

Mist Netting & Bird Banding at Venetucci Farm

2018 Results



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Table of Contents

Executive Summary.....2
Year Overview.....2
Summary of Birds Banded.....5
Bird Recaptures.....7

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2018 Results

Executive Summary

The bird banding station at Coyote Willows in Venetucci Farm was open 10 mornings in the spring/ early summer months from April 23 to June 24 and 3 mornings in the fall months from September 9 to September 30. In the spring/ summer season 81 birds representing 24 species were caught and banded. In the fall season 92 birds representing 11 species were caught and banded. The total for the year was 173 individuals representing 28 species.

Year Overview

Birds on the Farm

Several migrant species found habitat and conditions at Venetucci ideal for setting up breeding territories including blue grosbeak, gray catbird, Bullock's oriole, lazuli bunting, yellow warbler and yellow-breasted chat. This year conditions were very different than in past years. Flooding created new wetland habitat which affected the species that nested in the area. Based on brood patch* data collected from female birds caught and banded in the spring, there were at least the following number of pairs breeding and nesting in Coyote Willows:

Red-winged blackbird: 9

Bullock's oriole: 2

Northern rough-winged swallow: 2

Yellow warbler: 1

House finch: 1

American robin: 1

A male orchard oriole originally caught and banded in June 2017 was recaptured in June 2018 suggesting site fidelity to Venetucci Farm. He had a cloacal protuberance** indicating breeding activity.



Male orchard oriole

*A brood patch is an area of featherless skin seen on the belly of female (and some male) birds during the nesting season. The patch allows for heat transfer to eggs when incubating and to chicks when brooding.

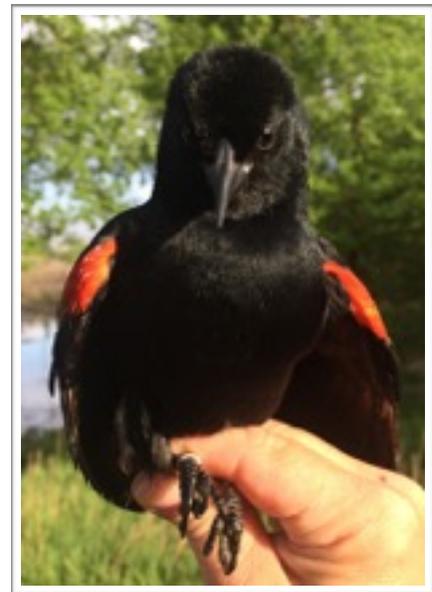
**A cloacal protuberance is a swelling of the area around the cloaca seen in male birds during breeding season. Its function is to store sperm for short periods of time.

Venetucci also provides vital habitat for migrating bird species including Lincoln's sparrows, orange-crowned warblers and chipping sparrows. In addition, the farm provides important habitat for overwintering white-crowned sparrows and many year-round resident birds including black-capped chickadees, American goldfinches and song sparrows.

The presence of unique species, species richness and the presence of breeding individuals highlight the diverse habitat structure at Venetucci Farm including mature riparian forests of cottonwood overstory, wet shrublands with coyote willow, and dry shrublands with chokecherry and snowberry, and farmed grasslands.

Flooding at the Farm

This year in May the lower areas of Coyote Willows flooded with water depths reaching 2 to 3 feet in many areas at peak flood. The cause was later determined to be related to the changes of water usage from the Security-Widefield aquifer. Due to PFC contaminants, water hasn't been used at the normal rate since 2016, causing a buildup of water within the aquifer. An underground spring was seen in Coyote Willows along a trail with water bubbling up for over a week. The new flooded riparian forest attracted animals such as blue-winged teal, mallards, breeding Woodhouse's toads and a very strong population of red-winged blackbirds!



Red-winged blackbird



Mallards on newly created temporary "pond"



Woodhouse's toad



Flooded Coyote Willows

It was interesting to note that the ages of the red-winged blackbirds favored second year females. Of the 22 red-winged blackbirds caught and banded, 64% were females, and 9 out of 14 were younger second year birds. This would make sense with other data that has been published on habitat preference among birds based on age. Prime habitat is usually inhabited by older birds and younger, less experienced birds set up territory in habitat that might be less rich in resources. These younger female birds saw an opportunity to nest in new habitat! Red-winged blackbirds were only caught, banded and observed in large numbers in the spring during the flooding conditions.

Banding Station Effort

Twelve net lane sites were cleared in 2018, some being closed due to lack of productivity or flooding conditions in the spring. Net hours totaled 247.75 hours for the year.

Besides collecting scientific data, the banding station at Venetucci Farm is committed to educating the public about bird science and conservation. Banding demonstrations were offered to five different groups of Zookeeping Technology students from Pikes Peak Community College.

A total of 62.5 hours were spent banding birds and doing banding demonstrations, 5 hours were spent clearing and maintaining net lanes and 25 hours were spent interpreting, compiling and entering banding data for the Bird Banding Laboratory and Colorado Parks and Wildlife and writing reports.



