

FEATURE ARTICLES

MIGRATORY OCCURRENCE AND STATUS OF SELECT SHOREBIRDS IN THE VICINITY OF FORT ST. JOHN, BRITISH COLUMBIA

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Abstract

From 1975 through 1989 over 6,500 observations of shorebirds were made in the vicinity of Fort St. John in northeastern British Columbia. A total of 30 species were recorded of which 22 species were spring migrants and 24 species were autumn migrants. The American Avocet (*Recurvirostra americana*), Marbled Godwit (*Limosa fedoa*), and White-rumped Sandpiper (*Calidris fuscicollis*) occurred only in spring. Sharp-tailed Sandpiper (*Calidris acuminata*) occurred only as an autumn migrant.

The Fort St. John region supports significant numbers or serves as a major migration corridor for Lesser Yellowlegs (*Tringa flavipes*), Solitary Sandpiper (*Tringa solitaria*), Upland Sandpiper (*Bartramia longicauda*), Hudsonian Godwit (*Limosa haemastica*), White-rumped Sandpiper, Pectoral Sandpiper (*Calidris melanotos*), and Stilt Sandpiper (*Calidris himantopus*) in British Columbia.

Introduction

There is a general consensus among biologists that shorebird numbers have declined at many long-established census locations in North America over the past few decades, but the reasons are not well understood (Morrison et al. 1994, 2001). Causative factors may include a combination of habitat loss and degradation, human disturbance, chemical contamination, and climate change. This concern has resulted in the development of a series of recent conservation plans being prepared by various provincial, state, and national governments (Oring et al. 2000). Paulson (1993) emphasized the need to encourage better record keeping, organizing standardized shorebird surveys, centralizing provincial and state electronic databases, and publishing data previously hidden in notebooks for years.

Campbell et al. (1990) summarized information for shorebirds in British Columbia through the 1980s,

but delineating staging areas, migration corridors, and population trends were beyond the scope of the book. In the Peace River region of the province some of the earliest shorebird fauna was reported by McTaggart-Cowan (1939) who spent 55 days in the Dawson Creek area collecting and observing wildlife. He recorded 18 species of shorebirds and correctly predicted that Sanderling, Black-bellied Plover, Buff-breasted Sandpiper, Stilt Sandpiper, and American Golden-Plover (*Pluvialis dominica*) would be found in the future (Campbell et al. 1990b). Thirty-seven years later an environmental report for proposed hydro-electric dams on the Peace River by Penner (1976) estimated 11,000 shorebirds used the southern Peace River region in spring migration but did not list species.

In August 1975 I moved to Fort St. John and over the next 14 years documented wildlife in the area emphasizing shorebirds. During that period I visited a variety of wetland, upland, and forested habitats in the

vicinity of Fort St. John. The purpose of this paper is to provide an overview for seven species of shorebirds that occur regularly in the Fort St. John area that appear to be significant in terms of migration corridors, numbers, and occurrence in British Columbia.

Study Area and Methods

From 1975 through 1989 I recorded over 6,500 observations of shorebirds in the vicinity of Fort St. John. The study area included Mile 70, Alaska Highway to the north, Halfway River to the west, the Peace River to the south and the British Columbia/Alberta border to the east. Most shorebird field trips were associated with wetlands such as dugouts, lakes, ponds, marshes, swamps, rivers, wet meadows in farmland, and especially sewage ponds. In Fort St. John, sewage lagoons, located 5 km northeast of town, concentrated shorebirds in a well-defined site that could be completely surveyed from a few vantage points.

In the spring of 1988 and autumn of 1986 I made a special effort to survey the sewage ponds to obtain information on numbers and species of shorebirds. Each "survey period" lasted up to two hours and all shorebirds were counted directly. Spring migration was considered lasting from late April through early June and autumn migration from late June through early October. In the following species accounts, "status" terminology follows Campbell et al. (1990a).

