



**Birds of North Peace River (Fort St. John and Vicinity)
British Columbia, 1975-1999:
Part 2 (Passerines: Flycatchers through Old World Sparrows)**

Chris Siddle

6131 Silver Star Road, Vernon, BC V1B 3P3

Abstract

Between July 1975 and July 1999, 258 species of birds, including nonpasserines and passerines, were recorded in the North Peace River region of British Columbia. Published accounts for 143 species of nonpasserines (55%) were previously published (Siddle 2010). The following passerine component (115 species) will complete the manuscript.

Accounts for regularly occurring species include sections on status, historical summary, migration chronologies (i.e., early arrival, peak movement, and late departure), changes in distribution between years, descriptions of non-breeding and breeding habitats, and specific breeding information. Accounts have been prepared from a personal database of over 70,000 individual records.

Introduction

The format for each species account essentially follows the non-passerine component published in the previous issue of *Wildlife Afield* (see Siddle 2010). New plants and animals are listed with full common and scientific names. The Literature Cited section is unique to passerines but Acknowledgements and About the Author also include the non-passerine component.

Species accounts are again organized within families following the latest taxonomic order (see Banks et al. 1998, 2002, 2003, 2004, 2005, 2006).

A “Conservation” section and appendices was initially planned as a “wrap-up” section for this issue. However, it will now be incorporated into a combined updated publication that will later be issued as a unique single volume. This will include summary information for significant North Peace River region species.

FLYCATCHERS

Olive-sided Flycatcher
Contopus cooperi

Status: *Uncommon migrant and summer visitor; probably breeds.*

Williams (1933b) found the Olive-sided Flycatcher to be “sparingly” distributed throughout the Peace River Block. Cowan (1939) wrote that it occurred as “scattered pairs in favourable locations both north and south of the Peace River.” Penner (1976) called the species “uncommon in the Peace River valley.”

Habitat: Migration: Generally birds appear directly on their presumed nesting grounds. However, on 23 May 1982, a silent migrant was atop trembling aspen saplings in a grassy transmission corridor near Watson Slough. Individuals appear somewhat

more accepting, and less specific, in their habitat choices during migration. **Breeding:** Pairs occur in two types of habitats in the North Peace River region - mixed forest, often around openings ranging from primarily coniferous to mostly deciduous with stands of conifers and black spruce muskeg and other forest edges surrounding wetlands such as Beaver (*Castor canadensis*) ponds.

In the South Peace River region, Phinney (1998) described this species as frequenting mixed forests, especially near edges and openings, and also bogs. Altman and Sallabanks (2000) describe common features of all Olive-sided Flycatcher nesting habitats as: “tall, prominent trees and snags, which serve as singing and foraging perches, and unobstructed air space for foraging” (Figure 1).



Figure 1. In the North Peace River region, Olive-sided Flycatcher often breeds in stands of mixed coniferous forests adjacent to open wetlands. An important component of breeding habitat is tall trees with dead tops or interspersed with snags that serve as singing and foraging perches. *Photo by R. Wayne Campbell, Bear Flat, BC, 16 June 1990.*

Distribution: **Migration:** There were no records of migrants significantly distant from summer areas. **Breeding:** Summer resident throughout the more heavily forested parts of the North Peace River region. The species was recorded from the vicinity of Hudson’s Hope, along the Upper Cache Road, at Charlie Lake, along Stoddart Creek at Fort St. John, and at St. John Creek at 101 Road. It was also observed along the forested south bank of the Peace River at Taylor and in muskeg habitats around German, Boundary, and Lost lakes.

Occurrence: **Spring:** Eleven first arrival dates ranged from 12 to 28 May (1976, 1977, and 1981 to 1989), with seven dates between 18 and 23 May. Phinney (1998) gave 11 May as an early arrival date for the South Peace River region, while Cowan (1939) first recorded it on 23 May 1938 (location not given). Penner (1976) gave 9 May as an arrival date for the Peace River valley. No spring peaks were detected. Notable records are: One at Beatton Provincial Park on 18 May 1984, one silent migrant along Peace Island Park Road south of Taylor, on 12 May 1987, and one at km 7 of Johnstone Road (Taylor) on 28 May 1983. **Summer:** Notable records are: One at the Alexander Mackenzie Bridge (Hudson’s Hope) on 7 June 1980, two birds near Watson Slough on 16 June 1990, one singing in muskeg at Lost Lake on 4 July 1998, and one in muskeg at Baldonnel on 17 June 1986. Only four records are after early August. In northern Alberta, a departure of 20 August was given (Francis and Lumbis 1979). **Autumn:** No records.

Breeding: No nests were found in the North Peace River region. A nest discovered outside the study area at Lone Prairie, southeast of Chetwynd, was a squat cup saddled on a small horizontal branch 6 m from the ground near the top of a small spruce tree in a selectively logged swamp. The adults were feeding and removing fecal sacs from at least two downy nestlings on 9 July 2003. North Peace River region sightings that suggest nesting included three birds, likely a family, at km 7 of Johnstone Road south of Taylor, on 29 July 1982, and an agitated pair calling in Beatton Provincial Park on 12 July 1983.

