



Bird Study

Merit Badge Workbook



This workbook can help you but you still need to read the merit badge pamphlet.

This Workbook can help you organize your thoughts as you prepare to meet with your merit badge counselor. You still must satisfy your counselor that you can demonstrate each skill and have learned the information. You should use the work space provided for each requirement to keep track of which requirements have been completed, and to make notes for discussing the item with your counselor, not for providing full and complete answers. If a requirement says that you must take an action using words such as "discuss", "show", "tell", "explain", "demonstrate", "identify", etc, that is what you must do.

Merit Badge Counselors may not require the use of this or any similar workbooks.

No one may add or subtract from the official requirements found in Scouts BSA Requirements (Pub. 33216 – SKU 653801). The requirements were last issued or revised in 2019 • This workbook was updated in June 2020.

Scout's Name: Study Guide Unit: Bird Study _____
Counselor's Name: LeJay Graffious Phone No.: _____ Email: _____

To get a head start on the Bird Study Merit Badge, this study sheet provides on-line resources to complete each of the requirements. Use this link to download the work, <http://www.ussscouts.org/mb/worksheets/Bird-Study.pdf>

Then use the links provided to answer the requirements. You may use other online resources or books to find more information which may be needed for a full comprehensive answer. As with any online resource, check it to be a reliable authority. I highly recommend this site from Cornell University, <https://www.allaboutbirds.org/>

<http://www.USScouts.Org> • <http://www.MeritBadge.Org>

Please submit errors, omissions, comments or suggestions about this **workbook** to: Workbooks@USScouts.Org
Comments or suggestions for changes to the **requirements** for the **merit badge** should be sent to: Merit.Badge@Scouting.Org

1. Explain the need for bird study and why birds are useful indicators of the quality of the environment.

We will do this requirement Sunday Morning with Greg Miller

Describe how birds are part of the ecosystem.

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- 2. Show that you are familiar with the terms used to describe birds by sketching or tracing a perched bird and then labeling 15 different parts of the bird.

<https://www.allaboutbirds.org/news/bird-id-skills-field-marks/>



Sketch or trace an extended wing and label types of wing feathers.

<http://nhptv.org/wild/images/wings.png>



- 3. Demonstrate that you know how to properly use and care for binoculars, a spotting scope, or a monocular.
 - a. Explain what the specification numbers mean on binoculars, a spotting scope, or a monocular.

<https://www.youtube.com/watch?v=pkPzl-VPmo4>

<https://www.youtube.com/watch?v=VTaPXhUNyv8>

<https://www.youtube.com/watch?v=PLAHZiasObw>

- b. Show how to adjust the eyepiece and how to focus for proper viewing.
- c. Show how to properly care for and clean the lenses. <https://www.youtube.com/watch?v=X-MEA-t0Ddo>
- d. Describe when and where each type of viewing device would be most effective.

<https://chipperbirds.com/spotting-scope-vs-binoculars/>

- 4. Demonstrate that you know how to use a bird field guide.
 - Show your counselor that you are able to understand a range map by locating in the book and pointing out the wintering range, the breeding range, and/or the year-round range of one species of each of the following types of birds:

Type	Species Chosen	Wintering Range	Breeding Range	Year-Round Range
a. Petrel	Wilsons Storm-Petrel			
b. Plover	https://www.allaboutbirds.org/guide/Piping_Plover/	https://www.13abc.com/2021/07/23/rare-piping-plovers-hatched-nw-ohio-are-getting-ready-spread-their-wings-fly-south/		
c. Falcon or hawk	https://www.allaboutbirds.org/guide/Red-tailed_Hawk/overview			
d. Warbler or vireo	https://www.allaboutbirds.org/guide/Hooded_Warbler			
e. Heron or egret	https://www.allaboutbirds.org/guide/Great_Blue_Heron			
f. Sparrow	https://www.allaboutbirds.org/guide/Song_Sparrow			
g. non-native bird *	https://www.allaboutbirds.org/guide/European_Starling	or	https://www.allaboutbirds.org/guide/Ring-necked_Pheasant	

*introduced to North America from a foreign country since 1800

- 5. Observe and be able to identify at least 20 species of wild birds. Prepare a field notebook, making a separate entry for each species, and record the following information from your field observations and other references.

In this section I have included birds that you may expect to see when visiting Old Hemlock. You can research to complete the description then add the date and time when at Old Hemlock. Or you can observe birds prior to arriving at Old Hemlock and log the information here.

Species 1: [Cedar Waxwing](#)

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Cedar_Waxwing

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 2: Chipping Sparrow

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Chipping_Sparrow

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 3: Red –bellied Woodpecker _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Red-bellied_Woodpecker

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 4: Downy Woodpecker _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Downy_Woodpecker

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 5: Pileated Woodpecker

Note the date and time. _____

- a. Note the location and habitat. _____
- b. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Pileated_Woodpecker

- c. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 6: Northern Cardinal _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Northern_Cardinal/

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 7: Wood Thrush _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Wood_Thrush

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 8: American Robin _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/american_robin

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 9: Eastern Towhee _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Eastern_Towhee

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 10: Hooded Warbler _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Hooded_Warbler/

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 11: Indigo Bunting _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Indigo_Bunting

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 12: Broad-winged Hawk _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Broad-winged_Hawk

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 13: Mourning Dove _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Mourning_Dove

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 14: Cedar Waxwing _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Cedar_Waxwing

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 15: Ruby-throated Hummingbird _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Ruby-throated_Hummingbird

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 16: Red-eyed Vireo _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Red-eyed_Vireo

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 17: Blue-headed Vireo _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Blue-headed_Vireo

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 18: Turkey Vulture _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Turkey_Vulture

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 19: Tufted Titmouse _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/Tufted_Titmouse

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

Species 20: White-breasted Nuthatch _____

- a. Note the date and time. _____
- b. Note the location and habitat. _____
- c. Describe the bird's main feeding habitat and list two types of food that the bird is likely to eat.

https://www.allaboutbirds.org/guide/White-breasted_Nuthatch

- d. Note whether the bird is a migrant or a summer, winter, or year-round resident of your area.

