



Smithsonian  
National Zoological Park  
Conservation Biology Institute

# VWL Grassland Biodiversity Bird Surveys





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# Goals of VWL Bird Surveys

- To advance our understanding of the relationship between grassland bird populations, habitat structure, and land management practices.
- Identify landscape features that correlate with the occurrence of target grassland species.
- Provide landowners and land managers with species lists specific to their properties and land management practices.
- Engage the community through use of volunteer naturalists on the importance of grassland bird conservation.

**Without support from our incredible community scientist team, we would not be able to make as significant of an impact as we are. Thank you for all you do!**



# Birds Commonly Observed on VWL Grassland Bird Surveys

Illustrations by Nick Garnhart



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Chimney Swift



Tree Swallow



Indigo Bunting



American Kestrel



Baltimore Oriole



Carolina Wren



Barn Swallow



Eastern Kingbird



Northern Mockingbird



Orchard Oriole



Eastern Bluebird



Eastern Towhee



Eastern Meadowlark



Song Sparrow



Field Sparrow



American Goldfinch



Mourning Dove



Brown Thrasher



Grasshopper Sparrow



Red-winged Blackbird



Chipping Sparrow



Common Yellowthroat



Yellow-breasted Chat



Gray Catbird



Bobolink\*



Northern Harrier\*



Loggerhead Shrike\*



Northern Bobwhite\*



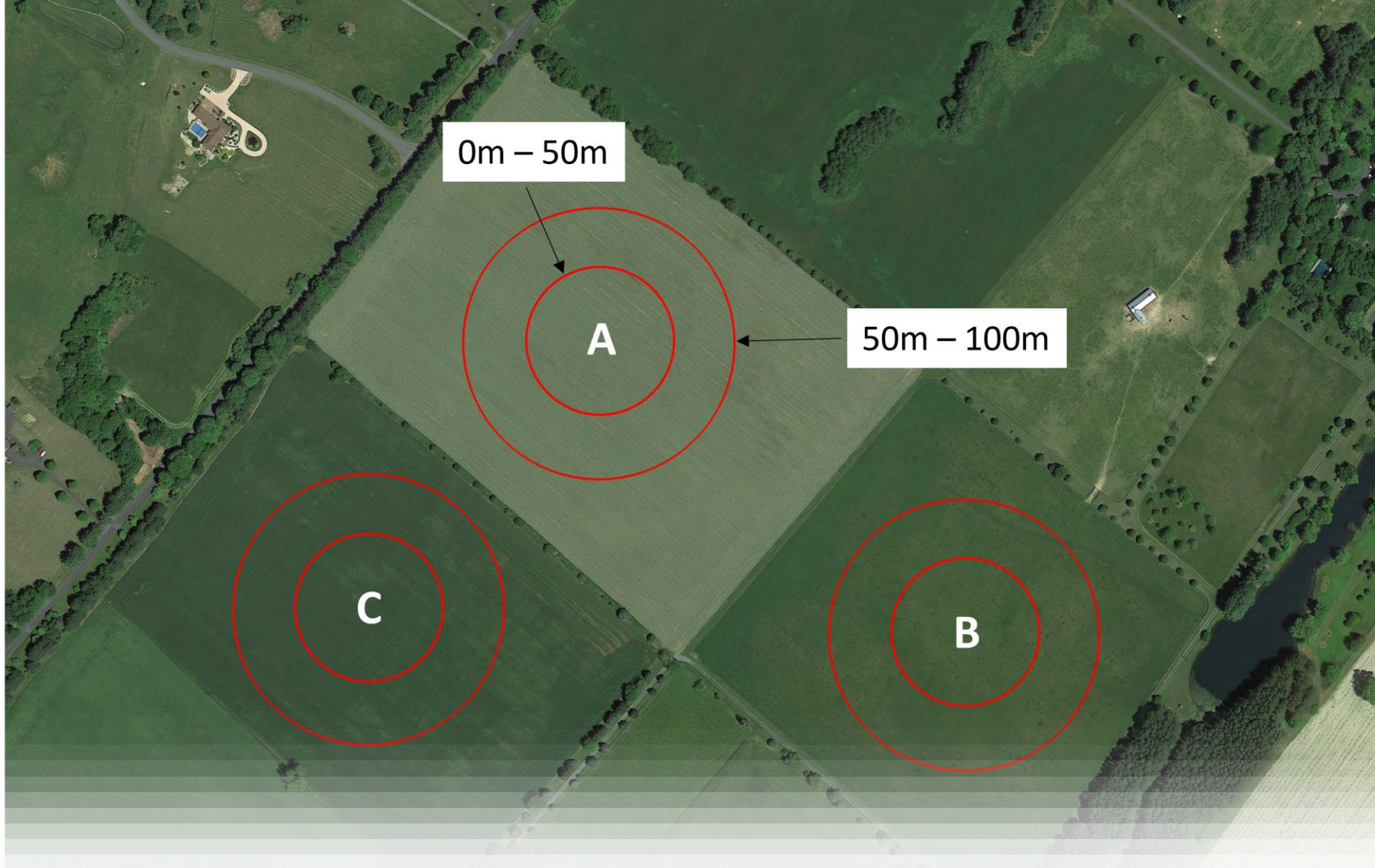
Prairie Warbler\*

\*VWL focal species  
not commonly  
observed on surveys

**GRASSLAND**

**SHRUBLAND**

**FOREST EDGE**



Bird surveys are carried out using a point count method. Community scientists stand at predetermined points (labeled A, B, & C) within survey fields and note every bird they see and hear within two distance bands (0 – 50m and between 50 – 100m) for a total of 10 minutes



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# Before Surveying





# Equipment Needed

Required	Recommended
Binoculars	Sun protection (hats, sunscreen)
Clipboard with datasheets, survey manual and site map	Insect repellent
Pencils (>5) and blank note sheets	First Aid kit
Stopwatch	Field Guide
Water	Camera/Recording device (optional)
Long pants & sturdy field boots	Range finder/Measuring tape (optional)
VWL Parking Sign ( <i>provided by VWL</i> )	
GPS Unit or Navigation App on phone	