Comments: The Olive-sided Flycatcher, a Neotropical migrant with perhaps the longest migration route of any North American breeding flycatcher species, has experienced range contractions particularly in the southeast part of its breeding range during the 20th Century (Altman and Sallabanks 2000). Declining populations in general, it is a species of conservation concern in several states and provinces. The Olive-sided Flycatcher is currently listed by the American Bird Conservancy on its *WatchList* as a “Declining Species”, facing

threats of clear-cutting, fire suppression, pesticide use, and habitat loss due to hydro-electric projects (Lebbin et al. 2010).

Western Wood-Pewee *Contopus sordidulus*

Status: *Widespread but uncommon migrant and summer visitor; breeds.*

Williams (1933b) found Western Wood-Pewee (Figure 2) common at “Little Prairie” (location unknown) in the Peace River Block from 3 to 10 August (year not given). Cowan (1939) recorded it as “fairly abundant” around Tupper Lake and Charlie Lake. Penner (1976) listed it as “common” in the Peace River valley.



Figure 2. Western Wood-Pewee breeds in forested habitats throughout the southern two-thirds of the province as well as in the Boreal Plains ecoprovince where the North Peace River region is located. *Photo by Mark Nyhof.*

Habitat: Migration: Similar to breeding but also occurs in semi-open areas during passage, including beaches with perches and willow hedgerows in fields. Breeding: Favours young and middle-aged balsam poplar and trembling aspen stands (Figure 3) along trails and edges in deciduous and mixed woodlands. Western Wood-Pewee appears to require bare perches and open, unobstructed air space for foraging. In the South Peace River region, Phinney (1998) stated that Western Wood-Pewee required mature trembling aspen forests and noted its preference for edges. Cowan (1939) stated that

it was a bird of climax trembling aspen forest at Tupper Creek and Charlie Lake.



Figure 3. Western Wood-Pewee nests in young to middle-aged trembling aspen woodlands, usually building its nest near the edge of the stand. *Photo by R. Wayne Campbell, Fort St. John, BC, 23 June 1996.*

Distribution: Migration and Breeding: Widely distributed across the North Peace River region, but is much rarer in the northern half of the study area.

Occurrence: Spring: Ten arrival dates ranged from 10 to 22 May (1976, and 1981 to 1989), with seven dates between 14 and 20 May. Cowan (1939) first recorded this species on 18 May. Phinney (1998) gives 8 May 1994 as the earliest spring date for the Dawson Creek area. Penner (1976) recorded an early arrival date of 7 May for the Peace River valley. Notable records are: One along Peace Island Park Road on 14 May 1988 and one at Cecil Lake on 10

May 1987. Summer: Southward migration probably begins in early August. Sightings of obvious migrants ranged from 14 August to 2 September and were usually encountered as singles or pairs. Occasionally higher numbers occurred. Largest counts were of seven at Beatton Provincial Park on 14 August 1986, five at various sites around Cecil Lake on 19 August 1984, three at Fish Creek, Fort St. John, on 28 August 1984, and three at Beatton Provincial Park on 14 August 1988. Autumn: The latest sighting and only September record was a single pewee observed at Beatton Provincial Park on 2 September 1982.

Breeding: Ten nests were located. Five were placed in balsam poplar, usually young trees; three were in trembling aspens; one was in a paper birch; and one in an unrecorded tree species. Campbell et al. (1997) also identified aspen and poplar as being the two most commonly used nest tree species, supporting 32% of all nests ($n=198$).

All 10 nests were built atop horizontal branches (Figure 4). Distance from the main trunk for four nests ranged from 0.5 to 1 m. Heights of 10 nests ranged from 5.2 to 9.1 m above ground, with 6 nests at 6 to 7.6 m. Nest construction began, in one case, as early as late May; a pair was seen working on a half- built nest at Montney Centennial Park at Charlie Lake on 30 May 1982. There were no clutch initiation dates.



Figure 4. Western Wood-Pewee nests, found in live and dead trees, especially trembling aspen, are saddled on horizontal branches with forks well out from the trunk. *Photo by R. Wayne Campbell.*

Nestlings were found between 30 June and 4 August, all within the range of 20 June to 17 August reported by Campbell et al. (1997). In only two nests was it possible to see the number of nestlings. One nestling ready to fledge with three others on a branch beside the nest was noticed at St. John Creek on 2 August 1987 and three nestlings were counted in a nest at Peace Island Park on 9 July 1997.

Comments: The Western Wood-Pewee is a small, nondescript flycatcher often mistaken by the inexperienced birder for an *Empidonax* flycatcher. The species' most frequent vocalization, a peevish "peer", is often given late into the summer, which helps identify it.

Yellow-bellied Flycatcher *Empidonax flaviventris*

Status: *Casual.*

Not recorded by Williams (1933b), Cowan (1939), or Penner (1976).

Occurrence: Two records. Summer: One bird was singing from the lower sub-canopy at about 7 m in height on a forested north-facing slope above the south bank of the Peace River about 6 km east of Farrell Creek mouth on 21 July 1992. Another individual was located in mixed forest at Beatton Provincial Park on 20 August 1988.

