *tsee* notes, followed by descending *tew* notes and concluding with a rich warbling of 3-note phrases
Bicknell's Thrush	Olive-brown upperparts. Tail usually a chestnut brown. Gray, indistict eye ring. Gray cheeks. Dark spots on breast. Underparts white with grayish flanks. Pink legs. Thin bill with pale base to lower mandible. Sexes similar. Often forages on forest floor.	song a soft, opening *chook-chook* followed by descending *wee-o, wee-o, wee-o-ti-t-ter-ee* (somewhat like a Veery's); call an emphatic *peer*
Swainson's Thrush	Olive-brown upperparts. Buffy spectacles. Dark spots on breast. Underparts white with brownish flanks. Pink legs. Thin bill with pale base to lower mandible. Sexes similar. Often forages on forest floor.	song an ascending spiral of varied whistles; call an abrupt *whit*

Species	Visual Identification	Vocalization
Hermit Thrush*	Brownish gray back. Reddish tail. Conspicuous white eye ring. Dark spots on breast. Underparts white with brownish to grayish flanks. Pink legs. Thin bill with pale base to lower mandible. Sexes similar. Often forages on forest floor.	song a seren series of clear flutelike notes with similar phrases repeated at different pitches; call a low *chuck*
American Robin	Black to dark gray head. Broken white eye ring. Dull red breast and belly. White undertail coverts. Gray upperparts. Streaked throat. Thin yellow bill. Sexes similar-female somewhat paler.	song a loud, liquid, variable *cheerily cheer-up cheerio*; call a rapid *tut tut tut*
Nashville Warbler	Small, active, insect-eating bird. Thin, very pointed bill. White eye ring. Yellow throat, breast, and undertail coverts. White belly. Olive upperparts. No wing bars. Rusty crown patch of male is rarely visible. Male has gray head, female's is duller, more olive.	song a series of high *see-weet* notes followed by a lower shorter trill; call a sharp *chink*
Magnolia Warbler	Small, active, insect-eating bird. Bright yellow rump. Thin, pointed bill. Broken white band in tail. Black mask. White supercilium and broken eye ring. Pale gray crown. Black back. Golden yellow underparts. Heavy black streaks across breast and onto flanks. Gray wings with thick white edging. Females plumage similar to male's, but duller	song a whistled *weety-weety-weeteo*
Yellow-rumped Warbler	Small, active bird. Bright yellow rump. Thin, pointed bill-but sturdier and thicker than most warblers. White spots in tail. Male has: black mask; white supercilium and broken eye-ring; yellow crown patch; blue-gray crown, nape, back and wing coverts with black streaks; white throat; yellow patch at side of breast; black patches on upper breast extending as streaks onto flanks; white underparts; white wingbars. Female has broken eye ring, head and back brown to brownish-gray with black streaks on back (browner in the fall), indistinct to absent yellow patch on side of breast, blurry dark streaking on breast and flanks, white throat, white wing bars.	variable song, usually a slow warbler followed by a musical trill
Blackpoll Warbler	Small, active, insect-eating bird. White wing bars. Thin, pointed bill. White spots visible on underside of tail. Yellow legs. Male has black crown and malar streak, upperparts streaked black and white, underparts mostly white with black streaks on flanks. Female plumage similar, but lacks distinctive head pattern. Greenish crown, nape and back with thin black streaks. Indistinct supercilium. Breast paler than upperparts with faint darker streaks. White belly and undertail coverts.	song a series of high *tseet* notes
White-throated Sparrow	Large sparrow. Dark conical bill. Long slightly forked tail. Pink legs. Bold black and white (or tan) head stripes. Yellow lores. White throat contrasting with gray breast and cheeks. Brown back with dark streaks. Brown wings with two white wingbars. Whitish belly.	song a thin whistle, *oh sweet Canada Canada Canada*; calls include a loud *pink* and a sharp *tseep*
Dark-eyed Junco	Shape and size of sparrow. Pink conical bill. Dark gray head, breast and upperparts. White belly. Females somewhat browner than adult male and may have buffy flanks.	song a musical trill on one pitch; varied calls include a sharp *dit* and, in flight, rapid twittering
Purple Finch	Large, conical bill. Short, forked tail. Male has purplish-red head, breast, back and rump, streaked back, white undertail, brown wings and tail. Female has brown crown and cheek patch contrasting with pale supercilium and malar streak, heavily streaked underparts, brown upperparts.	song a rich warbling; calls include a musical *chur-lee* and, in flight, a sharp *pit*