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# Survey Timing/Schedule

May 15 – May 25



**Visit 1**

May 29 – June 8



**Visit 2**

June 12 – June 22



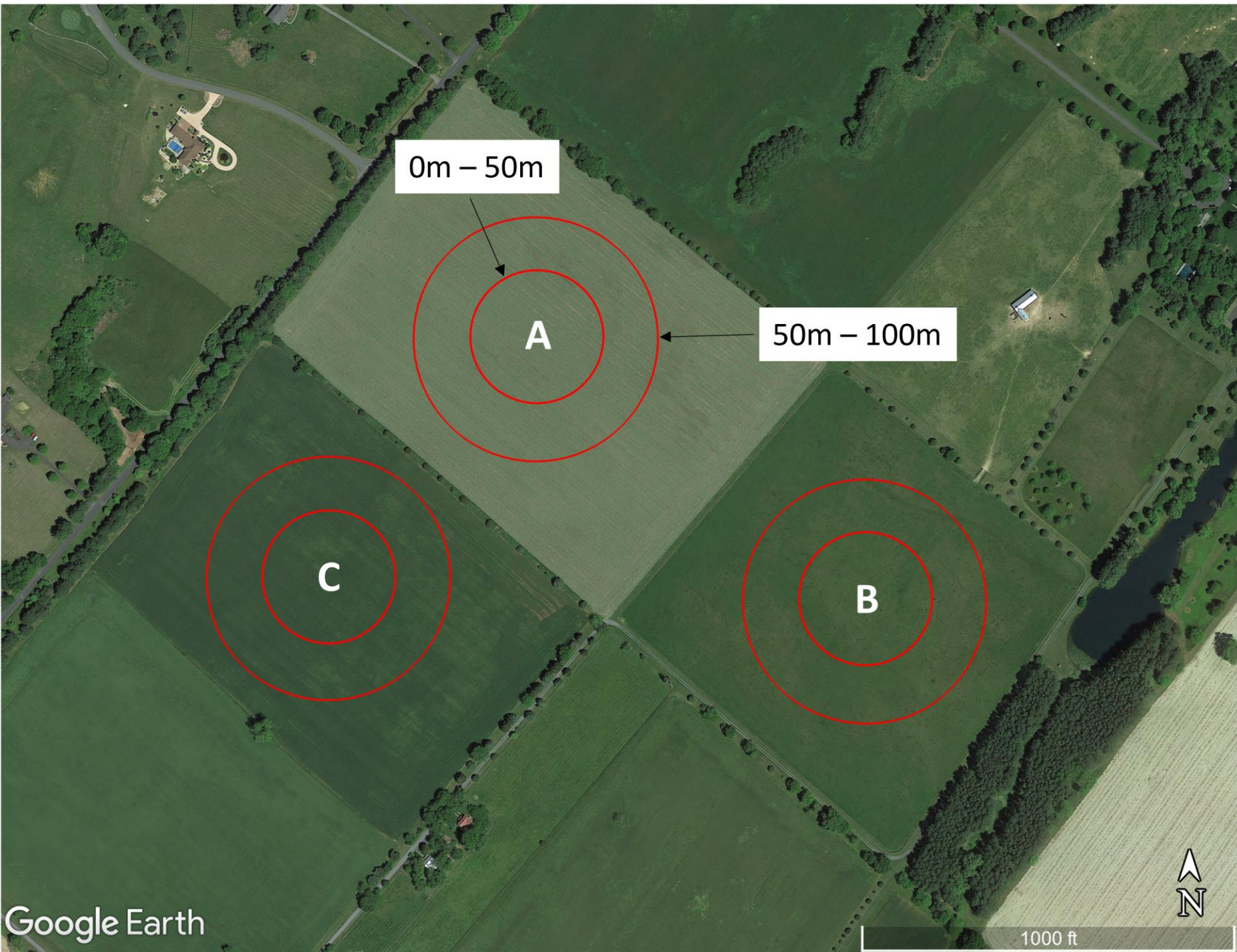
**Visit 3**

May

June

- Each site is surveyed 3 times
- Visits should be at least 4 days apart
- Survey within 3 hours of sunrise
- Coordinate with your partner(s), survey site landowner(s), and the VWL Survey Coordinator





0m - 50m

A

50m - 100m

C

B

Google Earth

1000 ft





# During Survey





Survey 1 of 3

## VWL GRASSLAND BIRD SURVEY POINT COUNT FORM

Christopher Rademacher, Erin Shibley  
Observer(s)

27 May 2024  
Date (ex. 24 May 14)

Contigo Ranch A  
Property Name and Survey Point (A, B or C)

05:57 am  
Start time of 10-minute count

15.5 | clear | 1  
Temperature (°C) | Sky Condition | Wind Speed (0-5)

med  
Vegetation height (short, med, tall)

**DO NOT LEAVE ANY SPACES BLANK**



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Survey 1 of 3

## VWL GRASSLAND BIRD SURVEY POINT COUNT FORM

Christopher Rademacher, Erin Shibley  
Observer(s)

27 May 2024  
Date (ex. 21 May 14)

Contigo Ranch A  
Property Name and Survey Point (A, B or C)

05:57 am  
Start time of 10-minute count

15.5 | clear | 1  
Temperature (°C) | Sky Condition | Wind Speed (0-5)

med  
Vegetation height (short, med, tall)