6. Describe to your counselor how certain orders of birds are uniquely adapted to a specific habitat. In your description, include characteristics such as the size and shape of the following: **The following links are guides to understanding how bird characteristics are tied to habitat and feeding strategies. You may have other sources to assist you.**

- a. Beak
- b. Body
- c. Leg and foot
- d. Feathers/plumage

<https://www.allaboutbirds.org/news/build-your-bird-id-skills-size-shape/>

<https://academy.allaboutbirds.org/inside-birding-habitat/>

<https://www.biologydiscussion.com/zoology/birds/birds-characteristics-habit-and-structure-phylum-chordata/41279>

7. Explain the function of a bird's song. Be able to identify five of the 20 species in your field notebook by song or call alone. For each of these five species enter a description of the song or call, and note the behavior of the bird making the sound. Note why you think the bird was making the call or song that you heard.

Species 1:	In this requirement, you may use the links for the 20 birds above. In each link there is a tab to the sound/song of each bird or you may select your own bird to describe.
Description:	
Behavior:	
Why?	

Species 2:

Description:

Behavior:

Why?

Species 3:

Description:

Behavior:

Why?

Species 4:

Description:

Behavior:

Why?

Species 5:	
Description:	
Behavior:	
Why?	

8. Do ONE of the following:

a. Go on a field trip with a local club or with others who are knowledgeable about birds in your area.

1. Keep a list or fill out a checklist of all the birds your group observed during the field trip. **(We will do this activity at Old Hemlock)**

2. Tell your counselor which birds your group saw and why some species were common and some were present in small numbers.

3. Tell your counselor what makes the area you visited good for finding birds.

b. By using a public library, the Internet, or contacting the National Audubon Society, find the name and location of the Christmas Bird Count nearest your home and obtain the results of a recent count.

1. Explain what kinds of information are collected during the annual event.

Skip this one

2. Tell your counselor which species are most common, and explain why these birds are abundant.

3. Tell your counselor which species are uncommon, and explain why these were present in small numbers. If the number of birds of these species is decreasing, explain why, and what, if anything, could be done to reverse their decline.

Species: Decreasing?

If decreasing why?

What could be done?

Species: Decreasing?

If decreasing why?

What could be done?

Species:	<input type="text"/>	Decreasing? <input type="checkbox"/>
If decreasing why?	<input type="text"/>	
	<input type="text"/>	
	<input type="text"/>	
What could be done?	<input type="text"/>	
	<input type="text"/>	
	<input type="text"/>	
	<input type="text"/>	
	<input type="text"/>	

9. Do ONE of the following:
- a. Build a bird feeder and put it in an appropriate place in your yard or another location.
 - b. Build a birdbath and put it in an appropriate place.
 - c. **Build a backyard sanctuary for birds by planting trees and shrubs for food and cover.**

For the option you choose, describe what birds you hope to attract, and why.

We will be improving the wildlife sanctuary habitat at Old Hemlock by installing bird nesting boxes.

<input type="text"/>
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10. Do the following.
- a. Explain the differences between extinct, endangered, and threatened.

[What are the differences between endangered, threatened, imperiled, and at-risk species? | U.S. Geological Survey \(usgs.gov\)](https://www.usgs.gov/learn/what-are-the-differences-between-endangered-threatened-imperiled-and-at-risk-species)

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b. Identify a bird species that is on the endangered or threatened list.

Choose One:

1. Short-tailed Albatross
2. California Condor
3. Interior Least Tern
4. Piping Plover
5. San Clemente Loggerhead Shrike
6. Southwest Willow Flycatcher
7. San Clemente Bell's Sparrow

Explain what caused their decline.

Discuss with your counselor what can be done to reverse this trend and what can be done to help remove the species from the endangered or threatened list.

11. Identify three career opportunities connected to the study of birds.

1.	Here are some ideas and resources for this requirement.
2.	1) Wildlife Careers - The Wildlife Society
3.	
	2) Here is list of current job openings. You can choose one of these to research. Wildlife Jobs, Employment Indeed.com
	3) Also veterinarian science is an option here. Veterinarians are employed by zoos, rehabilitation centers and for research.

Pick one and find out the education, training, and experience required for this profession. Discuss with your counselor if this profession might interest you.

Profession:

Education

--

Training

Experience

Discuss with your counselor if this profession might interest you.

When working on merit badges, Scouts and Scouters should be aware of some vital information in the current edition of the *Guide to Advancement* (BSA publication 33088). Important excerpts from that publication can be downloaded from <http://usscouts.org/advance/docs/GTA-Excerpts-meritbadges.pdf>.
 You can download a complete copy of the *Guide to Advancement* from <http://www.scouting.org/filestore/pdf/33088.pdf>.