Comments: Phinney (1998) found the Yellow-bellied Flycatcher to be an "uncommon migrant and summer visitor" that probably breeds in two to 40-year-old lodgepole pine-trembling aspen forests on dry sites. Recently, field workers found small local populations on territories at the south end of Williston Lake in June and July 2006 in similar habitat (R. Wayne Campbell pers. comm.; Figure 5).



Figure 5. Yellow-bellied Flycatcher, a little known species in British Columbia that appears to inhabit pockets of discreet habitat in north-central interior parts of the province, was found to be regular summer visitor in regenerating stands of lodgepole pine. *Photo by R. Wayne Campbell.*

Alder Flycatcher
Empidonax alnorum

Status: *Uncommon migrant and summer visitor; breeds.*

Prior to 1973, Alder and Willow flycatchers were lumped as “Traill’s” Flycatcher (*Empidonax traillii*) (American Ornithologists’ Union 1973). The species was not recorded by Williams (1933b). Cowan (1939) found Traill’s Flycatcher “quite abundant” at Charlie Lake and around Fort St. John. Penner (1976) recorded the Alder Flycatcher an “uncommon summer resident”, but suggested more detailed surveys in the Peace River valley would prove it to be more common.

Habitat: Migration and Breeding: Alder Flycatcher (Figure 6) arrives directly on its breeding grounds. Habitat includes a variety of dry and damp sites: willow thickets in overgrowing meadows (117th Avenue, Fort St. John), willows and shrubs along streams (Prespatou Creek south of Prespatou), willow thickets around marshes (248A Road marshes), and shrub edge to muskegs and bogs (Boundary Lake). Alder Flycatcher also commonly occurred in shrub communities on exposed grassy slopes such as the Beaton River breaks. In the Fort MacKay area of northern Alberta, the species preferred tall willows without a tree canopy (Francis and Lumbis 1979), a description that also applies to the North Peace River region.



Figure 6. Alder Flycatcher is an uncommon summer visitor to riparian habitats throughout the North Peace River region. *Photo by Mark Nyhof.*

Distribution: Migration and Breeding: Widely distributed in willowy sites across the North Peace River region, from Hudson’s Hope east to Boundary Lake, and from Taylor north along the Alaska Highway.

Occurrence: Spring: Among the last of the migrants to arrive in the North Peace valley area. Eight first arrival dates ranged from 26 May to 3 June (1981, 1983 to 1989). In northern Alberta, first migrants

were generally noted in the fourth week of May (Pinel et al. 1993). No spring aggregations were noted. Alder Flycatchers usually became widespread a few days after first arrival was recorded. Noteworthy records include one giving call notes but not song at Cecil Lake on 26 May 1986 and one in willow thickets along train tracks in eastern Fort St. John on 29 May 1988. Summer: Highest early summer counts were five at the north end of Boundary Lake on 7 June 1986 and five along 5 km of Johnstone Road, Taylor, on 13 June 1982. Six last departure dates ranged from 22 August to 30 August (1982, and 1984 to 1988). Noteworthy records included three at Tea Creek ravine, Grand Haven, on 5 June 1986 and one at St John Creek on 24 August 1986. Autumn: No records.

Breeding: No nests were found although Alder Flycatcher is likely a widespread breeding species. In the vicinity of Dawson Creek, Phinney (1998) found a nest with two eggs on 7 July 1994 and another nest with one egg on 29 June 1995. The latter nest held four recently hatched nestlings on 15 July. These dates complement sightings of fledged young in the North Peace River valley region. Fledglings have been encountered, usually with adults, from 21 July to 13 August. Records included one juvenile at German Lake on 21 July 1985, three adults and three juveniles at 117th Avenue, Fort St. John, on 31 July 1982, two adults feeding four tiny fledglings at the south sewage lagoons in Fort St. John on 2 August 1987, a family of four birds along Peace Island Park Road on 13 August 1988, and two recently fledged young at the south sewage lagoons on 21 August 1985.

Least Flycatcher *Empidonax minimus*

Status: *Fairly common migrant and summer visitor; breeds.*

Williams (1933b) found Least Flycatcher “common” at Moberly Lake in July 1930. Cowan (1939) rated it as the most abundant small flycatcher of the Peace District. Penner (1976) called it a “common summer breeder” in the Peace River valley.

Habitat: Migration and Breeding: Found in young and mature trembling aspen forests. At Charlie Lake, in June 1938, Cowan (1939) found this species most common in climax aspen forests, and much less common in second-growth aspen and second-growth willow thickets interspersed with aspen clumps. Penner (1976) described habitat in the Peace River valley as “open deciduous and mixed forest with a moderately dense understory.” Like Cowan, Phinney (1998) found this species in the Dawson Creek area of the South Peace River region to be most abundant in mature trembling aspen forests and less so in younger stands. In migration, Least Flycatcher shows a slightly broader tolerance for more open habitats such as willow edges around fields than it does when breeding.

Distribution: Migration and Breeding: Found in suitable habitat throughout the southern half of the North Peace River region, but its status as a migrant and as a breeding species is poorly known, especially north of Rose Prairie and about Mile 73 of the Alaska Highway.