Yellow-breasted chat- A migrant breeder on the farm

Summary of Birds Banded

Table 1: A summary of birds caught during the 2018 year at Coyote Willows, Venetucci Farm

Species	Spring	Fall	Total Number
American goldfinch	4	1	5
American robin	2		2
Black-capped chickadee	1	1	2
Blue-gray gnatcatcher		1	1
Blue grosbeak	1		1
Brown-headed cowbird	2		2
Bullock's oriole	6		6
Clay-colored sparrow	2	2	4
Downy woodpecker	2		2
Gray catbird	6		6
Harris' sparrow	1		1
House finch	4	1	5
House wren	2		2
Lazuli bunting	5		5
Lesser goldfinch	1	1	2
Lincoln's sparrow	1	12	13
Northern rough-winged swallow	2		2
Orange-crowned warbler		12	12
Red-winged blackbird	22		22
Song sparrow	2	8	10
Spotted towhee	3		3
Tree swallow	1		1
White-crowned sparrow, Gambel's	4	41	45

Species	Spring	Fall	Total Number
White-crowned sparrow, mountain		9	9
Willow flycatcher	1		1
Wilson's warbler		4	4
Yellow-breasted chat	1		1
Yellow warbler	4		4
Total Species	24	11	28
Total Birds Banded	81	92	173



Harris' sparrow- A rare visitor to the farm

Bird Recaptures

Bird recaptures are especially important in the larger picture of bird banding. Recaptured birds (previously banded birds that are re-caught) help us paint a larger conservation picture and determine the importance of habitat for individual birds. It provides information about site fidelity, migratory routes, migration timing, territory establishment, survival, longevity among other data.

Nineteen birds were recaptured at Venetucci Farm in 2018, including a gray catbird and a male yellow warbler that were banded in May 2016. One female yellow warbler that was banded early in the season at Clear Springs Ranch continued her first springtime migratory journey just a little further north and decided to stop at Venetucci Farm. She had a developed brood patch when recaptured which indicated that she found the area suitable enough to nest on the farm.

Table 2: Bird recaptures during 2018 at Coyote Willows, Venetucci Farm. Note: Rows in green indicate a recapture spanning more than one season.

Species	Sex	Age	Date Banded	Fat Level	CP/ BP	Date Recaptured	Fat Level	CP/ BP	Date Recaptured	Fat Level	CP/ BP	Date Recaptured	Fat Level	CP/ BP
Song sparrow	M	AHY	9/16/17	0		4/29/18	0	3 CP						
Song sparrow	M	AHY	5/28/17	0		4/29/18	0	2 CP						
Yellow warbler	M	AHY	5/21/16	0		5/14/18	0	3 CP						
Song sparrow	M	AHY	5/7/17	0		5/21/18	0	3 CP						
Gray catbird	U	AHY	5/20/17	1		5/21/18	2							
Song sparrow	F	AHY	9/16/17	0		5/27/18	0	3 BP						
Gray catbird	M	AHY	6/5/17	0		5/27/18	0	1 CP						
Black-capped chickadee	U	AHY	9/16/17	0		5/27/18	0							
Gray catbird	U	AHY	5/20/17	0		6/4/18	0							
Gray catbird	U	AHY	5/27/18	0		6/4/18	0		6/17/18	0	3 CP	6/24/18	0	3 CP
Song sparrow	F	AHY	4/23/18	0		6/4/18	0	3 BP						
Gray catbird	U	AHY	5/16/16	0		6/4/18	0							

Species	Sex	Age	Date Banded	Fat Level	CP/ BP	Date Recaptured	Fat Level	CP/ BP	Date Recaptured	Fat Level	CP/ BP	Date Recaptured	Fat Level	CP/ BP
Gray catbird	U	AHY	5/21/18	0		6/10/18								
Orchard oriole	M	AHY	6/19/17	0		6/10/18	0	2 CP						
Black-capped chickadee	U	AHY	9/16/17	0		6/10/18	0							
Brown-headed cowbird	F	AHY	6/4/18	0		6/17/18	0							
Yellow warbler	F	AHY	5/27/18-Banded at Clear Springs Ranch			6/24/18	0	3 BP						
Gambel's white-crowned sparrow	U	AHY	9/23/18	0		9/30/18	0							
Gambel's white-crowned sparrow	U	HY	9/23/18	0		9/30/18	0							

Abbreviation Key

Table 3: Abbreviation key for Table 2

Code	Meaning
Sex Codes	
M	Male
F	Female
U	Unknown
Age Codes	
AHY	After hatch year
HY	Hatch year

Code	Meaning
Fat Level	
0	None
1	Small amount
2	Filling furcular hollow
3	Level with surrounding muscle
4	Bulging over furcular hollow
CP	Cloacal protuberance (males)
0	Cloaca not enlarged
1	Small amount of swelling around the cloaca, conical
2	Medium amount of swelling around cloaca, cylindrical
3	Large amount of swelling around cloaca, bulbous and round
BP	Brood patch (females)
0	None present, breast feathered
1	Feathers dropped, skin smooth and dark red; some vascularization
2	Skin vascularized and wrinkled, fluid present
3	Vascularization extreme, skin wrinkled, much fluid
4	Wrinkled skin, thin and dry; vascularization and fluid mostly gone
5	Vascularization, fluid and wrinkles gone; pinfeathers appearing

Conclusion

Venetucci Farm is important habitat for a variety of bird species, from common species such as black-capped chickadees and white-crowned sparrows to rarer species such as Harris' sparrows, blue grosbeaks and orchard orioles. Birds continue to return to Venetucci year after year to either nest, winter or stop and fuel up on their migration journey. Other individuals discover the richness of Venetucci's habitat for the first time and decide to breed and nest on the farm, taking advantage of the resources found there.

Future Goals for Bird Banding at Venetucci Farm

Pending approval, the bird banding station at Coyote Willows on Venetucci Farm will continue to operate as a migration data collection station during the late spring and fall migration seasons. Starting the summer of 2019, the station will also serve as a MAPS (Monitoring Avian Productivity and Survivorship) station during the breeding season to further analyze the breeding bird activity at Venetucci Farm.