

Instructions for Conducting the Nightjar Survey Network 2009 Season

(see ccb-wm.org for more information)

Thank you for participating in the Nightjar Survey Network. The primary objective of this program is to determine the population distribution and trends of Nightjar species across the United States. There is a general sense that populations of these species are declining. Information on the precise scale and magnitude of population changes are necessary if we are to plot a course for conservation. However, prior to this program, there has been no widespread or long-term monitoring effort to monitor these Nightjar populations. This effort is coordinated by the **Center for Conservation Biology at the College of William and Mary and Virginia Commonwealth University**. But success of this monitoring program can only be achieved with dedicated volunteers willing to conduct Nightjar surveys.

Nightjar Surveys are standardized population counts conducted along roadside census routes at night. Each route is surveyed only one time per year but during a very specific survey window (see specific dates below). Surveys will not take much longer than one hour to complete. The only experience necessary is a familiarity with each Nightjar's characteristic song.

Determining population trends of Nightjars takes a dedicated set of volunteers willing to collect many years of data. Please consider adopting a Nightjar Survey Route only if you are able to conduct the census one time per year but for at least three consecutive years.

Please read all of the instructions carefully. Your commitment to following these instructions will ensure that data is collected in a standardized format so it may be comparable between all routes in the Nightjar Survey Network.

Visit the Nightjar Survey Network website at www.ccb-wm.org for more details

Conducting Surveys

Seasonal and Daily Timing:

- 1) **Begin each survey at least 30 minutes after sunset and end no later than 15 minutes before sunrise.**
- 2) **Surveys must only be conducted between May 31-June 15, 2009 (all states) or between June 29-July 15, 2009 if in Idaho, Michigan, Minnesota, Montana, North Dakota, South Dakota, Oregon, Washington and Wyoming. These dates are specifically chosen to coincide with the nights of brightest moonlight and greatest Nightjar calling frequency. These are important dates to maintain consistent survey conditions across all regions of the Nightjar Survey Network.**
- 3) **Surveys must only be conducted when the moon is above the horizon and not obscured by clouds. It is a little known fact that Nightjars call less frequently when the moon is still below the horizon or hidden by dense cloud cover. Check your local times for moonrise at the US Naval Observatory Website (<http://aa.usno.navy.mil>) or newspaper. In general, the moon rises during daylight on May 31 and sets a little after midnight (1:44am). Surveys should be conducted before moonset. Please note that by June 7 the moon does not rise until after dark (9:00pm) and rises later each night. Surveys should only be conducted after moon rise. During the second survey window, the moon begins to rise after dark on June 17 and later each night. Please consider these times when planning surveys so the best moon conditions can be chosen.**

****SURVEYS SHOULD ONLY BE CONDUCTED BETWEEN MAY 31 – JUNE 15 OR BETWEEN JUNE 29- JULY 15 DEPENDING ON GEOGRAPHY (see above) DURING THE 2009 SEASON****

Route Logistics:

Each survey route consists of 10 stopping points where you count Nightjars. The starting point of your route will be named stop # 1. All other stops are sequentially numbered and spaced 1 mile apart along the route. You may vary the exact distance up to 2 tenths of a mile between stopping points to find a safe place to park. It is better to add space between points rather than shortening this distance to avoid counting the same birds twice. Not all of your stopping points need to be on the same road. Turning onto different roads may be expected. We recommend scouting your route during daylight to become familiar with the stops.

Completing the Nightjar Survey Data Sheet:

Route Name and Number – All pre-existing routes are named and numbered. See Nightjar Survey Network website at ccb-wm.org for more details. If you are creating your own route, use the county where the route begins as the name, and the last 4 digits of your phone number of the number (e.g., Henrico1649).

Observer: Record your name here.

Date: Indicate the date of the survey.

Time Start: Indicate the time at which you begin listening at stop 1.

Time End: Indicate the time at which you stop listening at stop 10.

Survey Conditions at each Stop;

Wind: Do not conduct surveys during strong winds. High winds diminish your ability to hear Nightjars.

Code	Wind Speed	Description
0	Calm (<1 mph)	smoke rises vertically
1	Light (1-7 mph)	smoke drifts, weather vane inactive, leaves rustle, can feel wind on face
2	Moderate (8-18 mph)	leaves, twigs, and thin branches move around, small flags extend, raises loose papers.
3	Strong (19 mph or greater)	small trees begin to sway. Should not conduct survey.

Sky Condition: Do not begin a survey if the sky is completely overcast, during heavy fog, or persistent rain. All of these conditions will diminish calling rates of Nightjars and hamper your survey.

Code	Sky	Description
0	Clear	Cloudless sky, can stars and moon clearly
1	Mostly Clear	Few clouds, less than 25% cloud cover
2	Mostly Cloudy	Many clouds, 25-50% cloud cover
3	Overcast	Dense cloud cover, entire sky covered. Should not conduct survey.

Background Noise: Codes indicate the level background noise impairs your ability to hear Nightjars.

Code		Description
0	None	There is no effect of background noise on your ability to hear nightjars
1	Slight	Noise slightly affects your ability to hear nightjars (e.g. distant traffic, 1-2 car passing during a stop's counting period).
2	Medium	Noise moderately affects your ability to hear nightjars (e.g. nearby traffic, 3-6 cars passing during survey period, airplane flying overhead).
3	Excessive	Noise seriously affects your ability to hear nightjars (e.g. continuous traffic nearby, construction noise, frog chorus)

Mile: Enter odometer/tripometer to nearest tenth mile at each stop. Begin with a value of 0 for first stop.

