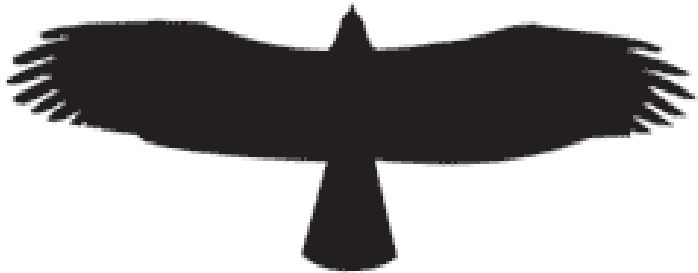


# BIG BALD FIELD NOTEBOOK

EVERGREEN COMMUNITY CHARTER SCHOOL  
AUTUMN 2011

Eagle



Buteo



Accipiter



Falcon



NAME:

---

**T**his field notebook is designed to help you to think differently about the natural environment you are visiting. Use the first half of the book to explore Big Bald and the Appalachian Trail. Use the second half when you visit the bird banding station on Little Bald. Enjoy!



***FIELD NOTES AND SKETCHES***

---

---

---

---

---

---

---

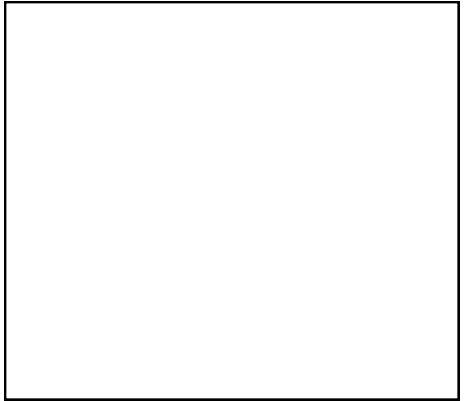
---

---

---

---

---



## MOUNTAIN HABITAT IS COOL!

High MOUNTAIN HABITAT differs from the lowlands in many ways. The higher the **ELEVATION** the cooler the temperatures on the mountain.

BIG BALD is **5510** feet above sea level.

LITTLE BALD is **5350** feet above sea level.

What is the difference in **elevation** between the two mountains? (Hint: Subtract Big Bald elevation from Little Bald elevation)

---

A general rule holds that one thousand feet in **elevation gain** equals about 3 degrees of temperature loss....

Asheville, NC is approximately 2500 feet above sea level. About how many degrees cooler is the Big Bald habitat than the temperature in Asheville? (Hint: First, find the difference in elevation between Asheville and Big Bald, then divide that number by one thousand, finally, times that number by 3 degrees)

---

Cooler habitat allows northern animals and plants to extend their **range** (see page 13) south on the earth. What other natural factors of the mountain surroundings contribute to a cooler habitat?



# APPALACHIAN TRAIL BIRDING with BINOCULARS HIKE

The **Appalachian Trail** is a hiking trail that starts in Georgia and goes over 2175 miles all the way to Maine!!! We will be hiking on the **AT** for about one mile...and learn to use our binoculars along the way. Look for bird pictures and information on the trail signposts and try to answer all the questions

GOOD LUCK!

## POST 1

WHAT DOES THE FIRST SIGN READ?...WRITE THE MESSAGE...

---

## POST 2

WHAT IS THIS ANIMAL????

---

## POST 3

WHAT COLOR IS THIS BIRD?

---

**POST 4**

WHAT SHAPE ARE THE BIRDS WINGS.....  
POINTED OR ROUNDED??

---

**POST 5**

WHICH BIRD IS LARGEST...  
LEFT, RIGHT OR CENTER?

---

**POST 6**

WHICH BIRD IS THE FALCON??  
LEFT...RIGHT ...OR CENTER???

---

**POST 7**

DOES THIS BIRD LIVE IN THE SOUTHERN  
APPALACHIAN MOUNTAINS? WHAT BIRD IS IT  
AND WHERE DOES IT LIVE?

---

WELCOME TO BIG BALD !!!.....

at mile 322 along the Appalachian trail hiking north from  
Springer Mountain.

LOOKING NORTH FROM BIG BALD

:

---

**WHAT DO YOU SEE?** DRAW A PICTURE OF THE SKYLINE FROM THE NORTHWEST TO THE SOUTHEAST. NAME AND LABEL THE HIGHEST AND MOST INTERESTING MOUNTAINS.