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Results and Discussion

From 1975 to 1989 I recorded 30 species of shorebirds in spring and autumn migration. Of these 22 species occurred in spring and 24 species were observed in autumn. The combined total represents 75 % of all regularly occurring shorebirds in the province (see Campbell et al. 1990b). Spring migration in the Fort St. John region occurred from late April through early June and generally peaked sometime in May. Autumn migrants appeared in late June with the main exodus occurring in July and August. In some years stragglers were found into mid October.

Seven shorebird species (Figure 1) require a full discussion since they appear to use the Fort St. John region exclusively or are in numbers that are noteworthy for British Columbia.

Lesser Yellowlegs

Status: Common to occasionally abundant spring and autumn migrant, uncommon local summer visitant. Breeds.

Habitat: Prefers shallow wetlands and lakes. Also frequents shallows and muddy edges of run-off pools in fields, ditches and roadways in very wet weather, sewage lagoons, ponds, and lake and marsh surfaces with dense aquatic plant growth.

Migration period: Hundreds to 1,000 individual birds may aggregate at favourite staging and feeding sites during migration. In spring, the main movement and peak numbers

occur during the first half of May. In autumn, the movement is more protracted with two peaks occurring from late June to the third week of July and again in the second and third week of August. Observations suggest that the first autumn migrants are adult-plumaged birds.

Remarks: The largest aggregation in spring was 1,000 birds resting and feeding on the northwest corner of Cecil Lake on 4 May 1981. In autumn, 1,000 birds were observed feeding along the east side of Cecil Lake on 16 August 1977. These totals are the highest single site numbers reported for British Columbia (Campbell et al. 1990b; Phinney 1998). The North American population is estimated to be about 500,000 birds (Tibbitts and Moskoff 1999). Breeding Bird Surveys indicate a significant decrease in numbers (1980-1996) while Christmas Bird Counts suggest an increase in numbers (1959-1988) of Lesser Yellowlegs wintering in the United States (Sauer et al. 1997, Sauer et al. 1996). Both surveys, however, sample a very small percentage of the species' range so caution is advised in evaluating trends.

Annual occurrence: The Lesser Yellowlegs has been recorded from 17 April to 21 October.

Solitary Sandpiper

Status: Uncommon spring and uncommon to occasionally fairly common autumn migrant. Uncommon local summer visitant. Breeds. Figure 2.

Habitat: Puddles (even on forested trails), melt water

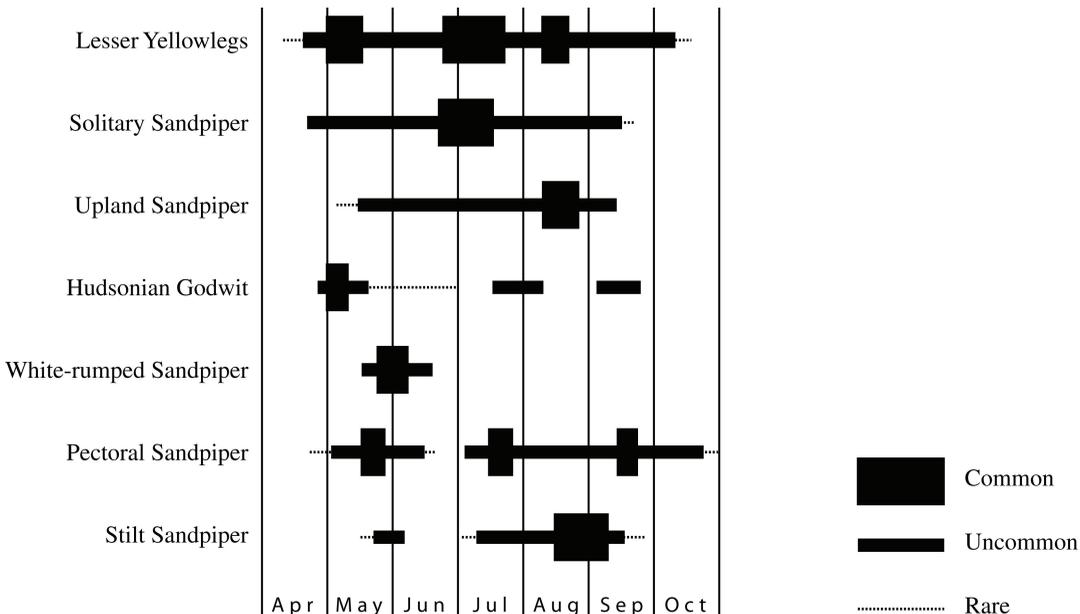


Figure 1. Phenology and relative status of seven common shorebirds occurring in the vicinity of Fort St. John, BC