**DO NOT LEAVE ANY SPACES BLANK**





Survey 1 of 3

## VWL GRASSLAND BIRD SURVEY POINT COUNT FORM

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Vegetation height (short, med, tall)





Survey 1 of 3

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05:57 am

Start time of 10-minute count

15.5

Temperature (°C)

Clear

Sky Condition

1

Wind Speed (0-5)

med

Vegetation height (short, med, tall)





Survey 1 of 3

## VWL GRASSLAND BIRD SURVEY POINT COUNT FORM

<u>Christopher Rademacher, Erin Shibley</u> Observer(s)		<u>27 May 2024</u> Date (ex. 24 May 14)	
<u>Contigo Ranch A</u> Property Name and Survey Point (A, B or C)		<u>05:57 am</u> Start time of 10-minute count	
<u>15.5</u> Temperature (°C)	<u>Clear</u> Sky Condition	<u>1</u> Wind Speed (0-5)	<u>med</u> Vegetation height (short, med, tall)

- Clear (can include a few clouds)
- Partly Cloudy (ca. 10% to 60% cloudy)
- Cloudy (more than ca. 60% cloudy)
- Fog (includes mist, but not haze)

**DO NOT SURVEY IN RAIN SHOWERS, HEAVY FOG OR SNOW**



Survey 1 of 3

## VWL GRASSLAND BIRD SURVEY POINT COUNT FORM

Observer(s) Christopher Rademacher, Erin Shibley Date 27 May 2024  
 (ex. 24 May 14)  
 Property Name and Survey Point (A, B or C) Contigo Ranch A Start time of 10-minute count 05:57 am  
 Temperature (°C) 15.5 Sky Condition clear Wind Speed (0-5) 1 Vegetation height (short, med, tall) med