Occurrence: Spring: Ten first arrival dates ranged from 10 to 19 May (1978, and 1980 to 1988), with six dates between 13 and 17 May. Penner (1976) gave 9 May as the earliest date for the Peace River valley in 1975. However, Cowan (1939) did not detect the first arrivals at Tupper Creek in the South Peace River region until 18 May 1938. It would be illuminating to know whether this discrepancy of a week between 1938 and 1975 was due to a gradually warming climate with spring temperatures increasing earlier in the season. During some springs in the North Peace River region, this species became widespread very soon after arrival. Least Flycatcher appeared to be most abundant during the final week of May, by which time birds may already have started building nests. A noteworthy record was 10 birds at Beaton Provincial Park on 18 May 1985, three days after first arrival. It was very common at Beaton Provincial Park on 23 May 1981. Early nest-building activity was observed near the confluence of Pine and Peace rivers on 24 May 1987. Summer: Fairly common through June. The species may depart on its southward migration as early as mid-July (Sealy

and Biermann 1983). After about 15 August, this flycatcher is scarce as adults have all migrated south, where they moult, while immatures are still on the breeding grounds and migrate later (S.G. Sealy pers. comm.). Five last autumn dates ranged from 21 August to 2 September. Noteworthy records were one at Beryl Prairie on 17 June 1978, one at Hudson's Hope on 28 June 1980, and one late departing bird at Beaton Provincial Park on 22 August 1985. Autumn: Very scarce after August. Three were seen foraging along 272 Road southwest of Charlie Lake on 2 September 1984.

Breeding: There were eight records of nests with contents and 19 records of adults feeding fledglings. Nests were usually situated in upright crotches of deciduous trees (Figure 7) including trembling aspen (3), willow (1), birch (1), alder (2), and a snag (1). Nest heights ($n=8$) ranged from 2.4 to 8 m. Nest-building was recorded three times between 24 May and 2 June.



Figure 7. The typical location for a Least Flycatcher nest in the North and South Peace River region of British Columbia is the upright crotch of a deciduous tree. Photo by Linda M. Van Damme.

Comments: The most common flycatcher in the North Peace River region, the Least Flycatcher can be detected by the brisk “chebec” call it may utter several times a minute. The Peace River area was the first part of British Columbia where this species was found to occur regularly (Racey 1930). It gradually expanded its breeding range southwards and westwards. By the late 1950s, Least Flycatcher was established in the Cariboo and Chilcotin region and was also spreading northwestwards. By the early 1990s, it had been reported from much of the southern interior of British Columbia (Campbell et al. 1997).

Dusky Flycatcher *Empidonax oberholseri*

Status: *Casual transient.*

The species was not reported by Williams (1933b) or Cowan (1939). Thormin (1973) and Penner (1976) reported the same bird singing 14 miles (22.7 km) downstream from the W.A.C. Bennett Dam, west of Hudson's Hope, on 30 and 31 May 1973.

Occurrence: There were only five records for this study. Spring: A singing bird was seen and its song was compared to commercial tape recordings of Dusky Flycatchers near the confluence of the Peace and Pine rivers in south Taylor, on 12 and 21 June 1988. Summer: An adult and two immatures were identified by calls at Peace Island Park Road on 28 August 1985. Another bird was recorded along 271 Road south of Beaton Provincial Park on 29 August 1985. Autumn: One was recorded along 272 Road southwest of Charlie Lake on 1 September 1985.

Pacific-slope Flycatcher *Empidonax difficilis*

Status: *Rare summer visitor.*

Not previously mentioned by Williams (1933a,b), Cowan (1939), or Penner (1976).

Habitat: Breeding: Mixed and coniferous forests with tall trees and steep topography along rivers and streams. There were two recent records from a trembling aspen forest scattered with white spruce.

Occurrence: The Pacific-slope Flycatcher is a recent arrival in the North Peace River region. It was first recorded in the study area in 1974 (Campbell et al. 1997). On 26 and 27 July 1985, a small aggregation of at least seven or eight singing birds was discovered in the mature mixed forest on the south bank of the Peace River between Lynx Creek and Farrell Creek. Since then, Pacific-slope Flycatcher has been recorded in small numbers at a few locations within 10 km of the Peace River. During the 1990s, trips to the North Peace River region were infrequent and brief, this species appeared to be spreading rapidly to steep, heavily forested areas (Figure 8). It should be noted, however, that Pacific-slope Flycatcher was known to occur in the Pine Pass area since the 1970s and was found east of Chetwynd, at East Pine Park and Coldstream Creek, in 1992. Spring: One notable record is: One at Stoddart “Fish” Creek on 20 May 1993. Summer: Six notable records are one singing at Danish Creek near the bridge on road to Dunlevy Inlet (Williston Lake) on 7 July 1997, one 9 km north of Beryl Prairie on 7 July 1998, one

at Alwin Holland Park, Hudson’s Hope on 7 July 1998, nine along the south bank of Peace River east of Farrell Creek mouth on 21 July 1992, one singing along Peace Island Park Road on 9 July 1997 (Gary Davidson pers. obs.), and one singing at the confluence of Stoddart Creek and Beatton River on 30 June 1998.