Moon Visible (Y or N): Enter Y for YES or N for NO to indicate if the moon can be seen above the horizon while counting nightjars at the stop. This is particularly important to register when in deep valleys because the moon may be obstructed by mountain ridges.

Instructions continue on next page

Counting Nightjars:

At each point, count all Nightjars seen or heard for a period of **SIX MINUTES**. Do not include Nightjars you see or hear anytime before or after the six minute counting period. Counting nightjars and recording data should be done from a stationary position outside of your automobile. Most importantly, be consistent. Use the same technique at each stop including how you focus your listening for nearby birds and distant birds.

The counting period is broken into six 1-minute listening periods on the data sheet. Record the detection history of each individual Nightjars seen or heard from the time of their first detection through their last detection in the appropriate 1-minute block of the Data Sheet. Use a value of 1 for a detection and enter nothing for minute-columns when an individual bird was not detected. This technique will allow us to compare your data to studies that use different time periods. Birds will sometimes move during the counting period. Use your best judgment in determining new detections from those of birds that have moved during the count.

DO NOT use whistles, audio-calls, or any method of that coaxes birds to call or come closer to you. Also, **DO NOT** use a flashlight to search for reflections of Nightjars eyes. These practices will bias your survey and make it difficult to compare your data to other routes. Record birds as you hear them, rather than waiting for the end of the six minute period to avoid data omission errors.

Enter a Stop# in the appropriate column of your data sheet beginning with #1 for your first stop and sequentially numbering others as 2 through 10.

Enter the following abbreviations for each species on the Data Sheet when detected at a stop:

WHIP = Whip-poor-will	BCNI = Buff-collared Nightjar	COPO = Common Poorwill
CHUCK = Chuck-will's-widow	LENI = Lesser Nighthawk	COPA = Common Pauraque
CONI = Common Nighthawk	ANNI = Antillian Nighthawk	

--If none of these species are detected at a stop enter **NONE** on the data sheet on the same line as that stop number

--Try your best to maintain a detection history of each individual over all six minutes

Sample Data Entry for an observer at 4 stops: Each line represents an individual bird's detection history and a value of 1 indicates that an individual bird was heard during that respective minute. Use a new line for each new bird detected at a stop.

Stop#	Species	Time blocks (minutes of survey)					
		1	2	3	4	5	6
1	WHIP	1	1	1			
1	CHUCK			1	1	1	1
2	NONE						
3	WHIP	1	1	1			
3	WHIP		1	1	1	1	1
4	CONI				1		1

In the above example, the observer began counting at Stop#1 and initially detected 1 Whip-poor-will during each of the first three minutes of survey so a numeral 1 was placed in the each respective column. The observer also detected 1 Chuck-wills Widow at Stop#1 during the third minute of survey through the sixth minute. This observer then moved on to Stop#2 and did not detect any Nightjars so NONE was entered for species. At Stop#3, the observer detected 1 Whip-poor-will during each of the first three minutes of the count but did not detect this individual during the last three minutes so the numeral 1 was placed in the 1 through 3 minute columns. This observer also detected a second Whip-poor-will at Stop#3 during the 2nd minute of survey and continued to hear if for the remainder of the 6-min time. This observer used the best judgment in deciding these were two individual Whip-poor-wills and not the same bird that moved after initial detection. No additional species were detected at Stop#3. Finally, at Stop#4, this observer detected 1 Common Nighthawk (CONI) during the 4th min of survey and during the 6th min of survey but not during any other time.

- Please remember that surveys should be conducted during the allotted survey times (see page 1). Surveys should not be conducted under overcast or strong wind conditions, or when there is persistent rain. If conditions deteriorate after a route is started for more than 3 stopping points, we advise you to abort the survey and attempt it on another night with better conditions. **If you have questions contact Mike Wilson, e-mail: mdwils@wm.edu (preferred method), phone 757-221-1649. Include Nightjar Survey in subject of email.**

Nightjar Stops Description Data
(only needed if not submitted in previous year)

Use this form if you are not able to provide a digital map of your stopping points. See Nightjar Survey Network Website at www.ccb-wm.org for more details on how to provide digital or hardcopy map data.

Observer Name	
State	
County	
Route Name and Number	
Year of Survey	

Stop#	Latitude e.g., dec degrees 38.43567 or deg, min, sec 38° 56' 07''	Longitude e.g., dec degrees 71.45465 or deg, min, sec 71° 25' 39''	or Location Description	# Houses Visible	Dominant 3 habitats (use codes below)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Habitat Codes:

PF = Pine/Conifer/Mixed Forest	D = Developed (urban, residential area)	W = Water
HF = Hardwood Forest	O = Open (fields, lawn, clear-cut)	M = Marsh/Wetland
P = Prairie	SHR = Shrub	AG = Agriculture

please feel free to add others if needed

Mail this form to: Nightjar Survey Network, Center for Conservation Biology, College of William and Mary Williamsburg, VA 23187-8795

or email digitally completed version to: mdwils@wm.edu. Include *Nightjar Survey* on subject line of email.