

WILDLIFE DATA CENTRE

FEATURED SPECIES - SEMIPALMATED PLOVER

R. Wayne Campbell

The Semipalmated Plover (*Charadrius semipalmatus*) is a small, common and familiar shorebird identified by a single dark band across its breast. Unlike many of its relatives who feed and fly in large flocks, this tame sandpiper prefers to forage by itself, running a few steps, then darting to snatch some insect, isopod, or worm, before chasing after another morsel. It is a medium- to long-distant migrant and is best seen in spring and autumn where it feeds or rests on open muddy and sandy shores. It breeds almost exclusively in the Arctic and sub-Arctic regions of North America but recently small numbers of Semipalmated Plovers have been found nesting in scattered locations in coastal and interior British Columbia as far south as the Cariboo and Fraser River delta.

Wildlife Data Centre Provincial Status - 2004

The Semipalmated Plover is *Not Threatened* in British Columbia. Populations appear stable and the species' breeding range is slowly expanding in the northwest.

Where and When

World Range

The Semipalmated Plover is the North American counterpart of the Eurasian Common Ringed Plover (*C. hiaticula*). Its breeding range encompasses the North American Arctic and sub-Arctic regions except for the very



Figure 1. Semipalmated Plover at nest, Nahahini River, BC. 20 June 1999 (R. Wayne Campbell).

high Arctic islands. Small numbers also breed in northwestern British Columbia, the Queen Charlotte Islands, and rarely in southwestern mainland British Columbia, Washington and Oregon. It winters along the coasts of the southern United States south through Central America and much of South America.

British Columbia

It is a locally common to abundant spring and autumn migrant along the coast. In the interior it is locally uncommon in spring and common in autumn migration, primarily

throughout the central interior and Peace Lowland in the vicinity of Fort St. John.

The first spring migrants appear on the coast in late April with the main passage occurring during the first two weeks of May (Figure 2). A few stragglers are present until late May. Flocks gather at five or six major staging areas along the coast. These include the Fraser River delta, Long Beach, Sandspit, Masset Inlet, and North Beach with largest numbers nearling 2,100 birds on Rose Spit on the northeastern Queen Charlotte Islands.