Beaufort No.	Speed in MPH	Indicators of Wind Speed
0	0	Smoke rise vertically, <u>absolutely still</u> conditions
1	1 to 3	Wind direction shown by smoke drift
2	4 to 7	Wind felt on face; leaves rustle
3	8 to 12	Leaves and small twigs in constant motion
4	13 to 18	Raises dust, loose paper and small branches
5	19 to 24	Small trees in leaf sway



Survey 1 of 3

## VWL GRASSLAND BIRD SURVEY POINT COUNT FORM

Christopher Rademacher, Erin Shibley

Observer(s)

27 May 2024

Date (ex. 24 May 14)

Contigo Ranch A

Property Name and Survey Point (A, B or C)

05:57 am

Start time of 10-minute count

15.5

Temperature (°C)

Clear

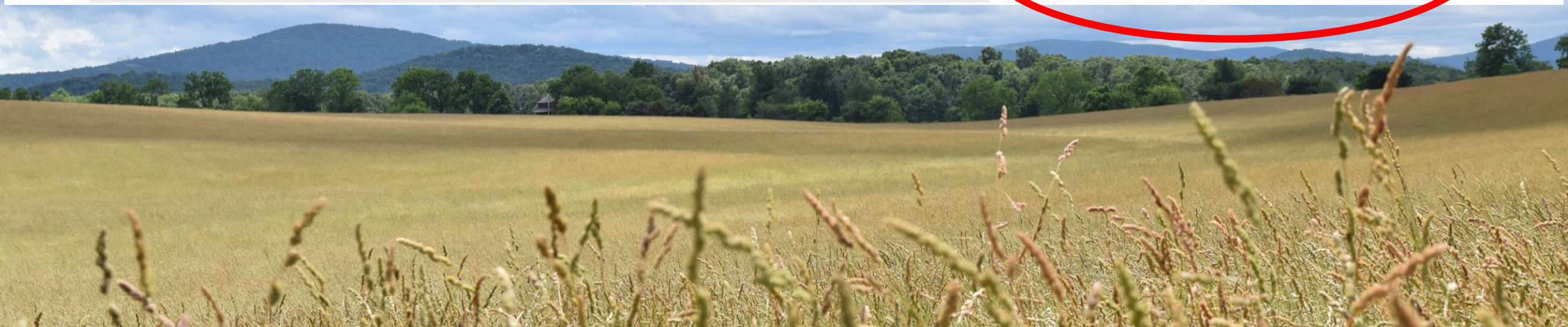
Sky Condition

1

Wind Speed (0-5)

med

Vegetation height (short, med, tall)







Survey 1 of 3

## VWL GRASSLAND BIRD SURVEY POINT COUNT FORM

Christopher Rademacher, Erin Shibley  
Observer(s)

27 May 2024

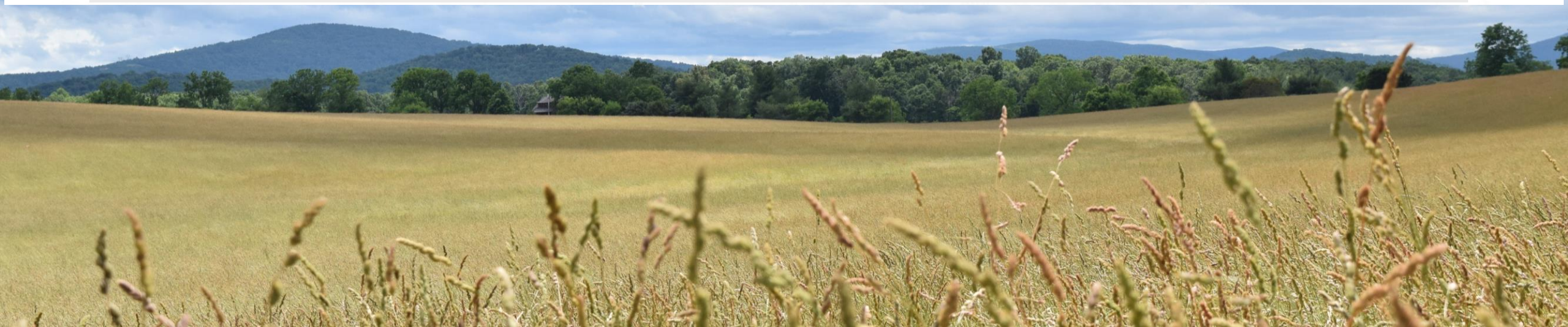
Date (ex. 27 May 14)