Figure 2. The Solitary Sandpiper is a common, widespread breeding shorebird in the region of Fort St. John. Tommy Lakes, BC. 3 July 2005. (Michael I. Preston).

ponds in fields, ditches, bogs, wooded swamps, muskegs, shallow lakeshores, beaver ponds, and sewage ponds. Does occur on much smaller waterbodies than most shorebirds but also associates with other species in more extensive wetlands.

Migration period: Most noticeable as an autumn migrant as late spring and early summer observations probably represent local breeding birds. The peak movement occurs from late June to early July. Rarely is more than a single bird seen at once in early spring.

Remarks: A sudden draw down of water in the sewage lagoons during migration may result in unusually large numbers of foraging sandpipers. A count of 30 birds on 27 June 1987 is the largest concentration reported for the province (Campbell et al. 1990b). Due to its solitary habits and remote breeding locations there is no information on population estimates or trends for North America (Moskoff 1995).

Annual Occurrence: The Solitary Sandpiper has been recorded from 26 April to 20 September.

Upland Sandpiper

Status: Rare spring migrant. More widespread and frequent in autumn. Local summer visitant. Breeds.

Habitat: Open fields and roadside edges throughout open habitats. Also frequents recently burned fields.

Migration period: Primarily an autumn migrant that may appear as early as 16 July in some years. The main passage, however, occurs during the latter half of August.

Remarks: Most records are of single birds. The southern Peace River region of British Columbia is the main breeding centre for this rare sandpiper (Campbell et al. 1990b). The

largest number of autumn birds recorded was 13 found between 16 July and 24 August 1987. In the Dawson Creek area a flock of 26 birds was grounded by bad weather on 18 May 1995 (Phinney 1998).

Annual occurrence: The Upland Sandpiper has been recorded from 8 May to 9 September.

Hudsonian Godwit

Status: Rare to occasionally fairly common local spring and autumn migrant.

Habitat: Edges of exposed mud flats and shores of shallow lakes, ponds, marshes, and sewage lagoons. Often feeds by wading and probing the bottoms of shallow wetlands.

Migration period: Largest numbers, up to 26 birds in a flock, occur in spring migration in early May. After that only individual birds can be found. Occasionally a single bird will stay for a prolonged period during late spring and early summer. Large flocks rarely stay more than three days. Autumn migration occurs in two stages. Adults, often moulting, show up in small numbers (usually less than 8 in a flock) during the last half of July followed by juveniles (1 to 6 birds) in September.

Remarks: In British Columbia, the Hudsonian Godwit occurs only in the extreme northwest as a local and very scarce nesting species, and locally in the northeast as a regular migrant through the southern Peace River region (Campbell et al. 1990b).

Annual occurrence: The Hudsonian Godwit has been recorded from 26 April to 26 September.

White-rumped Sandpiper

Status: Locally rare to occasionally fairly common spring migrant.

Habitat: Muddy or sandy shores of shallow ponds and lakeshores. Favours mudflats at sewage lagoons. Also frequents large mud puddles and dirt roadways and dykes during violent rainstorms.

Migration period: Occurs regularly only in spring migration. Small numbers of migrants, usually less than 11 birds together, can be found from mid-May to mid-June with peak numbers occurring in late May and early June.

Remarks: In British Columbia, the White-rumped Sandpiper, a non-breeding species, occurs regularly only in the vicinity of Fort St. John.

Annual occurrence: The White-rumped Sandpiper has been recorded from 18 May to 15 June.

Pectoral Sandpiper

Status: Fairly common to occasionally abundant spring and autumn migrant.