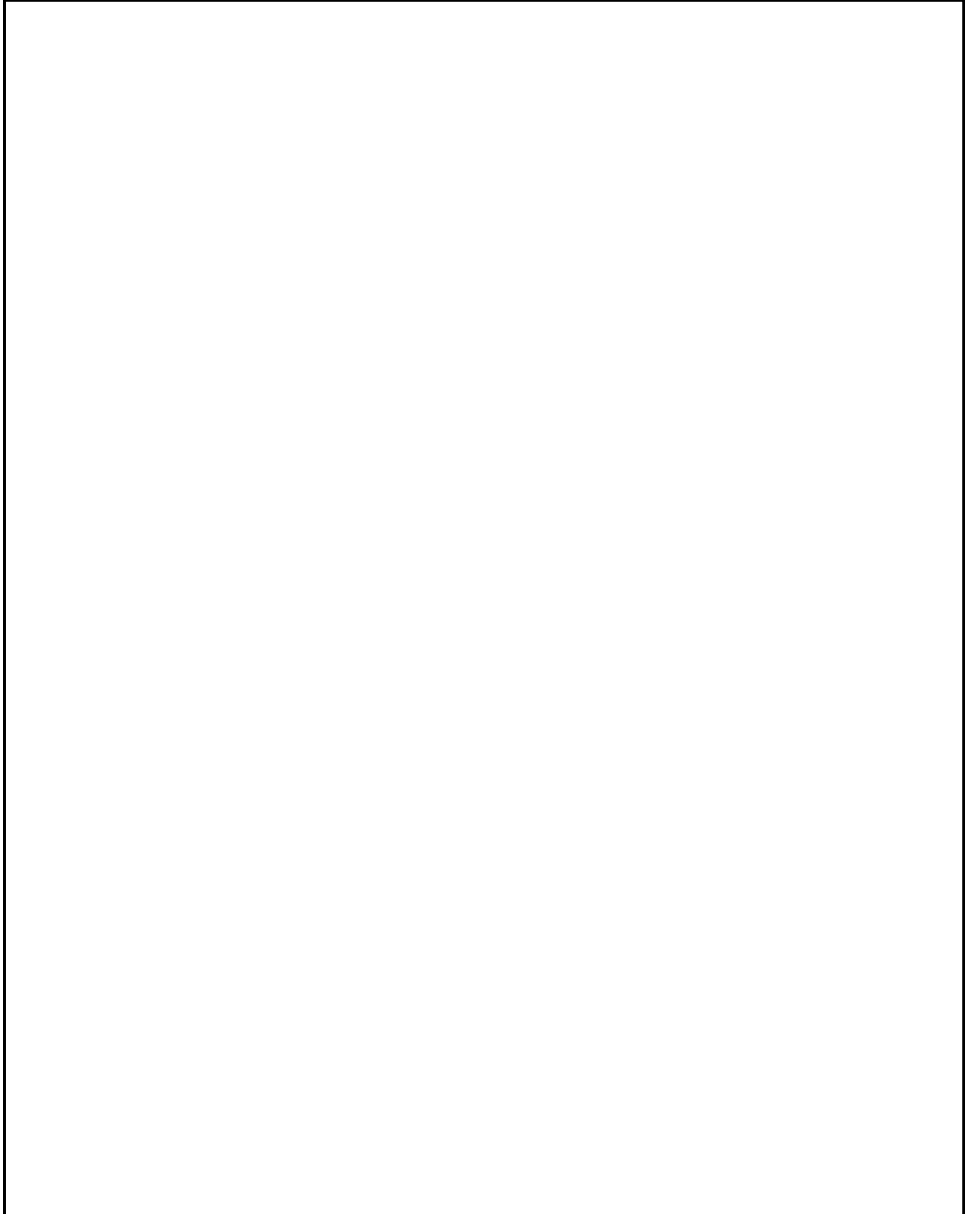
**HOW FAR CAN YOU SEE?** SOME OF THE MOUNTAINS IN YOUR VIEW ARE OVER 75 MILES AWAY!

BE SURE TO DRAW IN THE APPALACHIAN TRAIL AS IT WINDS OVER LITTLE BALD. WHAT HABITAT CHARACTERISTICS MAKE LITTLE AND BIG BALD SO ATTRACTIVE TO MIGRATING BIRDS?