1 Visual Identification Tips from Patuxent Bird Identification InfoCenter http://www.mbr.nbs.gov/id/framlst/infocenter.html
2 Vocalization descriptions from National Geographic Society's Field Guide to the Birds of North America (1987)

Mountain Birdwatch Five Species Data Sheet - Sample

Observer(s) Rosie Finch	Route name Crossbill Mountain	Date 6/4/02

Start time	End time	Temperature	Sky code	Wind code
04:47	06:10	45 - 50° F	(0-6) 1	(0-5) 2

Total # of: BITH 0 BLPW 5 WIWR 2 WTSP 5 SWTH 4 RESQ 2

sky codes: 0 = clear or a few clouds 1 = partly cloudy/variable 2 = cloudy/overcast 3 = fog 4 = drizzle 5 = showers 6 = rain
wind : 0 = calm 1 = fog drifts 2 = leaves rustle 3 = leaves/twigs in constant motion 4 = branches move 5 = small trees sway

Start Time	Point #	Species	Time Period	Activity
4:47	1	WTSP	A	S, C
	1	WIWR	A	S
	1	WTSP	B	S
	1	BLPW	C	I (male)
5:05	2	SWTH	A	S
	2	BLPW	B	S
	2	BLPW	B	S
	2	WTSP	C	S
5:20	3	SWTH	A	C
	3	WIWR	B	S
5:38	4	WTSP	A	S
	4	WTSP	A	I, C
	4	BLPW	C	S
6:00	5	SWTH	A	S
	5	SWTH	A	C
	5	BLPW	B	S

Start Time	Point #	Species	Time Period	Activity

Time period codes: A = 0-3 minutes B = 3-5 minutes C = 5-10 minutes

Red Squirrel Tally | |

Activity codes: S = singing C = calling I = individual seen D = Drumming F = Family group N = Active nest

Mail completed data sheets to Mountain Birdwatch VINS 27023 Church Hill Rd. Woodstock, VT 05091.

Mountain Birdwatch Playback Data Sheet – SAMPLE

Conduct playbacks and complete this form only if no Bicknell's Thrushes have been detected on the survey route before, during or between point counts. Broadcast the one-minute recording of songs and calls at high volume and listen silently for two minutes. Repeat this at each station in the reverse order of the original survey until you hear or see a Bicknell's Thrush or until playbacks have been conducted at all listening stations. On the black and white route map, plot the position of any responding BITH.

Name: Rosie Finch
Route: Crossbill Mtn
Date: June 4, 2002

Point 5
Playback time: 6:10 Comments:
Response: song call visual none
Number of BITH responding: 0

Point 4
Playback time: 6:20 Comments: Flew in immediately and
Response: song call visual none perched at trail's edge.
Number of BITH responding: 1

Point 3
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Point 2
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Point 1
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

If you complete playbacks without detecting Bicknell's Thrush, please return to your route before June 30 to help verify your results with a follow-up playback survey. Follow-up playbacks can be conducted at dusk or dawn. Refer to manual or follow-up playback data sheet for more details. Thank you for the extra effort!

NOTES

Mountain Birdwatch Mail-in Checklist

Please complete this form and mail it to VINS with the requested items and information.

___My data are entered online (www.vinsweb.org/cbd/mtn_birdwatch.html).

___I have made photocopies of the data sheets for my files.

___Point count data sheet is enclosed.

___Playback data sheet is enclosed (if playbacks were conducted).

___Follow-up playback data sheet is enclosed (if follow-up playbacks were conducted).

___Point location form is enclosed (if route was updated or established for the first time).

___Map of Bicknell's Thrush locations is enclosed (if BITH was observed).

Are you interested in conducting a follow-up, audioplayback search for BITH on another route before July 15? If so, please specify maximum driving and hiking distances.

Yes No

Do you intend to monitor your route in 2006?

Yes No Uncertain

Please report 2005 off-route BITH observations below.