Comments: Western Flycatcher (*E. difficilis*) was split into Pacific-slope Flycatcher and Cordilleran Flycatcher (*E. occidentalis*) based upon differences in vocal, morphological and allozyme characters (American Ornithologists’ Union 1989, Lowther 2000). Supposedly, the two forms were reproductively separate. Subsequent investigations in interior British Columbia have suggested that many flycatchers in this region have hybrid characteristics. Recently analysis of multilocus DNA revealed hybridization in a contact zone across southern interior British Columbia and southern Alberta (Rush et al. 2009).



Figure 8. Since its arrival in the North Peace River region in 1974, Pacific-slope Flycatcher has included stands of mature trembling aspen and balsam poplar as its summer habitat *Photo by R. Wayne Campbell, east of Fort St. John, BC, 8 June 2005.*

Eastern Phoebe
Sayornis phoebe

Status: *Uncommon migrant and summer visitor; breeds.*

Williams (1933b) recorded Eastern Phoebe (Figure 9) at five locations in the Peace River District. Cowan (1939) termed this species “abundant” in the Peace River District. Penner (1976) found it a “fairly common summer resident” in the Peace River valley.

Habitat: Migration: Streamside woodlands and lakeshores, trembling aspen woodlands on dry hillsides, and edges of marshes. It is seldom encountered as a migrant in the North Peace River area. Breeding: Deciduous or deciduous-dominated woodland edges and openings, often near water. Eastern Phoebe favours parks in the study area, especially the beach area of Beatton Provincial Park. Other specific habitats include a dry run-off eroded ravine lined by young aspens on a steep south-facing hillside near Beatton River Recreational Area, an eroded earthen lakeshore covered with mixed forest at Charlie Lake, a building in an opening in

an aspen grove at Cecil Lake, and a young balsam poplar forest in Peace Island Park. Wooden bridges, culverts, and farmyards throughout the study area are also frequented.

Distribution: Migration: Seldom encountered, usually arrives directly on breeding grounds. Breeding: Found across the southern half of the North Peace River region from Hudson’s Hope east to the Alberta border.

Occurrence: Spring: Earliest arrival dates (1976, 1978, and 1980 to 1989) ranged from 25 April to 10 May, with eight dates between 25 April and 4 May. Most arrival dates are from traditional breeding sites, which are often sheltered and south-facing, allowing maximum ambient temperatures to be achieved during early spring days. There were no observations of spring aggregations. Eastern Phoebe is widespread by the second week of May. Territorial defense and egg-laying occurs in May. Notable spring arrival dates are one at Hudson’s Hope on 26 April 1986, one near the mouth of Farrell Creek on 27 April 1980, one at Beatton Provincial Park on 29 April 1984, two along Peace Island Park



Figure 9. Eastern Phoebe arrives in the Peace River region of British Columbia in late April and early May and may depart as early as late July with most southward migration occurring during August. *Photo by Linda M. Van Damme.*

Road on 10 May 1983, and one at Fort St. John on 25 April 1987. Summer: See *Breeding*. Southward departure may begin as early as late July. No peak in migration was observed; birds simply disappear. No aggregations larger than three birds were recorded. Latest summer records (1980, and 1984 to 1988) ranged from 20 to 30 August. Notable late records are three at St. John Creek at 101 Road on 21 August 1986 (Michael Force pers. comm.), one at Stoddart “Fish” Creek on 30 August 1985, and one at a ski hill along Peace Island Park Road on 25 August 1988.

Breeding: Sixteen nests were recorded as well as five records of dependent fledged young. Adults defended nest sites as early as mid-May (two in territorial dispute at Beatton Provincial Park on 16 May 1980). Fourteen of 17 nests (82%) were associated with buildings (Figure 10) and three were built under overhangs just below the tops of earthen banks (Figure 11). Nest sites become traditional (Figure 12). For example, a pair of phoebes (not likely the same individuals) built or refurbished a nest in the Beatton Provincial Park picnic shelter at least 10 times and probably annually from 1980 to 1998.

Nests were built atop ridgepoles, rafters, or other horizontal supports inside open buildings or under eaves outside (Figure 13). Nests are cups of mud and straw lined with finer materials. Nests in natural sites blended so well with the surrounding earth of the bank that often it was very hard to determine where the nest stopped and where the bank began.



Figure 10. Most Eastern Phoebe nests in the North Peace River region were located in buildings, often abandoned, either on ledges outside or inside the structure. *Photo by R. Wayne Campbell, Cecil Lake, BC, 24 June 1996.*



Figure 11. Crevices in earthen banks and cliffs along rivers and steep road cuts are used by Eastern Phoebe for nesting. The nest in this photo was located under overhanging vegetation near the top of the cliff. *Photo by R. Wayne Campbell, Beatton River, BC, 23 June 2008.*



Figure 12. At some sites, notably under bridges spanning small and large rivers and creeks, Eastern Phoebe has been known to nest for a decade or more. *Photo by R. Wayne Campbell, Cypress Creek, BC, 27 June 1998.*

Four nests with eggs were found between 30 May and 11 July. In addition, Cowan (1939) reported eggs as early as 12 May 1938 and Phinney (1998) on 25 May in the South Peace River region. Two North Peace River region nests contained four eggs and two contained five eggs, but it is not known whether these were complete clutches. Elsewhere in its range, the Eastern Phoebe lays two to six eggs, with five the mode (Weeks 1994). Nests with nestlings ($n=8$) were found from 5 June (Campbell et al. 1997) to 2 August with five broods recorded between 5 and 24 June. Five records of adults attending fledged, dependent young occurred between 3 and 13 July and represent the period of first broods' post-fledging parental care in the North Peace River region. Four broods, recorded between 20 July and 2 August, probably represent second nestings, as this species is typically double-brooded (Weeks 1994). One fledged chick attended by two adults on 18 August was the latest breeding-related observation.