## **WHAT DOES A RAPTOR SEE???**

A Bald Eagle has binocular vision that can see a rabbit from FOUR miles away!!!  
Most hawks see 3 times sharper than humans.

DRAW A PICTURE OF WHAT A RED-TAILED HAWK MIGHT SEE AS IT  
MIGRATES OVER BIG BALD ON ITS JOURNEY SOUTH!









## COMMON RAVEN



The **Common Raven** is a large, all black bird that looks similar to the **American Crow**. However, the Common Raven is about 1/2 larger than the crow and has a WEDGE-SHAPED TAIL. Ravens are members of the Corvid family which also includes crows and **Blue Jays**. Ravens live mostly in high altitudes of the southern Appalachians.

Common Ravens soar gracefully while the American Crow usually flaps its wings and has a squared tail. They also sound different. Listen for the raven's AWK! AWK! What call does the American Crow often make?

# BIG BALD HAWKWATCH DATA SHEET

DATE \_\_\_\_\_



OBSERVATION TEAM \_\_\_\_\_

WIND SPEED \_\_\_\_\_

TEMPERATURE \_\_\_\_\_

WIND DIRECTION \_\_\_\_\_

DURATION OF OBSERVATION \_\_\_\_\_

TIME	BIRD SPECIES	FLIES FROM	FLIES TO	DRAW THE BIRD

# A GUIDE FOR HAWKS SEEN IN THE NORTHEAST

Because many hawks differ in appearance due to age and various dark and light morphs, only the adult of the most common form is illustrated.

## KNOW YOUR SILHOUETTES



### FALCONS

Streamlined - Long pointed wings; Long compressed tapered tails; Strong rowing wing beats; lose some pointed wing and tapered tail look when not in direct flight.



### ACCIPITERS

Short, wide rounded wings; long tails. flap, flap, flap - sail flight.



### BUTEOS

Broad wings and broad rounded tails; often seen soaring in wide circles high in the air.



### PEREGRINE FALCON

- 14 - 18" length
- Light breast and throat.
- Crow size, falcon shape.
- Quick, powerful wingbeats.



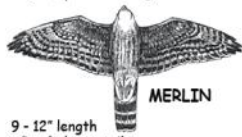
### NORTHERN GOSHAWK

- 18 - 24" length
- Pale gray underbody.
- White under-tail coverts.
- Larger than crow.



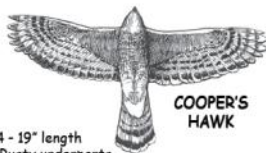
### RED-TAILED HAWK

- 17 - 22" length
- Unmarked light to red tail.
- Light breast and dark leading edge to wing.
- Streaked, variably dark belly band.



### MERLIN

- 9 - 12" length
- Banded gray tail.
- Dark-looking underside.
- Streaked body.



### COOPER'S HAWK

- 14 - 19" length
- Rusty underparts.
- Round tipped, long tail.
- Near size of crow.



### RED-SHOULDERED HAWK

- 15 - 18" length
- Black tail with narrow white bands.
- Dark underwing coverts.
- Crescent windows near tip of wing.



### AMERICAN KESTREL

- 8 - 11" length
- Tail: rufous-male, barred brown -female
- Light underneath.
- Near size of Blue Jay.



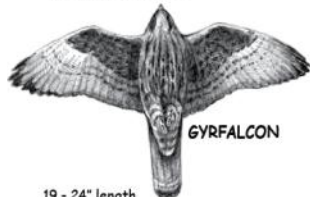
### SHARP-SHINNED HAWK

- 9 - 13" length
- Rusty underparts.
- Square or notched tail tip.
- Near size of Blue Jay.



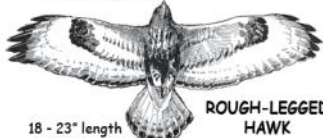
### BROAD-WINGED HAWK

- 13 - 17" length
- Smallest Buteo, crow size.
- Equal white and black on tail.
- Whitish wing linings.



### GYRFALCON

- 19 - 24" length
- Robust - larger than Peregrine.
- Body uniformly colored-4 color morphs.
- Rare Arctic visitor.



### ROUGH-LEGGED HAWK

- 18 - 23" length
- Winter visitor.
- Dark belly, wrist patch and terminal tail band.
- Dark morph: body, wing linings solid dark



### SWAINSON'S HAWK

- 17 - 22" length
- Dark chest.
- Light underwing coverts, dark flights.
- Uncommon western visitor in northeast.