In the southern interior, the spring movement is far

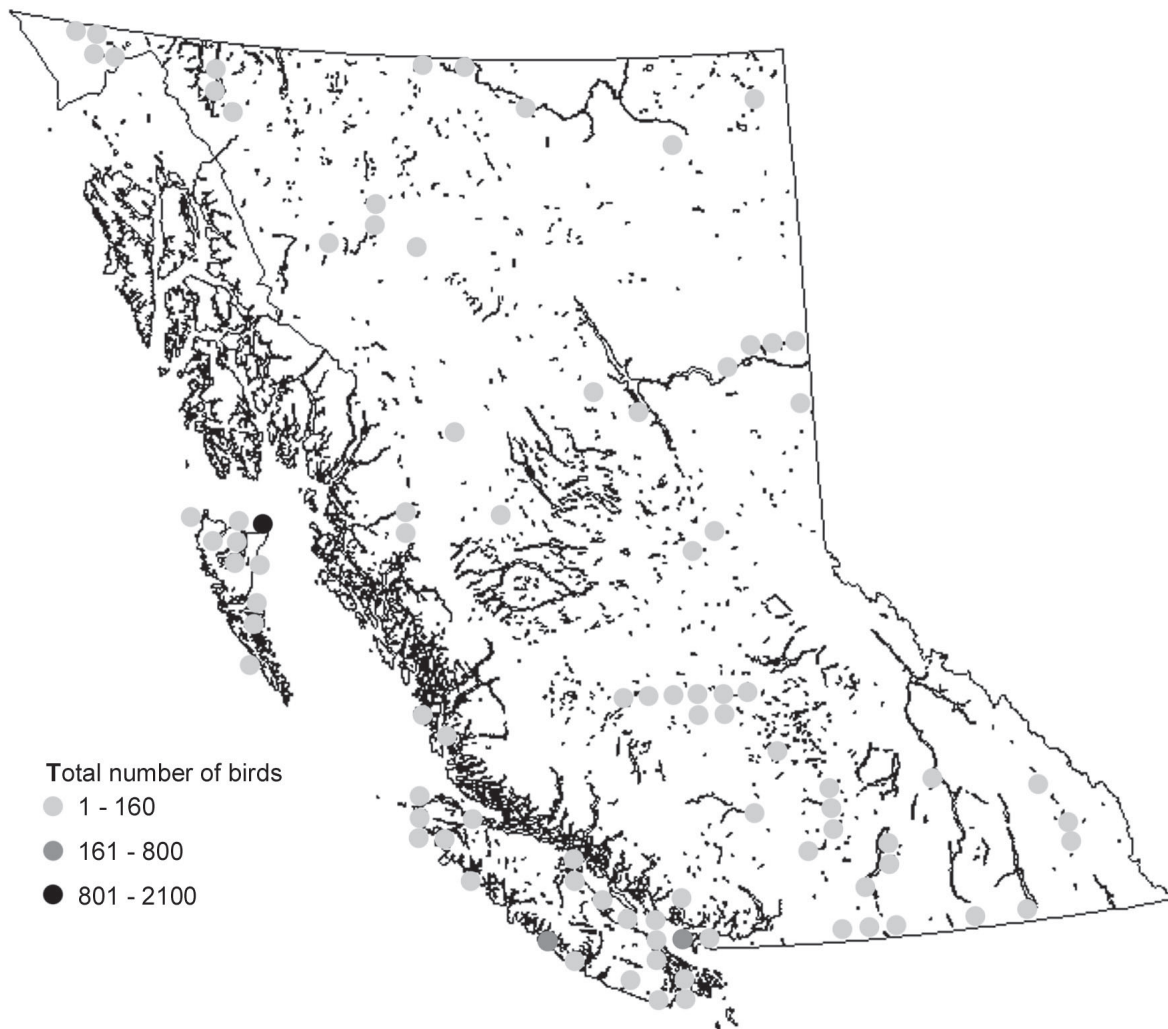


Figure 2. Distribution and relative abundance of the Semipalmated Plover in May.

less noticeable with individuals and small flocks appearing sporadically in late April and a slightly more pronounced migratory movement in May. Most interior records are of single birds. In the Peace River region of Fort St. John and Boundary Lake, spring migration occurs mainly during the last three weeks of May and is more defined with over 100 plovers sometimes found staging in late May. Staging areas identified in the interior occur only in the vicinity of Prince George, Mackenzie, Fort St. John, and Fort Nelson.

The autumn movement is more protracted and occurs mainly from mid-July to mid-August. On the coast, small

flocks of plovers begin to assemble about mid-July on the Queen Charlotte Islands, followed soon afterward by a southward movement that continues strong through to the third week of August (Figure 3). Numbers taper off quickly through early September and only stragglers are found in early October. Largest numbers aggregate at Rose Spit. While other locations support staging plovers in autumn but North Beach, Tlell, Sandspit, Long Beach, and the Fraser River delta are the most significant.

In the interior, the southward movement may begin in late July in northern areas but is in full swing in August.