Brown-headed Cowbird parasitism was not observed although Friedmann (1963) lists Eastern Phoebe as a "very common victim" and cited over 375 records for North America. Rothstein (1975) and Friedmann et al. (1977) further state that Eastern Phoebe is "often parasitized intensely by the Brown-headed Cowbird."



Figure 13. Eastern Phoebe readily uses structures built at oil and gas well sites for nesting throughout the North Peace River region. This nest, just visible in the upper right corner, was placed on a narrow ledge under the eave to the entrance of the structure. *Photo by R. Wayne Campbell, Boundary Lake, BC, 27 June 2002.*

Say's Phoebe
Sayornis saya

Status: *Uncommon spring and autumn transient.*

Williams (1933b) was the first to report Say's Phoebe (Figure 14) in the Peace River District. He recorded birds in mid-May 1922 around Fort St. John and in August 1929 at Hudson's Hope. Cowan (1939) designated it an "uncommon migrant" around Swan Lake in the South Peace River region. Penner (1976) called Say's Phoebe an "uncommon migrant" in the Peace River valley.

Habitat: Migration: Fields, roadsides, and edges along adjacent open areas. There was one record of a bird in an open black spruce muskeg.



Figure 14. Say's Phoebe is a transient species, passing through the North Peace River region in late spring and again in late summer. *Photo by R. Wayne Campbell, Cecil Lake, BC, 27 July 1996.*

Distribution: Migration: Widely distributed across open areas of the North Peace River region from the mouth of the Halfway River east to the Alberta border. It is most frequently encountered in agricultural country around Fort St. John, Charlie Lake, and Cecil Lake.

Occurrence: Say's Phoebe is recorded more frequently in spring than in late summer and early autumn during its southern movement. Spring: Eight first arrival dates (1981 to 1988) ranged

from 28 April to 15 May. Cowan (1939) gave a first arrival date of 20 May 1938 for Tupper. Forty-five years later Phinney (1998) recorded the earliest individual at Dawson Creek on 5 May 1993. The peak of spring migration in the North Peace River region was between 3 and 17 May. The latest spring departure (1981 to 1988) occurred between 8 May and 1 June, with five records between 16 and 26 May. Notable records are two at the south end of Charlie Lake on 28 April 1981, three on the hill north of the Taylor landfill on 15 May 1983, one at north sewage lagoons in Fort St. John on 26 May 1984, and six at Boundary Lake on 17 May 1986. Summer and Autumn: Seven first southbound arrival dates (1980 and 1982 to 1988) ranged from 21 July to 24 August. These records divide into two distinct periods: 21 to 28 July and 18 to 24 August. The peak of southbound movement occurred 19 to 25 August. Dates for final autumn records (1980, 1982, and 1984 to 1988) ranged from 19 August to 5 September. Notable records are one at Cecil Lake on 28 July 1982 (autumn arrival), four at Buick Creek on 18 August 1988, and one in muskeg at German Lake on 5 September 1987, the latest departure date for the study area.

Eastern Kingbird
Tyrannus tyrannus

Status: *Uncommon to fairly common migrant and uncommon summer visitor; breeds.*

Williams (1933b) observed Eastern Kingbird (Figure 15) at Hudson's Hope, East Pine, Dawson Creek, Taylor, and Rolla in 1929 and 1930. Cowan (1939) noted it in small numbers "throughout the district." Penner (1976) listed it as an "uncommon to common" member of the Peace River valley avifauna.

Habitat: Migration: Recorded in a somewhat broader range of habitats than during breeding, including brushy areas and thickets of red-osier dogwood where autumn migrants, sometimes in flocks, consume the berries. Breeding: Cowan (1939) described preferred habitat as "willow thickets bordering lakes and water courses." Campbell et al. (1997) added that this kingbird prefers sites

“with quantities of dead trees and shrubs along the shores...” Similar habitat is found around Beaver ponds along Highway 29 near Watson Slough, around Charlie Lake, the 248A Road marshes, and Cecil Lake, as well as Boundary, German, and Lost lakes. The Eastern Kingbird was also found in drier areas around thickets and trembling aspen edge on south-facing hillsides (breaks) of the Peace River near Bear Flat and also the Beatton River.



Figure 15. Eastern Kingbird is locally distributed throughout the southern portion of the North Peace River region, and often found close to water. *Photo by R. Wayne Campbell, Watson Slough, BC, 23 June 1998.*

Distribution: Migration: More widespread, especially in autumn migration, where it was found at the north and south sewage lagoons in Fort St. John, Baldonnel, Fort St. John airport, and 246 Road northwest of Fort St. John. Breeding: Restricted to the southern quarter of the North Peace River region.