Contigo Ranch A  
Property Name and Survey Point (A, B or C)

05:57 am  
Start time of 10-minute count

15.5 | Clear | 1  
Temperature (°C) | Sky Condition | Wind Speed (0-5)

med  
Vegetation height (short, med, tall)



# Alpha Codes



**BRDL**



# Alpha Code Rules

Single-word names:	If name is longer than four letters, the alpha code is the first four letters of the name.	Ex. <b>Bobolink</b> = BOBO
Two-word names:	If there are two words in the name, the alpha code is the first two letters of each word.	Ex. <b>Common Yellowthroat</b> = COYE
Three-words with a hyphenated pair:	If the hyphen is in the <b>first part</b> , the alpha code is the first letter from each hyphenated word and the first two letters from the last word.	Ex. <b>Yellow-billed Cuckoo</b> = YBCU
	If the hyphen is in the <b>last part</b> , the alpha code is the first two letters from the first word and the first letter from each hyphenated word.	Ex. <b>Eastern Wood-pewee</b> = EAWP
Names with three separate words:	If there are three separate words, the alpha code is the first letter from the first two words and then two letters from the last word.	Ex. <b>Great Blue Heron</b> = GBHE
Names with four words:	If the name has four words, the alpha code is the first letter of each word.	Ex. <b>Northern Rough-winged Swallow</b> = NRWS



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# Alpha Code Rules

Bobolink by Ryan Sanderson;  
Cornell Lab of Ornithology  
Macaulay Library



Single-word names:

If name is longer than four letters, the alpha code is the first four letters of the name.

Ex. **Bobolink** = BOBO



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# Alpha Code Rules

Common Yellowthroat by Mark  
Daly; Cornell Lab of Ornithology  
Macaulay Library



Two-word names:

If there are two words in the name, the alpha code is the first two letters of each word.

Ex. **C**ommon **Y**ellowthroat = COYE

# Alpha Code Rules



<p>Three-words with a hyphenated pair:</p>	<p>If the hyphen is in the <b>first part</b>, the alpha code is the first letter from each hyphenated word and the first two letters from the last word.</p>	<p>Ex. <b>Y</b>ellow-<b>b</b>illed <b>C</b>uckoo = YBCU</p>
	<p>If the hyphen is in the <b>last part</b>, the alpha code is the first two letters from the first word and the first letter from each hyphenated word.</p>	<p>Ex. <b>E</b>astern <b>W</b>ood-<b>p</b>ewee = EAWP</p>



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# Alpha Code Rules



Names with three separate words:

If there are three separate words, the alpha code is the first letter from the first two words and then two letters from the last word.

Ex. **G**reat **B**lue **H**eron = GBHE



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# Alpha Code Rules



Names with four words:

If the name has four words, the alpha code is the first letter of each word.

Ex. Northern Rough-winged Swallow  
= NRWS





# Point Count Methodology

SPECIES ALPHA CODE (enter each bird individually)	0-5 minutes Seen (S), Heard (H), Both (SH)		5-10 minutes Seen (S), Heard (H), Both (SH)		COMMENTS (breeding behavior, carrying food/nesting material, territorial aggression, etc.)
	Within 50m	Between 50m - 100m	Within 50m	Between 50m - 100m	



# Point Count Methodology

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	Within 50m	Between 50m - 100m	Within 50m	Between 50m - 100m	
RWBL	SH				♂
SOSP		H		H	
AMGO		SH			on coneflowers
AMGO		SH			" "
AMGO		SH			" "
EAME	S		SH		carrying food
BARS		SH			foraging
RWBL		S			
BLJA			SH		
KILL				H	



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SOSP		H		H	
AMGO		SH			on coneflowers
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EAME	S		SH		carrying food
BARS		SH			foraging
RWBL		S			
BLJA			SH		
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BARS		SH			foraging
RWBL		S			
BLJA			SH		
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SOSP		H		H	
AMGO		SH			on coneflowers
AMGO		SH			" "
AMGO		SH			" "
EAME	S		SH		carrying food foraging
BARB		SH			
RWBL		S			
BLJA			SH		
KILL				H	