Habitat: Primarily mudflats on lakeshores and ponds and short grass areas in sewage lagoons. Also frequents sandy beaches (occasionally), lawns, dry fields, and grassy roadsides (especially when rain has softened the soil).

Migration period: In spring migration, flocks of 20 to 60 birds are regularly found. The passage is evident in early May but peaks during the third week of the month. Very few birds are ever recorded after 1 June. The first southbound migrants appear in the first half of July and peak towards the end of the month. Small numbers continue to feed and rest with another peak occurring in the second and third weeks of September. Stragglers can be found, in some years, into late October, departing just before freeze-up.

Remarks: This species is one of the most abundant migrants feeding and resting along the muddy edges of sewage lagoons and in nearby agricultural fields where it often associates with American Golden-Plovers. When ponds are drained exposing sediment mud flats and during inclement weather, individual flocks may reach 500 or more birds, among the largest aggregations recorded in British Columbia (Campbell et al. 1990b).

Annual occurrence: The Pectoral Sandpiper has been recorded from 26 April to 16 June and from 4 July to 31 October.

Stilt Sandpiper

Status: Rare to uncommon spring migrant and fairly common to common autumn migrant.

Habitat: Prefers to wade in shallow water off the shores of sewage lagoons, ponds, and lakeshores and also forages in marshy areas with exposed mudflats.

Migration period: Small numbers occur briefly in spring migration and the visit is short. The main movement occurs in late May. The autumn passage is more protracted and can commence during the first week of July. The peak movement for adults occurs during the latter part of July while juveniles peak from mid-August to early September. The largest flock recorded during the 14 years was 133 birds (adults and juveniles) on 22 August 1987.

Remarks: The Fort St. John area is the only region in British Columbia where the Stilt Sandpiper is a regular migrant and known to occur in substantial numbers (Campbell et al. 1990b). Recently, however, large flocks have been reported from mudflats near Salmon Arm in autumn migration (C. Charlesworth, pers. comm.).

Annual occurrence: The Stilt Sandpiper has been recorded from 21 May to 1 June and from 7 July to 26 September.

The significance of wetlands surrounding the Fort St. John area for shorebirds remains poorly understood. The diversity and numbers of shorebirds are impressive and

suggest that the region may provide significant stopover and feeding sites for migrants, especially those species that have long-distance flights. For some species that migrate only through the central United States and Canada, like the Hudsonian Godwit, White-rumped Sandpiper, Buff-breasted Sandpiper, and Stilt Sandpiper, the southern Peace River region provides the only suitable habitat in British Columbia that exists at the western edge of their migration corridors. Other important, much larger, and permanent wetlands in the region include Boundary Lake, Cecil Lake, and Charlie Lake.

With global warming and climate change becoming a real threat to many shallow wetlands in the Peace River region, human-created impoundments such as sewage lagoons, cattle dugouts, and small reservoirs may serve as critical habitats for shorebirds in the future.

Acknowledgements

Several people enabled me to better understand the shorebirds of the Fort St. John area. These included Mike Bentley, Ken Best, Jack Bowling, R. Wayne Campbell, Richard J. Cannings, Chris Charlesworth, Bruce Cummings, Gary S. Davidson, Mark Gardiner, Richard R. Howie, Joan Johnston, John Manley, Jim Norris, Gerry Paille, Syd Roberts, Gary Saxon, Mike Toochin, and Wayne C. Weber.

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About the Author

Since he was 11 years old, Chris has been interested in the occurrence and habits of birds of British Columbia. He lived in Fort St. John from 1975 to 1989 before moving to Vernon, where he presently lives with his wife Sonja. He has participated in many volunteer surveys including Christmas bird counts and breeding bird surveys as well as being an active participant in the British Columbia nest record scheme. He was regional editor for American Birds in the early 1990s, covering the regions of British Columbia and the Yukon Territory.

He retired in June 2005 from teaching high school English and presently serves as a director and regional coordinator for the Biodiversity Centre for Wildlife Studies.