Date	State	Mountain	Notes

NOTES

Mountain Birdwatch Five Species Data Sheet

Observer(s)	Route name	Date

Start time	End time	Temperature	Sky code (0-6)	Wind code (0-5)

Total # of: BITH____ BLPW____ WIWR____ WTSP____ SWTH____ RESQ____

sky codes: 0 = clear or a few clouds 1 = partly cloudy/variable 2 = cloudy/overcast 3 = fog 4 = drizzle 5 = showers 6 = rain
wind : 0 = calm 1 = fog drifts 2 = leaves rustle 3 = leaves/twigs in constant motion 4 = branches move 5 = small trees sway

Start Time	Point #	Species	Time Period	Activity

Start Time	Point #	Species	Time Period	Activity

Time period codes: A = 0-3 minutes B = 3-5 minutes C = 5-10 minutes

Red Squirrel Tally __________

Activity codes: S = singing C = calling I = individual seen D = Drumming F = Family group N = Active nest

Mail completed data sheets to Mountain Birdwatch VINS 27023 Church Hill Rd. Woodstock, VT 05091.

Mountain Birdwatch Playback Data Sheet

Conduct playbacks and complete this form only if no Bicknell's Thrushes have been detected on the survey route before, during or between point counts. Broadcast the one-minute recording of songs and calls at high volume and listen silently for two minutes. Repeat this at each station in the reverse order of the original survey until you hear or see a Bicknell's Thrush or until playbacks have been conducted at all listening stations. On the black and white route map, plot the position of any responding BITH.

Name:_____
Route:_____
Date:_____

Point 5
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Point 4
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Point 3
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Point 2
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Point 1
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

If you complete playbacks without detecting Bicknell's Thrush, please return to your route before June 30 to help verify your results with a follow-up playback survey. Follow-up playbacks can be conducted at dusk or dawn. Refer to manual or follow-up playback data sheet for more details.

Mountain Birdwatch Follow-up Playback Data Sheet

If you complete playbacks without detecting Bicknell's Thrush, please return to survey route before June 30 to help verify your results. Along the route, broadcast one-minute playbacks at 100-m intervals between 4 and 5 a.m. or between 8:00 and 9:00 p.m. Listen for 2 minutes after each broadcast and record your observations below. On the black and white route map, plot playback locations and the position of any responding BITH.

Name:_____ Sky: ___
Route:_____ Wind: ___
Date:_____ Temp: ___

sky codes: 0 = clear or a few clouds 1 = partly cloudy/variable 2 = cloudy/overcast 3 = fog 4 = drizzle 5 = showers 6 = rain
wind : 0 = calm 1 = fog drifts 2 = leaves rustle 3 = leaves/twigs in constant motion 4 = branches move 5 = small trees sway

Playback 1
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Playback 2
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Playback 3
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Playback 4
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Playback 5
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Playback 6
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Playback 7
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Playback 8
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Playback 9
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