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BARB		SH			foraging
RWBL		S			
BLJA			SH		
KILL				H	



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AMGO		SH			" "
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BARS		SH			foraging
RWBL		S			
BLJA			SH		
KILL				H	



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AMGO		SH			" "
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BARB		SH			foraging
RWBL		S			
BLJA			SH		
KILL				H	



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# Point Count Methodology

A photograph of a yellow-billed cuckoo bird in a field of tall grass. The bird is shown in profile, facing right, with its beak open as if singing. A white speech bubble with a black outline is positioned to the right of the bird's head, containing the text "Time's Up!".

Time's Up!



# Point Count Methodology

FLYOVERS (During Survey)	BEFORE/AFTER/OUTSIDE SURVEY OBSERVATIONS			OTHER NOTES
CANG +3	YBCU	NOBO!	AMGO	-buggy morning
TUVU	RHWO	heard <sup>↑</sup>	AMRO +6	-deer in field +3
GBHE	PIWO	GCFL		
CORA	EAKI	EATO		
		CARW		

Revised 14 Feb 2024 by C. Rademacher, SCBI



# Point Count Methodology

FLYOVERS (During Survey)	BEFORE/AFTER/OUTSIDE SURVEY OBSERVATIONS			OTHER NOTES
CANG +3	YBCU	NOBO!	AMGO	-buggy morning
TUVU	RHWO	↑ heard	AMRO +6	-deer in field +3
GBHE	PIWO	GCFL		
CORA	EAKI	EATO		
		CARW		

Revised 14 Feb 2024 by C. Rademacher, SCBI



# Point Count Methodology

## FLYOVERS (During Survey)

CANG +3  
TUVU  
GBHE  
CORA

## BEFORE/AFTER/OUTSIDE SURVEY OBSERVATIONS

YBCU	NOBO!	AMGO
RHWO	↑ heard	AMRO + 6
PIWO	GCFL	
EAKI	EATO	
	CARW	

## OTHER NOTES

- buggy morning  
- deer in field + 3

Revised 14 Feb 2024 by C. Rademacher, SCBI



# Point Count Methodology

FLYOVERS (During Survey)	BEFORE/AFTER/OUTSIDE SURVEY OBSERVATIONS			OTHER NOTES
CANG +3 TUVU GBHE CORA	YBCU RHWO PIWO EAKI	NOBO! ↑ heard GCFL EATO CARW	AMGO AMRO + 6	-buggy morning -deer in field +3

Revised 14 Feb 2024 by C. Rademacher, SCBI





# Entering Data

	A	B	C	D	E	F	G	H	I	J
1	Who took part in the survey?	Where was the survey conducted?		When was the survey conducted?			What were the field conditions during the survey?			
2	Observers (use full names, each separated by a comma)	Site Name	Point (A, B, or C)	Date (MM/DD/YYYY)	Start Time (hh:m m)	Visit # (1st, 2nd, or 3rd)	Temp (deg C)	Sky Condition	Wind Condition (0-5)	Grass Height (short, med, tall)
3	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
4	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
5	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
6	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
7	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
8	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
9	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
10	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
11	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
12	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
13	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
14	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
15	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
16	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
17	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
18	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
19	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
20	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med
21	Christopher Rademacher, Erin Shibley	Contigo Ranch	A	5/27/2024	5:57	1	15.5	clear	1	med