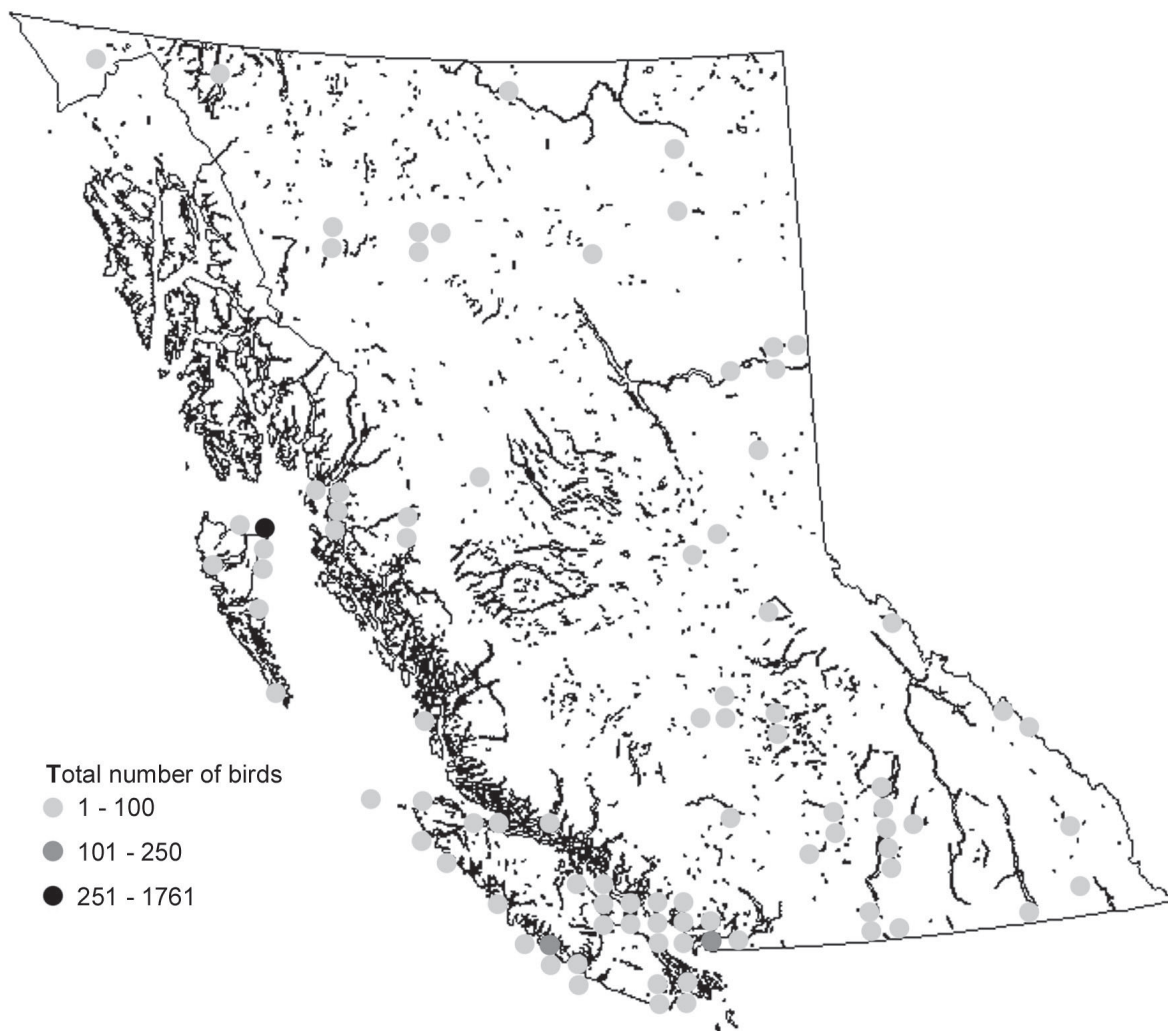


Figure 3. Distribution and relative abundance of the Semipalmated Plover in August.



Figure 4. Breeding distribution of the Semipalmated Plover

In southern regions, it carries into early September and in favourable years small numbers may still be present locally (e.g., Williams Lake) in early October. Most records are of single birds. Small numbers, however, stage at the sewage lagoons in the vicinity of Fort St. John, Boundary Lake, Bowron Lake Park, and the mudflats at the south end of Shuswap Lake at Salmon Arm.

Breeding populations are well established in a narrow corridor extending from the St. Elias Mountains and Chilkat Pass in extreme northwestern British Columbia southeast to the vicinity of Spatsizi Plateau Wilderness Park (Figure 4). A disjunct population, estimated at 100 pairs, breeds on the northern and northeastern portions of the Queen Charlotte Islands. Of these, 30 or so pairs breed in the vicinity of Masset. Peripheral breeding occurs at Lower Post, Oregon Lake (Fireside), Le Blanc Lake (Cariboo-Chilcotin), and Iona Island (Richmond). The Semipalmated Plover occurs from sea level to 1,525 m (5,000 feet) elevation.

In winter, small numbers have been recorded infrequently on the Queen Charlotte Islands, southeastern and southern Vancouver Island, and the Fraser River delta.

Habitat

Open, bare, and sparsely-vegetated environments. In spring and autumn migration it frequents fresh and saltwater mudflats, exposed sandy beaches, estuaries, sewage lagoons, reservoirs, and, less commonly, flooded agricultural fields with short vegetation, gravel beaches, and rocky shores.

In summer it breeds in sand dunes, sand and gravel beaches, and jetties on the coast. In the interior, the Semipalmated Plover prefers open tundra with abundant

lichen growth, well-drained gravel roadsides, sparsely vegetated flat gravel patches, sandy lakeshores, and gravel pits.

