

Lesson 2: Research
Methods using Field Study
and Museum and Archival
Collections Lesson Guide

Ecosystems of Zion National Park











COMMON SONGBIRDS AND BUTTERFLIES OF ZION NATIONAL PARK

BIBDS 1 Blanguny Gastactakry 2 Lesser Goldfinch 5 Song Sparrow 4 Yullow Warkler & Black Threated Sparrow 6 Laturil Burning 7 Yolds Crees Swallow 8 Canyon Wen 9 American Dipole 10 An Threated Flycatcher 11 Spotted Towhee 12 Summer Transpar 73 Western Kinghird 14 American Robin 15 Bullock's Oriole 16 Western Sruch Jay 17 Black Headed Grasbesh 18 House Flinch 19 Says Pheebe 20 Western Transpar 21 Wastern Bluebied 22 Chipping Sparrow 23 Black Ploaded 24 Humboous View 28 Black Capped Chickade 26 House Wen 27 Juniper Timouse 28 Black Capped Chickade 26 House Wen 27 Juniper Timouse 28 Black Capped Chickade 26 House Wen 27 Juniper Timouse 28 Black Capped Chickade 26 House Wen 27 Juniper Timouse 28 Black Capped Chickade 26 House Wen 27 Juniper Timouse 28 Black Capped Chickade 26 House Wen 27 Juniper Timouse 28 Black Capped Chickade 26 House Wen 27 Juniper Timouse 28 Black Capped Chickade 26 House Wen 27 Juniper Timouse 28 Capped Chickade 26 House 28 Black Capped Chickade 26 House 28 Black Capped Chickade 26 House 26 Black Capped Chickade 28 House 26 Black Capped Chickade 28 House 26 Black Capped Chickade 28 House 28 Black Capped Chickade 28 House 26 Black Capped Chickade 28 House 28 Bla

What is biodiversity?

Why is biodiversity important?

How do scientists document and record diversity of birds?

How and why should I be a birder?

Common Songbirds of Zion Artwork by Zoe Keller



Student Name	
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D-1	Colors?	Short IShoo and other details
Date:	Colors?	Sketch (Shape and other details)
Time:		
•	Special Markings or	
Location:	Features?	
How many of this bird?		
_		
Size in relation to your		
hand?	What is it doing?	
Date:	Size in relation to your	Sketch (Shape and other details)
	hand?	
Time:		
Location:	Colors?	
II		
How many of this bird?	Special Markings or	
	Features?	
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hand?		
	What is it doing?	
_		
Date:	Size in relation to your	Sketch (Shape and other details)
Time:	hand?	
Timei		
Location:	Colors?	
How many of this bird?		
	Special Markings or	
	Features?	
Size in relation to your		
hand?		
	1100-a i-ia d-i2	
	What is it doing?	



Video by Clive Bramham





Small Group Discussion: Field Study Observations

- Share your sketch of the Spotted Towhee. How would you describe the shape of its body?
- What was the Spotted Towhee doing? Why do you think it was behaving this way?
- Compare and contrast the three birds observed in the videos. How are the similar? How are they different?
- Why do you think there is such physical and behavioral diversity in birds?

Observation of the Spotted Sandpiper

Observers: Merrill Webb & David Ng

Location & Habitat: South of Rockville, Utah on a mud bar along the Virgin River

Date: December 28, 1978

Time: 11:30 A.M.

Light & Weather: slightly overcast to sunny and not too cold-temperature about 45

degrees

Distance: We were within 25-35 yards. I was using 8X40 binoculars and David was using

10x50 binoculars.

Description:

A small shorebird, larger than the "peeps" but smaller and more slender than a dowatcher. It had a pure white breast with brownish-gray "sideburns" extending down between the shoulders and neck from the brownish-gray back. I really wasn't sure what it was until it started moving its tail-end by bobbing up and down. Add that behavior with the clear breast and the white line over the eye & bright colored legs it had to be a spotted sandpiper in winter plumage. We got quite close to it before it flew with the characteristic shallow, rapid wing beats to the other side of the river. It didn't call so I can't give a sound description.

Its behavior of bobbing its tail up and down as it walked along & the universal description given alone, I feel identifies it as a spotted sandpiper. We observed it for about a five minute period.

Merrill Webb

Observation of the Spotted Sandpiper rus - merrill webb + David Ng - December 28, 1978 e of day - 11:30 A.M. ther + Light - slightly overcast to sunny 4 not too cold-about 45; tance - we were within 25-35 yds. of it (a single bird) & I was using 8x40 linoculars & David was using 10 x50 linoculars. cription - A small shorelied, larger than the "peops" but smaller 4 more slender than a dowitcher. It had a sure white breast with brownish-gray "sideburns" extending down between the shoulders 4 neck from the brownish-gray back. I really wasn't sure what it was until lit started to mode along the shore; but then it started moving it's tall-end by bobling up & down. Add that behavior with the clear breast of the white line over the eye & light-colored less it had to be a sketted Sandgeiper in winter slumage. We get quite close to it before it flew with the characteristic shallow rapid wing heats to the other side of the river est didn't call, so I can't give a voice description. It's bellavior of bobbing its tout up & down as it walked along & the Ivisual description given above, I feel, lidentifies it as a spotted sandpiper. We observed it for about a five minute period. Merrill well

Official National Park Service Natural History Field Observation

Form 10-257 "R" 5/83

DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

NATURAL HISTORY FIELD OBSERVATION

OBSERVATION:			
LOCATION:			
DATE (Month, Day, Year)	TIME (a.m., p.m.)	WEATHER	
Description, Behavior, Number, Sket	ch, Map, Etc. (use reverse if i	necessary)	
	€		
BE	ACCURATE - DO NOT	GUESS	
PARK:	3 \$ 2		
OBSERVER: (include name, address		nt Printing Office: 1992 — 619-398/4056	8



At Home Birding Observations

	Size in relation to your hand?	Sketch Body Shape
DATE: TIME: LOCATION:	Colors? Special Markings or Features?	
HOW MANY?	What is it doing?	Sketch Beak or Bill Shape
	Size in relation to your hand?	Sketch Body Shape
DATE: TIME:	Colors?	
LOCATION:	Special Markings or Features?	
HOW MANY?	What is it doing?	Sketch Beak or Bill Shape
	Size in relation to your hand?	Sketch Body Shape
DATE: TIME:	Colors?	
LOCATION:	Special Markings or Features?	
HOW MANY?	What is it doing?	Sketch Beak or Bill Shape

Student Name

Bird Field Study Data



Research Proposal



Barbara Billionaire Research Foundation 2424 Main Street Darcy, MT 86759

esearcher's Name:	
esearch Project Title:	
pecies to be Studied:	
roject Dates and Duration:	
oject Description and Focus:	
nportance of Research:	
penses:	
Staff Salary =	
Camping and Lodging =	
Food =	
Travel Expenses =	
Other =	
Total Funding Requested =	