# Entering Data

K		L		M	N	O	P	Q		R	S	T
What species was observed?		Where&How did you observe this species (during 0 to 5 minutes)?		Where&How did you observe this species (during 5 to 10 minutes)?		Was this species detected as a Flyover or Incidental observation?		Species Notes about the species observed (e.g., behaviors or observations such as carrying nesting material or food, territorial behavior, male or female, etc.)		Survey Notes regarding survey period (e.g., things that could have impacted detection, such as noise levels or the presence of other predatory wildlife)		
Species Alpha Code (each line represents an individual)	Common Name (this will automatically fill if the species code is correct)	≤50m = 1 >50m = 2	seen = S heard = H both = SH	≤50m = 1 >50m = 2	>	seen = S heard = H both = SH	Flyover (seen flying over field during the survey; Yes or No)	Incidental (seen before/after/outside of surveys; Yes or No)				
RWBL	Red-winged Blackbird	1	SH								male	buggy morning, deer in field x3
SOSP	Song Sparrow	2	H			2	H					buggy morning, deer in field x3
AMGO	American Goldfinch	2	SH								on coneflowers	buggy morning, deer in field x3
AMGO	American Goldfinch	2	SH								on coneflowers	buggy morning, deer in field x3
AMGO	American Goldfinch	2	SH								on coneflowers	buggy morning, deer in field x3
EAME	Eastern Meadowlark	1	S			1	SH				carrying food	buggy morning, deer in field x3
BARS	Barn Swallow	2	SH								foraging	buggy morning, deer in field x3
RWBL	Red-winged Blackbird	2	S									buggy morning, deer in field x3
BLJA	Blue Jay					1	SH					buggy morning, deer in field x3
KILL	Killdeer					2	H					buggy morning, deer in field x3
FISP	Field Sparrow					2	H					buggy morning, deer in field x3
SOSP	Song Sparrow					1	SH					buggy morning, deer in field x3
TRES	Tree Swallow					1	SH				foraging	buggy morning, deer in field x3
TRES	Tree Swallow					1	SH				foraging	buggy morning, deer in field x3
TRES	Tree Swallow					1	SH				foraging	buggy morning, deer in field x3
BOBO	Bobolink					2	SH				male	buggy morning, deer in field x3
BOBO	Bobolink					2	S				female	buggy morning, deer in field x3
NOMO	Northern Mockingbird					1	SH					buggy morning, deer in field x3
CANG	Canada Goose							Y				buggy morning, deer in field x3
CANG	Canada Goose							Y				buggy morning, deer in field x3
CANG	Canada Goose							Y				buggy morning, deer in field x3
TUVU	Turkey Vulture							Y				buggy morning, deer in field x3
GBHE	Great Blue Heron							Y				buggy morning, deer in field x3
CORA	Common Raven							Y				buggy morning, deer in field x3
YBCU	Yellow-billed Cuckoo								Y			buggy morning, deer in field x3
RHWO	Red-headed Woodpecker								Y			buggy morning, deer in field x3
PIWO	Pileated Woodpecker								Y			buggy morning, deer in field x3
EAKI	Eastern Kingbird								Y			buggy morning, deer in field x3



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# Bird ID Tips

- Song
- Size and Shape
- Color and Pattern
- Behavior
- Habitat



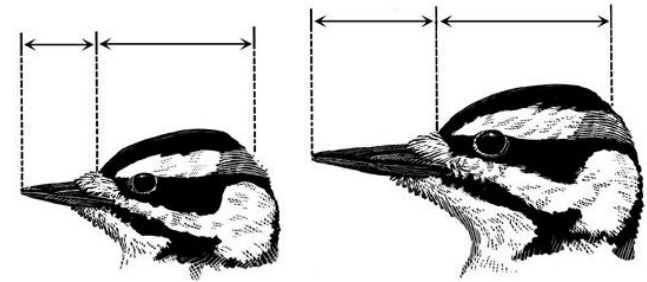
# Bird ID Tips: Song



- Clear whistle or harsh/unmusical?
- Descending or rising?
- Low or high frequency?
- Note repetition or new notes?

# Bird ID Tips: Size & Shape

- Place bird into size category
- Squat, stocky, tall or thin?
- Crest on head?
- Focus on size and shape of bill, tail or feet



Downy Woodpecker



Hairy Woodpecker

# Bird ID Tips: Color & Pattern

- What are primary colors of bird?
- Colors of bill, legs and feet?
- Does bird have wing bars, eye stripes, streaks, or spots?

