

BIRD POPULATIONS IN A BLACK COTTONWOOD  
COMMUNITY, GRAND TETON NATIONAL PARK

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Baseline information on the avifauna of the riparian communities in Grand Teton National Park is sparse. Consequently, the objective of this project is to collect information on the composition, density, distribution and habitat of the bird species inhabiting a portion of the black cottonwood, Populus trichocarpa, community in Grand Teton National Park. The study was initiated in June 1980 on a portion of the western floodplain of Pilgrim Creek. The southeast corner of this 300m x 400m (12ha) plot is identified by a metal post. This post can be located on a bearing line of 4° E of N. 77 mm from the fiducial center of the infrared aerial photo N 31 (U.S. Bur. of Reclamation Series B/R17, 7-16-79).

This floodplain community is predominantly black cottonwood with scattered trees of quaking aspen, Populus tremuloides, engelmann spruce, Picea engelmannii and lodgepole pine, Pinus contorta. In restricted moister areas several small patches of alder, Alnus incana occur under the larger trees and a few patches of willow, (Salix, sp.) are located in moist openings of the woodland.

### Methods

The mapping census plot was subdivided into 12 square 1 ha plots, with a 30 in. metal post at each hectare corner. Painted wooden stakes were used to mark the 50 m intervals between each corner stake.

All censuses were begun at 7:30 am and ended between 9:30 and 10 am following procedures set forth by the International Bird Census Committee (Svensson, 1970). Each bird observation on the plot was recorded as to species, number, sex and age and activity of the individuals and location. Movements of the census taker through each plot were such that at no time was the width of the area being censused greater than 33 m. This was accomplished by the census taker using a census pattern which moved through nine square subunits approximately 33 m on a side.

### Results

Study plot censuses were taken on May 29 and 30 and on June 20. The

cold, late spring likely accounts for some of the disparity of numbers and species observed during the two censuses (Table 1). Additional disparity in species and numbers is likely caused by movements of migrants through the site. The Chestnut-sided Warbler is certainly an itinerant wanderer for this area.

Two species, the Warbling Vireo and the Western Wood Pewee, were noticeably later in arriving on the study area in 1981 compared to 1980. For reasons unknown, Tree Swallows were not observed on the study area in 1981. Of the 33 species, Dark-eyed Juncos and American Robins, as in 1980, continue to be the most numerous birds on the site. Also, these two species and the Yellow-bellied Sapsucker are likely to be encountered anywhere on the study area. The Chestnut-sided Warbler represents a new accidental occurrence record for Jackson Hole.

#### References

- Skaar, P. 1969. Birds of the Bozeman latilong. 501 S. Third, Bozeman, Montana. 131 p.
- Svensson, S. (Editor). 1970. Bird census work and environmental monitoring. Swedish Natural Science Research Council, Redaktionstjansten, Stockholm. 52 p.

Table 1. Species, number and frequency of birds on a 12 ha riparian mapping census plot, Pilgrim Creek, Grand Teton National Park, Wyoming, May 29 & 30 and June 20, 1981.

Species	No. of Birds		Frequency (%)		Birds/km <sup>2</sup>		Abundance Category (After Skaar, 1969)
	May	June	May	June	May	June	
	29-30	20	29-30	20	29-30	20	
Great Blue Heron <sup>a</sup>		1		8		8	Abundant
Trumpeter Swan <sup>a</sup>	1		8		8		Abundant
Canada Goose <sup>a</sup>	6		8		50		Very Abundant
Common Goldeneye <sup>a</sup>		4		17		33	Abundant
Common Merganser <sup>a</sup>	1	1	8	8	8	8	Abundant
American Kestrel	1	1	8	8	8	8	Abundant
Ruffed Grouse	1		8		8		Abundant
Common Flicker		3		8		25	Abundant
Yellow-bellied Sapsucker	9	8	42	50	85	67	Very Abundant
Hairy Woodpecker	2	1	8	8	17	8	Abundant
Dusky Flycatcher	9	7	42	33	75	58	Very Abundant
Western Wood Pewee		8		42		67	Very Abundant
Stellars Jay	1		8		8		Abundant
Common Raven	1		8		8		Abundant
Black-capped Chickadee	4	2	25	17	33	17	Abundant
Mountain Chickadee	1	3	8	25	8	25	Abundant
Unknown Chickadee	2	1	8	8	17	8	Abundant
Red-breasted Nuthatch	2	2	17	1	17	17	Abundant
House Wren	2	1	17	8	17	8	Abundant
American Robin	3	10	25	50	25	83	Abundant to Very Abundant
Ruby-crowned Kinglet	3	2	17	17	25	17	Abundant
Warbling Vireo		7		42		58	Very Abundant
Yellow Warbler	1	3	8	25	8	25	Abundant
Yellow-rumped Warbler	2	2	8	17	17	17	Abundant
Chestnut-sided Warbler		1		8		8	Abundant
McGillivray's Warbler	1	2	8	8	8	17	Abundant