Occurrence

While a few occur year-round on the coast, the species is mostly present from May through August. In the southern interior, it has been recorded from 29 April to 13 October and in the northern interior from 30 April to 17 September.

Family Life

Breeding

The Semipalmated Plover is a solitary nester and is monogamous. The pair stays together during the summer until autumn departure but separates if the nest or chicks are lost. Over 40% of pairs do not retain the same partner between nesting seasons. First breeding occurs at 2 to 3 years old. Never more than one brood is attempted per year and if the clutch fails there is no attempt at re-laying.

Annual Cycle

Males arrive on the breeding grounds first and soon begin aerial courtship displays where they dive to the ground and suddenly pull away at the last moment. The female chooses a male's territory and courtship continues on the ground. The female selects the nest site. Nest-building may begin 5 to 10 days after the female arrives. The season is short and lasts from about early-May to late July. Peak egg-laying occurs in mid-May at southern locales, and in mid-June at northern locales. Hatching and the presence of flightless young is known from 9 June to 21 July. Timing varies between years depending on snowfall and temperature, which affects insect emergence and numbers.



Figure 5. Semipalmated Plover nest at Nadahini River, BC. 20 June 1999 (R. Wayne Campbell).

How Are We Doing?



Figure 6. Semipalmated Plover eggs at Nadahini River, BC. 20 June 1999 (R. Wayne Campbell).

Nests

The male makes a new scrape in the ground or may use an old depression. The shallow depression may be bare or lined with a few dry leaves, pebbles, wood chips, and short plant stems gathered from within 1 m (Figure 5). Most nests are within 50 m of water, even if it is only a large but temporary puddle.

Eggs

The eggs are short ovate pyriform with a smooth slightly glossy surface. The olive buff ground colour is marked entirely with blotches of black, brownish-black, or dark brown, sometimes concentrated at the larger end of the egg (Figure 6). The number of eggs in a single nest ranges from 2 to 4 eggs with most having 4 eggs (88%). The average size is 33 mm (1.3 inches) long by 23 mm (0.9 inches) at the widest point. One egg is laid per day and both male and female share incubation duties equally. The incubation period averages 24 days.

Young

Breaking through the egg shell may take from 2 to 5 days. Chicks can be heard peeping in eggs 3.5 days before hatching. Chicks are precocial and are usually dry within one hour of hatching and leave the nest within one day of hatching. They are brooded for 4 to 5 days. The chicks still show evidence of down at 17 days old. At 22 days old they start showing a breast band. Tail feathers are still sheathed at 31 days old.

Lifespan

The oldest known bird, an individual breeding at Churchill, Manitoba, was 9 years old.

Conservation and Management

The Semipalmated Plover is not threatened or endangered in any part of its world range nor is there any evidence that numbers have decreased at major staging areas or on its breeding grounds. The entire breeding population has been estimated between 13,200 and 120,000 pairs. In North America, populations declined since 1890 due to hunting but recovered quickly after the international Migratory Bird Act was enacted in 1918.

Some of the most endangered habitats for migrant Semipalmated Plovers passing through British Columbia are estuaries, tidal mudflats, and other open wetlands. Major staging areas along the coast and in the interior of the province need to be defined. These traditional stopovers, where significant numbers of plovers gather to rest, feed, and ready themselves physiologically for their next migration jump need to be identified and rated for use. Only then can we evaluate the importance of habitats in British Columbia in relation to the plover's long distance movements between continents. It is encouraging to note that Boundary Bay, a major stopover for shorebirds on the Pacific Flyway, has recently been afforded protection as a RAMSAR site. Other important staging areas have also afforded some protection and management options by federal parks (e.g., Pacific Rim National Park).

Staging areas may differ significantly between spring and autumn migration. In spring, because of the rush to get to the breeding grounds, Semipalmated Plovers may aggregate at fewer but more critical sites whereas in autumn a continuum of suitable habitats may be required for the more widespread, protracted, and leisurely movement. It has also been pointed out that the Pacific coast is straighter than the Atlantic coast and therefore offers less habitat for migrant shorebirds. In the interior, it would be useful to define migration corridors and identify significant foraging and resting sites.