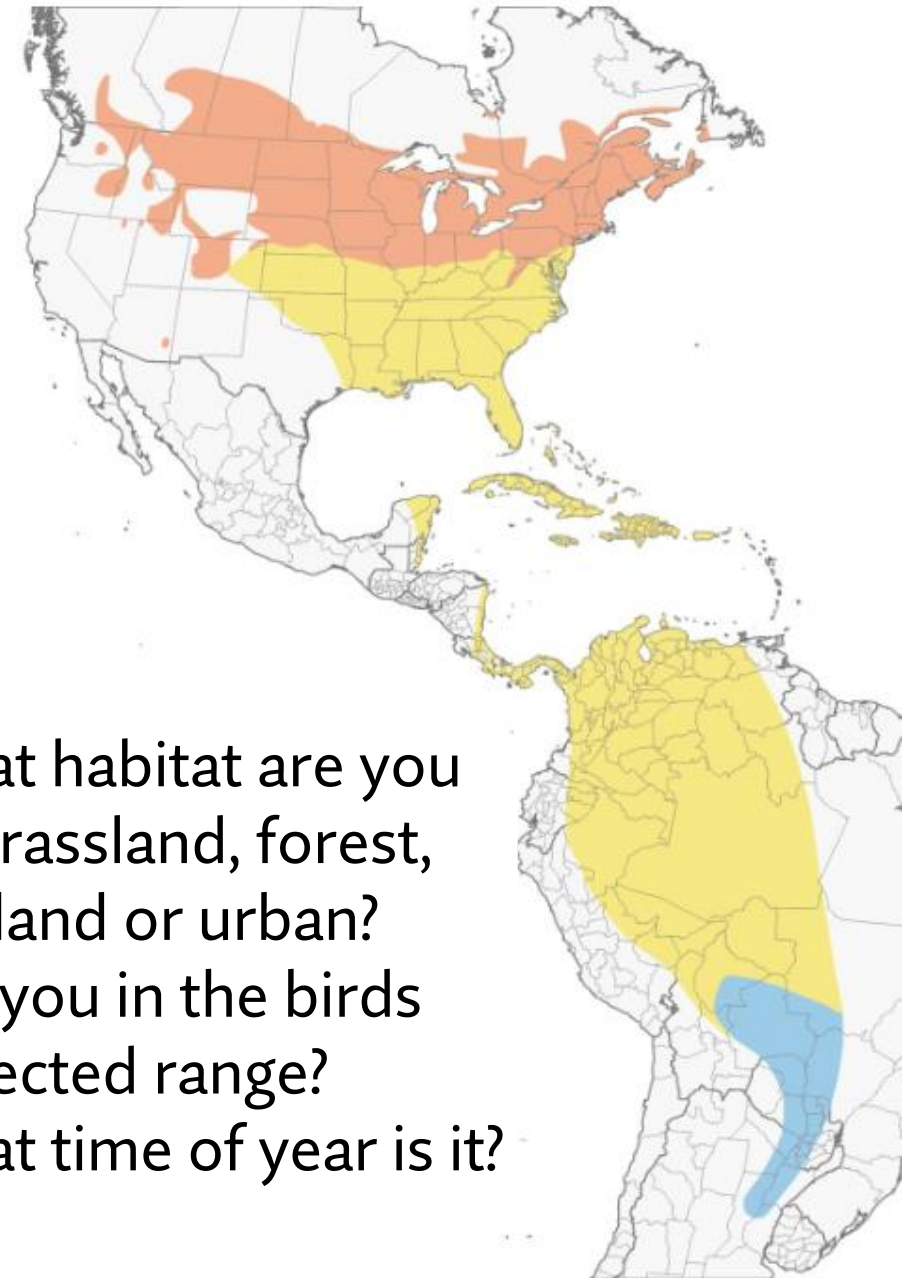


# Bird ID Tips: Behavior

- How does it move through the landscape?
- Is it soaring in the sky or flitting in a tree?



# Bird ID Tips: Range/Season/ Habitat



- What habitat are you in, grassland, forest, wetland or urban?
- Are you in the birds expected range?
- What time of year is it?

■ Year-round    ■ Breeding  
■ Migration    ■ Nonbreeding





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# Bird Resources

## Helpful Websites:

 Audubon (Audubon.org)



(aba.org)



(virginiabirds.org)

The **Cornell** Lab  
of Ornithology 

- All About Birds (allaboutbirds.org)
- eBird (ebird.org)

## Helpful Apps:



Merlin Bird ID



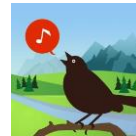
Sibley Birds  
2<sup>nd</sup> Edition (\$)



Larkwire App (\$\$)



iNaturalist



Chirp! Birdsongs App (\$)

**Coming Soon!**



Welcome to Virginia Working Landscapes Bird Identification Training!



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# Happy Birding!

**Christopher Rademacher**

Biodiversity Technician

rademachercj@si.edu