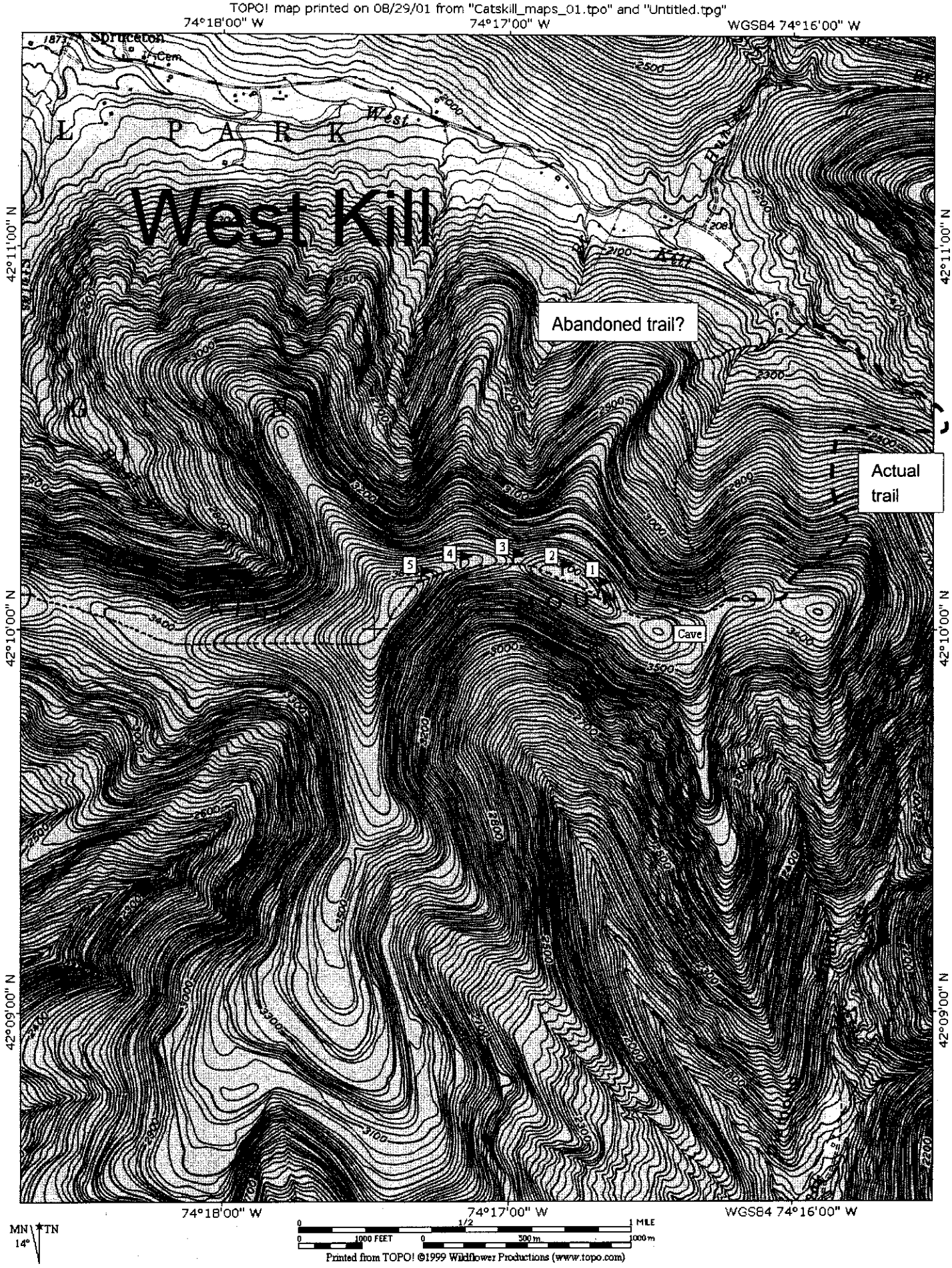
Playback 10
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Playback 11
Playback time: ___:___ Comments:
Response: song call visual none
Number of BITH responding:_____

Mountain Birdwatch Point Location Form

Survey Route: West Kill **Described in**: 2001

Point No.	Location Description
1	42°10'03.3"N, 74°16'42.1"; 4668428N, 559618E From the cave, continue west on trail for about 5 minutes until reaching a plateau where there is a large (about 60 cm diam) log fallen to the south side of the trail; log is covered with moss. There is a red, circular trail marker on a white birch tree 6 m to the west of the log
2	42°10'08.2"N, 74°16'49.5"; 4668576N, 559437E 325 steps west of station 1; just before a 5 foot rise with a large boulder on south side of trail that is cracked horizontally creating a 5-6 inch tall mini cave. Topography is more or less flat
3	42°10'09.8"N, 74°16'58.0"; 4668620 N, 559236E 325 steps west from station 2; just downslope from a small peak with a log (45 CM diam, 70 cm long) parallel to and 4 ft south of trail; log with very little moss
4	42°10'10.0", 74°17'09.2"; 4668640N, 558985E 325 steps west of station 3, just before a rise of a few feet with boulders and right in front of a 6-7 ft crooked fir snag on south edge of trail
5	42°10'07.7"N, 74°17'17.9"; 4668441N, 558784E Buck Ridge lookout exactly 0.1 miles short of actual summit


TOPO! map printed on 08/29/01 from "Catskill_maps_01.tpo" and "Untitled.tpg"
74°18'00" W
74°17'00" W
WGS84 74°16'00" W
42°11'00" N
42°10'00" N
42°09'00" N
West Kill
Abandoned trail?
Actual trail
Cave
1
2
3
4
5
Spruceton
Cem.
West
MN 14°
TN
1/2
1 MILE
1000 FEET
500 m
1000 m
Printed from TOPO! ©1999 Wildflower Productions (www.topo.com)