Eastern Kingbird is locally distributed around wetlands (also a few dry sites) from Hudson’s Hope in the west to the Clayhurst area in the east. It also occurs on the south banks of the Peace River north to about North Pine but was not found farther north. Breeding was confirmed at Watson Slough (Figure 16), Charlie Lake, and 251 Road southwest of Cecil Lake.



Figure 16. This productive wetland provides a variety of invertebrates as food, and snags and dense shrubs as nesting sites for Eastern Kingbird. *Photo by R. Wayne Campbell; Watson Slough, BC, 28 June 2002.*

Occurrence: Spring: Eastern Kingbird showed an unusually wide range of arrival dates, primarily because of one exceptionally early sighting, at Charlie Lake Provincial Park, on 9 May 1981. Campbell et al. (1997) reported that early migrants may appear in southern areas of the province in the second week of April but most arrive during the second and third week of May. The first arrival dates for the North Peace River region ranged from 9 to 28 May (1980 to 1989), with eight dates between 19 May and 28 May. Cowan (1939) gave 20 May as the earliest date for Tupper Creek, South Peace River region, and Phinney (1998) as 17 May 1993 for Dawson Creek. Arrivals are generally encountered as singles or pairs. However, a flock of four was seen at the south sewage lagoons on 24 May 1986, that year’s first arrival date. Other noteworthy records were two at St. John Creek at 101 Road 28 May 1978 and two at the north-east corner of Cecil Lake on 28 May 1980. Summer: Southward migration probably begins in

late July. The largest aggregations occurred between 11 and 18 August, with the largest flock of 42 birds around a small farm along Peace Island Park Road on 16 August 1986. Latest “autumn” records ($n=6$) ranged from 23 August to 5 September (see below). Noteworthy summer records were one 7.5 km north of Beryl Prairie on 7 July 1998, 10 kingbirds along 2 km of Old Hudson’s Hope Road east of Bear Flat on 5 July 1997, and a migrant along Swanson Lumber Road in Fort St. John on 28 August 1984. Autumn: Two records, one at Charlie Lake on 2 September 1984 and one along 103 Road in Beatton River valley on 5 September 1987.

Breeding: There were six records of nests and another record of adults tending fledglings. Five nests were situated on snags (Figure 17) or dead bushes or trees over water. Heights above water were 0.1, 0.5, 0.6, 2.6, and 3.0 m. One nest, located about one km from a wetland, was placed in a broken snag, 6.0 m above the ground, in a brushy clearing in second-growth trembling aspen forest. Four wetland nests were placed in dead deciduous trees (trembling aspen, balsam poplar, and willow) and another in a dead white spruce sapling.



Figure 17. Eastern Kingbird often builds its nest in crevices or the top of snags surrounded by water. Photo by R. Wayne Campbell, Near Fort St. John, BC, 26 June 2004.

Nest-building was noted on 12 June 1983 at Charlie Lake and 15 June 1986 near Watson Slough. Dates for eggs from literature are 10 June 1962 at Fort St. John and 7 July 1973 at Fort St. John (Campbell et al. 1997) and 21 June 1994 and 24 June 1992 at Dawson Creek (Phinney 1998). Unfledged young were seen on 1 July 1993 (three in nest near Watson Slough) and four downy young in a nest at the same site on 5 July 1997. In addition, two young tended by adults were seen on 28 July 1981 near the mouth of the Halfway River.

Comments: The Eastern Kingbird is a Neotropical migrant, departing its North American breeding areas in August and September and migrating to Amazonia where most individuals gather in flocks to forage on fruit (Murphy 1996).

SHRIKES

Northern Shrike *Lanius excubitor*

Status: *Uncommon migrant and very uncommon winter visitor.*

Williams (1933 a,b), Cowan (1939), and Penner (1976) did not record the Northern Shrike because their field work took place from mid-spring through summer.

Habitat: Migration and Winter: A bird of open habitats and brushy edges of agricultural fields, cattail marshes, large clearings in forests, muskegs, lakeshores, and open roadsides along highways. It frequently is seen around farmyards and towns including yards with bird feeders, grain elevators, and shrubby-edged sewage lagoons.

Distribution: Migration: Found throughout open areas of the entire North Peace River region; often perched atop bushes and small trees (Figure 18). Winter: Recorded at Hudson’s Hope, along Highway 29 near the mouth of the Halfway River, and along Upper Cache Road. It was most frequently seen around Fort St. John, Montney, North Pine, and Rose Prairie, as well as Taylor, Cecil Lake, and Flatrock.



Figure 18. Most Northern Shrike records were obtained while scanning open habitats with patches of tall shrubs and clumps of small deciduous trees. *Photo by R. Wayne Campbell, south of Fort St. John, BC, 10 November 1996.*

Occurrence: Spring: A definite movement begins in the fourth week of March with numbers peaking between 5 and 24 April. The highest single-day count during spring migration was 31 birds during a shrike survey of the North Pine-Montney area on 18 April 1982. Notable large numbers are 10 shrikes between Cecil Lake and Clayhurst on 5 April 1981 and 17 birds between North Pine and Cecil Lake on 17 April 1982. The final spring record for 1982 was three shrikes around Hudson's Hope on 24 April. Autumn: Ten early autumn arrival dates (1978, and 1980 to 1988) ranged from 17 September to 11 October, with seven dates between 23 September and 5 October.