Human Disturbance During Breeding Season

All terrain vehicle (ATV) activity at known breeding locations, especially in roadside gravel habitats along the Haines Road in extreme northwestern British Columbia, has resulted in two known nests being damaged. Vehicles pulling offroad can also impact nesting plovers. Areas of sensitivity should be identified and such activities curtailed from mid-May through July. Nesting birds are quite tolerant of humans near their nest sites and return to nests within a minute or so of disturbance depending on the stage of incubation.

Scientific Collecting

A total of 13 skins/skeletons and 34 eggs have been

collected in British Columbia and are scattered around the world in various museum collections. At the present time there are no collecting programs by museums in the province nor are there any research programs that require killing Semipalmated Plovers.

Other Threats

Direct, but unquantified sources of mortality include hitting guy wires on tall radio towers (Bechers Prairie, west of Williams Lake), predation of eggs by Common Ravens (*Corvus corax*) (Queen Charlotte Islands) and by red foxes (*Vulpes vulpes*) (along the Haines Road), legs entangled in fishing line and surfgrass (*Phyllospadix scouleri*) (Long Beach), flooding of nests by high river waters (Nadahini River), death in mist nets during banding operations (Sea Island), a nest run over by a construction truck (Pleasant Camp), individuals captured by Merlins (*Falco columbarius*), Sharp-shinned Hawks (*Accipiter striatus*) and Peregrine Falcons (*Falco peregrinus*), and an adult bird hit by a vehicle on Haines Highway (Nadahini River).

Trends

Standard long-term population information to determine trends is not available for British Columbia because the species is rarely encountered on Christmas Bird Counts, and Breeding Bird Surveys do not cover the plover's subalpine and alpine nesting habitats for summer trends.

Databases

Since 1990, when the second volume of *The Birds of British Columbia* (BBC) was published, a vision to establish and centralize a new and comprehensive database for wildlife in British Columbia was slowly brought together and set up at the Wildlife Data Centre (WDC) in Victoria. Beginning in 1998, a concentrated effort was made by a small group of committed individuals to amass previously unavailable information collected from a wide variety of sources and incorporate it into digital databases. New information from which this account was produced is reflected in the number of new occurrence (Figure 7) and breeding (Figure 8) records.

Did You Know?

Biological Control

The Semipalmated Plover, like many birds, is an opportunistic feeder. It eats mainly small marine and freshwater molluscs, worms, amphipods, isopods, fly larvae, other insects, seeds, and berries. During the severe locust outbreak in the United States between 1873 and 1876 it lived entirely on these large insects and a single plover ate

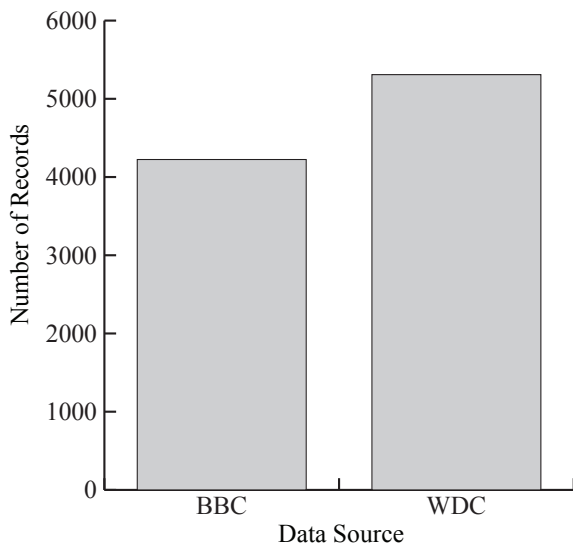


Figure 7. Comparison of total number of occurrence records since *The Birds of British Columbia* (BBC) (1990) with records at the Wildlife Data Centre (WDC) in Victoria.

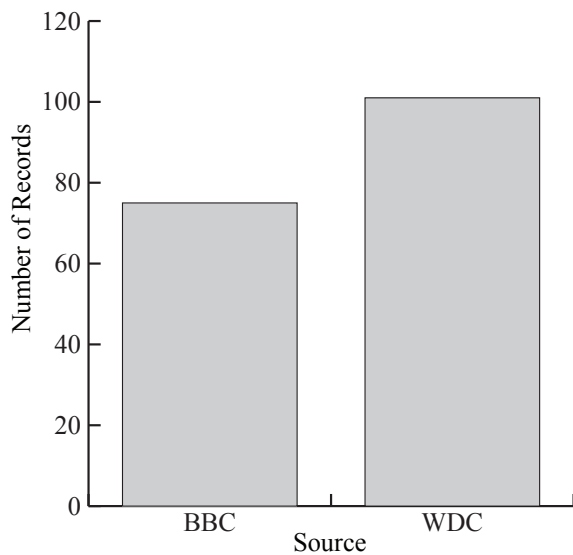


Figure 8. Comparison of total number of breeding records since *The Birds of British Columbia* (BBC) (1990) with records at the Wildlife Data Centre (WDC) in Victoria.

an average of 38 locusts a day.