Developed by Paul Carrier for the NorthEast Hawk Watch (NEHW)  
[www.battaly.com/nehw](http://www.battaly.com/nehw)



**OSPREY**  
21 - 26" length

- . Flies with kink (W) in wings.
- . Eagle sized; clean white body.
- . Black wrist marks.



**NORTHERN HARRIER**  
16 - 20" length

- . Long, narrow wings and tail.
- . Brown above, streaked brown below-female.
- . Gray above, pale below with black wing tips-male.

## SHARP-SHINNED vs COOPER'S



SMALLER-LESS HEAD PROTRUSION  
MORE CURVED LEADING WING EDGE  
NOTICEABLE WRIST  
← **ADULT SHARP-SHINNED**

†  
MORE A T LOOK



← **ADULT COOPER'S**  
LONGER LOOKING TAIL →  
LARGER-MORE PROTRUDING HEAD  
LITTLE-OR NO WRIST BEND  
†  
MORE A CROSS LOOK

PAUL CARRIER'S SKETCHBOOK

### WING PROFILE



**BALD EAGLE**



**GOLDEN EAGLE**

**SUB-ADULT GOLDEN EAGLE**



- . Like large buteo, curvy wings.
- . Less head protrusion than tail.
- . Slight dihedral to wing profile.

27 to 35" length

### IMMATURE BALD EAGLE



**BALD EAGLE**



27 to 35" length

- . Long, straight wing extension.
- . Tail and head length similar.
- . Straight wing profile.



24 to 28" length  
**Turkey Vulture**  
. Dark wings with lighter feathers  
. Flies with uplifted wings-V shaped



23 to 28" length  
**Black Vulture**  
. Wings & tail shorter than TV  
. Whitish tips on wings

This guide developed by Paul Carrier is the property of the North East Hawk Watch (NEHW), a registered not-for-profit volunteer organization established to increase awareness, appreciation and protection of hawks. We do that by promoting hawk watching, the study of hawk migration, throughout New England, eastern New York, and northeastern New Jersey. Individuals may download or print single copies of this guide for their personal, non-commercial use. All other rights are reserved. For more information on hawk watching in the northeast, to join NEHW, or to purchase a durable, laminated printed version of this guide, visit [www.battaly.com/nehw](http://www.battaly.com/nehw).



# HABITAT.....

**is the home of a living thing.**

Good habitat provides the essential needs for the survival of any plant or animal.

Can you list three essential ingredients for survival provided by **HABITATS**???

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Using the **range map** on the opposite page.....

FIND the **Breeding** habitat of the Tennessee Warbler.

CIRCLE the migration **Stopover** Habitat (Hint: Big Bald)

FIND the **Wintering** Habitat of the Tennessee Warbler.

DRAW an arrow to connect the three HABITATS and to show how the Tennessee Warbler migrates south to warmer climates.

What favorite food of a Tennessee Warbler is found in the **Wintering** habitat and also in the **Breeding** habitat?

(HINT: BUZZ, BUZZ)

# TENNESSEE WARBLER RANGE MAP

Why is the Tennessee Warbler named that way?  
Many years ago, when the first European naturalists roamed the southern Appalachians, the first time that a bird was seen, it was given a new English name. Where do you think this bird was first seen ?



# BIG BALD HABITAT HUNT

Welcome HABITAT Hunters! When you and your group go out to collect birds from the nets, you'll need to **think like a bird** to answer each habitat riddle. Write the answer or collect a tiny piece of the HABITAT to proof your observations. Return to the banding table with your answers to collect your reward! GOOD LUCK !!!

## NET 1

Along the path you'll see these seeds  
That can help to satisfy all a bird's needs

## NET 2

Years ago I grew strong and tall  
Then during a storm I took a fall

## NET 3

As a bird birthplace, I'm often round  
Find me up high or on the ground

## NET 6

Search up high on a climbing vine  
For berry good bird food that's divine

## NET 7

Strong and true trees grow on the hill  
Many years from now, they'll be here still



## **NET 9**

Find burry nuts that are closed up tight  
Birds only open them using all their might

## **NET 12**

We are yellow, round and red  
And blue jays eat us to be fed

## **NET 13**

A big tree here has the best  
Place that's dark to make a nest

## **NET 17**

The other trees drop leaves down  
But I will never turn to brown  
I have lots of branches green  
To hide and rest and maybe preen



Screech-Owl

# LOOK A WILD BIRD IN THE EYE !

WHAT IS THE DIFFERENCE BETWEEN A **WILD** ANIMAL AND A **TAME** ANIMAL?



