

Project Overview

Red Butte, Emigration, and Parley's Creeks flow underground through Salt Lake City before entering the Jordan River at the Three Creeks Confluence. The confluence is currently paved over and bounded by weedy vacant lots. The Seven Canyons Trust, in partnership with Salt Lake City and the Jordan River Commission, is restoring Three Creeks Confluence beginning in winter of 2018/2019. They will daylight 200 feet of confluence water, and add recreational and ecological amenities to the surrounding riparian area. In 2017, Tracy Aviary began a citizen science study at the Three Creeks Confluence to monitor the bird community before, during, and after the site is restored.

Breeding season point count surveys:

During April – July of 2018, 5 citizen scientists conducted 7 breeding season point count surveys at 2 survey points in the Three Creeks Confluence (Figure 2). Point count surveys were conducted by pairs of citizen scientists between dawn and 10am. The 'observer' identified all birds seen and heard during a 6-minute period, and noted the number of individuals, distance, and direction. The 'recorder' wrote all of the observations on the datasheet, noted the minute during the survey (1-6) when the observation was made, and also noted weather and site variables, such as wind speed and cloud cover.

Non-breeding season group surveys:

Data from point count surveys was supplemented by 5 non-breeding group surveys conducted in January, February, March, August, and September 2018. During non-breeding surveys, groups of citizen scientists lead by a trained Tracy Aviary staff person walked a transect through the site and noted all birds seen and heard in the area.



Figure 1. Map of bird sampling points at Three Creeks Confluence.



Figure 2. Tracy Aviary citizen scientists conducting breeding season (left) and non-breeding season (right) bird surveys.

2018 Results

During 7 breeding season surveys in 2018 we had 263 bird observations and detected 23 species (Figure 3). During 5 non-breeding season surveys, we had 163 bird observations and detected 18 species. 10 species were detected exclusively during the breeding season, and 5 species were detected exclusively during the non-breeding season, resulting in a total species list of 28 species for the year. See the complete species list for the Three Creeks Confluence on page 2.

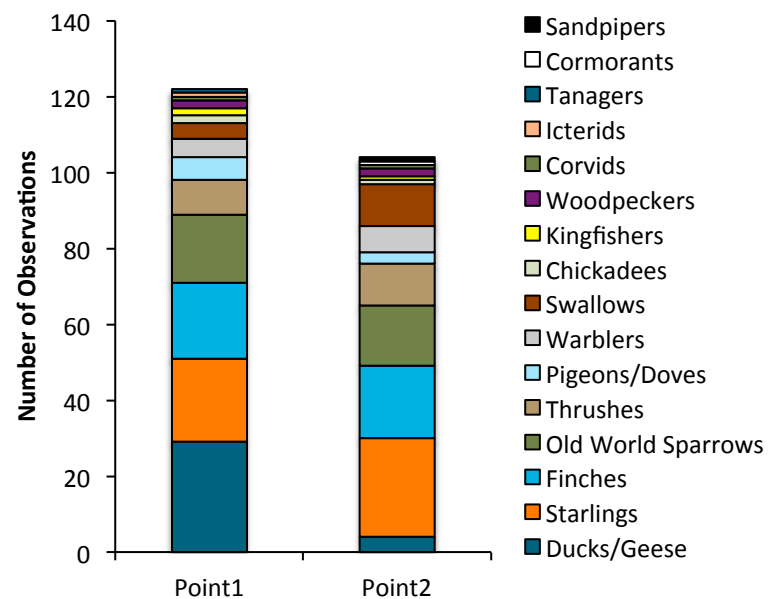


Figure 3. Number of birds from different families detected during 2018 breeding season surveys at Three Creeks Confluence.

COMPLETE LIST OF BIRDS DETECTED AT THE THREE CREEKS CONFLUENCE IN 2017-2018

Species	Number of Observations (detections/survey)			
	Breeding Season 2017 (4 surveys)	Non-breeding Season 2017 (5 surveys)	Breeding Season 2018 (7 surveys)	Non-breeding Season 2018 (5 surveys)
European Starling	9.5	18.6	6.86	20
Mallard	7.75	1.2	5.29	2.2
House Sparrow	3.75	7.6	4.86	2.2
House Finch	3.75	4	3.29	2.2
Yellow Warbler	3.25	0.2	1.57	0
Lesser Goldfinch	2.5	1.2	2	0.4
American Robin	2.25	1	2.86	1.6
American Coot	1.5	0	0	0
Barn Swallow	1.25	0	2.14	0
Black-capped Chickadee	0.75	0.4	0.43	0.2
American Crow	0.5	7	0.43	0
Downy Woodpecker	0.5	0.2	0.14	0.2
Eurasian Collared-Dove	0.5	1.2	1	0.6
Rock Pigeon	0.5	0	0	0
American Goldfinch	0.25	0	0.29	0.2
American Kestrel	0.25	0.2	0	0
Bullock's Oriole	0.25	0	0.14	0
California Quail	0.25	0	0	0
Mourning Dove	0.25	0.2	0.57	0.2
Northern Rough-winged Swallow	0.25	0	0	0
Red-winged Blackbird	0.25	0	0	0
Sharp-shinned Hawk	0.25	0	0	0
Dark-eyed Junco	0	3.2	0	0.4
Evening Grosbeak	0	1	0	0
Belted Kingfisher	0	0.6	0.43	0.4
California Gull	0	0.4	0	0.2
Northern Flicker	0	0.4	0.43	0.2
Black-chinned Hummingbird	0	0.2	0	0
Steller's Jay	0	0.2	0	0
Ruby-crowned Kinglet	0	0.2	0	0
Pine Siskin	0	0.2	0	0
Spotted Towhee	0	0.2	0	0
Western Tanager	0	0.2	0.14	0
Lazuli Bunting	0	0.2	0	0
Common Goldeneye	0	0.2	0	0
Canada Goose	0	0	0.14	0
Double-crested Cormorant	0	0	0.14	0
Orange-crowned Warbler	0	0	0.14	0
Spotted Sandpiper	0	0	0.14	0
Warbling Vireo	0	0	0.14	0
Pied-billed Grebe	0	0	0	0.6
Hooded Merganser	0	0	0	0.4
Yellow-rumped Warbler	0	0	0	0.2