Numbers Game

The Semipalmated Plover belongs to the family of shorebirds *Charadriidae* comprised of 67 species and 10 genera. There are 11 species of plovers in North America all of which belong to the genus *Charadrius*. Eight species have been found in British Columbia, of which three breed.

No More Myths

Words for the plover's origin come from the Latin *pluvia* for "rain" or *pluvarius* for "rain-bird." It was earlier believed that plovers and other shorebirds were easier to capture [for food] in the rain and that they showed up when the rainy season was about to begin.

Useful References

* indicates copy is filed in the Wildlife Data Centre library.

***Bent, A.C.** 1929. Life histories of North American shorebirds, Part 2. United States National Museum Bulletin 146, Washington, DC.

***Bock, W.J.** 1959. The status of the Semipalmated Plover. *Auk* 76:98-100.

***Campbell, R.W. and R.E. Luscher.** 1972. Semipalmated Plover breeding at Vancouver, British Columbia. *Murrelet* 53:11-12.

***Campbell, R.W., T.D. Hooper, and N.K. Dawe.** 1988. A bibliography of British Columbia Ornithology – Volume 2. Royal British Columbia Museum Heritage Record No. 19, Victoria, BC. 591 pp.

***Campbell, R.W., H.R. Carter, C.D. Shepard, and C.J. Guiguet.** 1979. A bibliography of British Columbia Ornithology. British Columbia Provincial Museum Heritage Record No. 7, Victoria, BC. 185 pp.

***Campbell, R.W., N.K. Dawe, I. McT.-Cowan, J.M. Cooper, G.W. Kaiser, and M.C.E. McNall.** 1990. The birds of British Columbia: Volume 2 - Nonpasserines (Diurnal birds of prey through woodpeckers). Royal British Columbia Museum, Victoria, BC. 635 pp.

***Cooper, J.M. and E.H. Miller.** 1997. Populations, status, and biology of shorebirds breeding near Masset, Queen Charlotte Islands. *In* The ecology, status and conservation of marine birds on the Queen Charlotte Islands. Canadian Wildlife Service Occasional Paper No. 93, Delta, BC.

***Hallet, C.E., B.R. Casler, and M.A. Stern.** 1995. Semipalmated Plover nesting on the Oregon coast. *Western Birds* 26:161-164.

***Hesse, W.H. and H. Hesse.** 1961. Sight record of

the downy young Semipalmated Plover in the Chilcotin of British Columbia. *Murrelet* 42:3.

***Howe, M.A., P.H. Geissler, and B.A. Harrington.** 1989. Population trends of North American shorebirds based on the International Shorebird Survey. *Biological Conservation* 49:185-199.

Myers, J.P., R.I.G. Morrison, P.Z. Antas, B.A. Harrington, and T.E. Lovejoy. 1987. Conservation strategy for migrating species. *American Scientist* 75:19-26.

***Nol, E. and M.S. Blanken.** 1999. Semipalmated Plover (*Charadrius semipalmatus*). *In* The Birds of North America, No. 444 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA. 24 pp.

***Nol, E.M., S. Blanken, and L. Flynn.** 1997. Sources of variation in clutch size, egg size and clutch completion dates of Semipalmated Plovers in Churchill, Manitoba. *Condor* 99:389-396.

***Paulson, D.** 1993. Shorebirds of the Pacific Northwest. University of British Columbia Press, Vancouver, BC. 406 pp.

***Pitelka, F.A.** (ed.). 1979. Shorebirds in marine environments. *Studies in Avian Biology* No. 2, Lawrence, KS. 261 pp.

***Sinclair, P.H., W.A. Nixon, C.D. Eckert, and N.L. Hughes.** 2003. Birds of the Yukon Territory. University of British Columbia Press, Vancouver, BC. 595 pp.