DRAW THE WILD BIRD'S **TOOLS FOR SURVIVAL** IN THE BOX BELOW.....

**BEAK** SHAPE: Insect or seed eating?

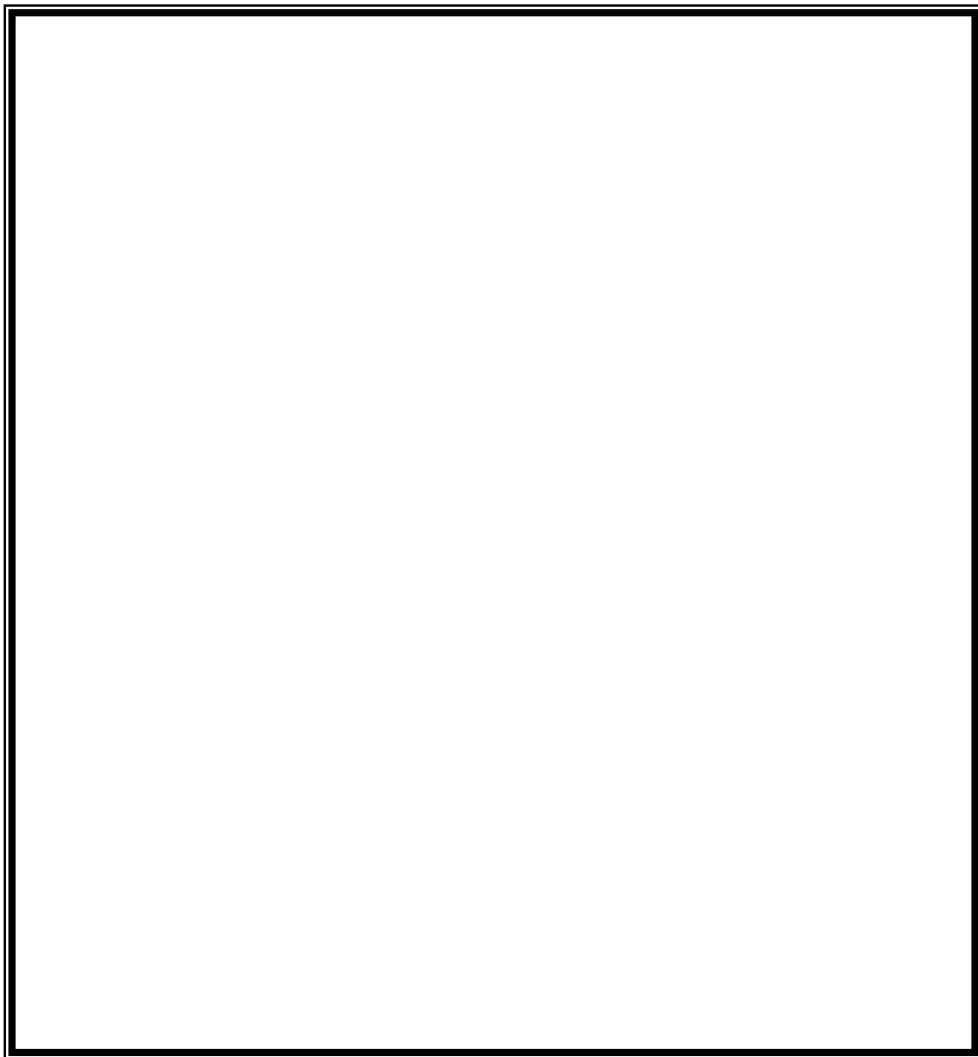
**FEET**: for climbing or perching?

**WING** SHAPE: (Pointed or rounded)?

**EYE** POSITION: (Side or top of head?)

BEAK	FEET
WINGS	EYES

# CREATE A COLOR DRAWING OF A BIRD SPECIES THAT IS BEING BANDED



BIRD NAME \_\_\_\_\_

AGE \_\_\_\_\_ SEX \_\_\_\_\_ WEIGHT \_\_\_\_\_

PLACE OF ORIGIN \_\_\_\_\_

DESTINATION \_\_\_\_\_

## MIGRATION MECHANICS

### HOW FAR AND FAST DO BIRDS FLY?

Most songbirds migrate in flocks during the nighttime to conserve moisture and to keep cool. Can you think of one migration hazard that songbirds AVOID by migrating at night?




---

To get an idea of how far some species migrate, try to answer these brain squeezers.

A Tennessee Warbler flies 15 miles an hour during ten hours of nighttime migration. How many miles does it migrate in one night?

10 hours X 15 miles = \_\_\_\_\_

Look at the **RANGE MAP** of a  Tennessee Warbler. Using the information above, about how many nights of flying would it take the TEWA to migrate the 2000 miles from Canada (where it nests) to Costa Rica (where it might spend the winter)?

---

# FAT BIRDS FLY FAR!

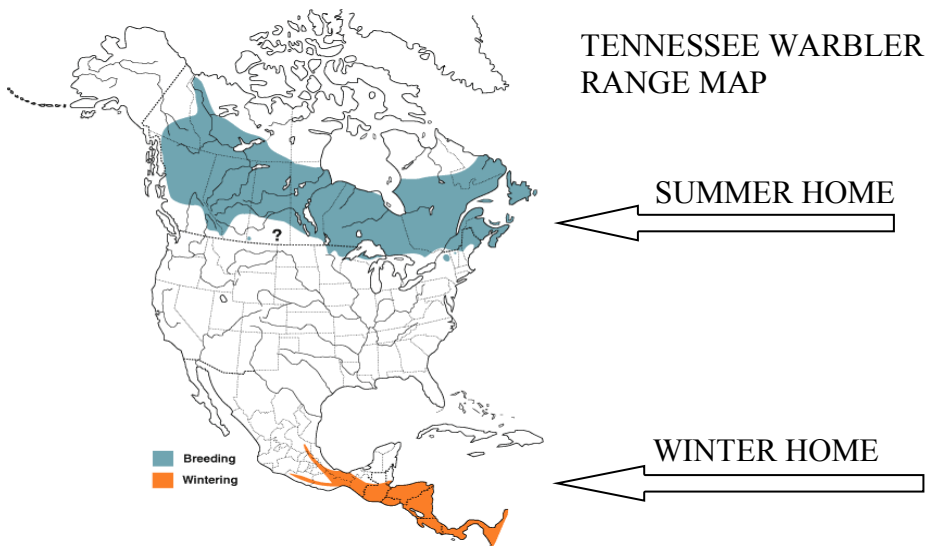
Many **neotropical migrants** eat and eat, sometimes doubling their average weight, to gain enough **FAT** to **fuel** their long migration journey.

A Black-throated Blue Warbler weighs 8 grams when banded at Big Bald Banding Station. She stays in the woods at Little Bald and eats insects. When she is recaptured 5 days later she has gained 50% (or  $1/2$ ) of her original weight.

**How many grams does the fat BTBW weigh now?**

---

Answer hint: What is half (50%) of 8 grams? Add this number to the original weight of the BTBW.





## DATA DETAILS

SCIENTISTS USE THEIR DATA TO **EVALUATE** THE HEALTH OF INDIVIDUAL BIRDS AND TO **MONITOR** MIGRANT BIRD POPULATIONS.

HELP CONSERVE BIRD POPULATIONS BY USING YOUR DATA TO ANSWER THE FOLLOWING QUESTIONS.....

1. What was the most common bird banded today?
2. How many different species were banded today?"
3. Which species had the longest wing lengths?
4. Which species is heaviest?
5. Which species is lightest?



**Bonus question!** Are female birds generally lighter or heavier than male birds?

---

***Double bonus!!*** Use a **bird field guide** and range map to answer...

Which banded bird species might travel the most distance during migration? \_\_\_\_\_

# Autumn Migratory Bird Checklist at Big Bald

- Slate-colored junco**
- Blue-headed vireo**
- Ruby-crowned kinglet**
- Tennessee warbler**
- Black-throated blue warbler**
- Ovenbird**
- Bay-breasted warbler**
- Swainson's thrush**
- Wood thrush**
- \_\_\_\_\_
- \_\_\_\_\_

- Bald eagle**
- Sharp-shinned hawk**
- Cooper's hawk**
- Red-tailed hawk**
- Turkey vulture**
- Merlin**
- \_\_\_\_\_
- \_\_\_\_\_