In their compilation of Alberta passerines from 1971-1980, Pinel et al. (1993) reported that Northern Shrike first appeared in Alberta between 23 September and 13 October, which is generally within the period for the North Peace River region.

Notable autumn records are one at a Fort St. John apartment building at dusk on 2 October 1978 and one at Beatton Provincial Park on 11 November 1980. There was no definite peak in autumn migration. The highest numbers recorded in a single autumn day was two birds on at least eight different occasions. Winter: Records are scattered through December, January, and February. Shrikes often appeared at bird feeders where they chased Black-capped Chickadees and House Sparrows. On 22 January 1984, a Northern Shrike was seen killing a House Sparrow at a feeder along 104 Avenue in Fort St. John (Joan Johnston pers. comm.).

VIREOS

Blue-headed Vireo *Vireo solitarius*

Status: *Uncommon migrant and summer visitor; breeds.*

Not found by Williams (1933a,b). Cowan (1939) designated this species "uncommon" in the Peace District. Penner (1976) called it "fairly common" along the Peace River valley. In British Columbia, Blue-headed Vireo occurs regularly only in the Boreal and Taiga plains ecoprovinces (Campbell et al. 1997).

Habitat: Migration: Similar forest types as "Breeding", as well as thickets around open areas. Breeding: Found in mixed woodlands where stands of conifers occur where it nests and forages extensively (James 1998). In the North Peace River region, Blue-headed Vireo occurs in old-growth white spruce with mature trembling aspens (*e.g.*, Fish Creek; Figure 19), balsam poplars with white spruce (*e.g.*, Peace Island Park Road and Beatton Provincial Park), trembling aspen-balsam poplar forests with scattered white spruce (*e.g.*, Alwin Holland Park and Upper Cache Road), and young lodgepole pine stands with willow thickets (*e.g.*, several kilometres east of Buick Creek).



Figure 19. Blue-headed Vireo, a breeding species restricted to northeastern British Columbia, frequents a variety of mixed woodlands including old-growth white spruce. *Photo by R. Wayne Campbell, near Hudson's Hope, BC, 23 June 1998.*

Distribution: Migration and Breeding: Distributed in mixed coniferous and deciduous woodlands across the southern third of the North Peace River region.

Occurrence: Spring: Ten first arrival dates (1980 to 1989) ranged from 10 to 23 May, with eight dates between 13 and 19 May. The highest spring count was of five birds along Peace Island Park Road on 18 May 1985, also the day of spring arrival that year. No flocks were encountered. Summer: This species may begin pair formation and nesting very soon after arrival in mid-May since a parent with dependent fledglings was seen 11 July near Cecil Lake. In the South Peace River region, Phinney (1998) reported a nest with one egg and three recently hatched chicks on 17 June 1993. The time of autumn departure overlaps between August and September. Autumn: Seven late departure dates (1975, 1982, and 1984 to 1988) ranged from 21 August to 7 September, with five dates between 1 and 7 September. The single highest late season counts were three at Beaton Provincial Park on 14 August 1986 and 20 August 1988.

Breeding: No nests were found in the North Peace River region, although the Blue-headed Vireo undoubtedly breeds. See Occurrence: Summer and Autumn above. Typical nests are suspended cups built in the tops of coniferous shrubs or near ends of branches of older trees, two to five m above the forest floor (James 1998).

Warbling Vireo *Vireo gilvus*

Status: *Fairly common migrant and summer visitor; breeds.*

Cowan (1939) found Warbling Vireo (Figure 20) to be the most abundant vireo in deciduous woodlands of the Peace River District. Penner (1976) called it a “fairly common summer resident” along the Peace River valley.

Habitat: Migration: Similar to *Breeding* but also occurred in a wide range of brushy and more open situations such as treed backyards, edge thickets,

and patches of willow scrub. Breeding: Recorded in various forest types including mature balsam poplar floodplain forest (*e.g.*, south Taylor), trembling aspen groves within lodgepole pine and white spruce forests (*e.g.*, Mile 73, Alaska Highway), trembling aspen and balsam poplar forests (*e.g.*, Beaton Provincial Park; Figure 21), and trembling aspen forest on south-facing hillsides (*e.g.*, Bear Flat). In Alberta, Warbling Vireo inhabits the margins of riparian black cottonwoods, poplar bluffs, trembling aspen groves, and more rarely, mixed-woodlands (Salt and Salt 1976).



Figure 20. Warbling Vireo is the most common and widely distributed vireo in British Columbia, including the North Peace River region. *Photo by Mark Nyhof.*

Distribution: Migration and Breeding: Widely distributed throughout the North Peace River region.

Occurrence: Spring: Thirteen first spring arrival dates (1976 to 1978 and 1980 to 1989) ranged from 2 to 17 May, with eight records between 10 and 15 May. Cowan (1939) first recorded the species on 18 May 1938 at Tupper Creek. Phinney (1998) gave an early arrival date of 30 April 1992 for the Dawson Creek area. In the North Peace River region, peak spring movement occurred between 17 and 28 May. Highest counts along 0.5 to one km of woodland roads revealed peaks of four to 18 singing birds during this period. Notable records included birds frequently singing at Hudson’s Hope on 15 and 16 May 1976, two at Kin Park in Fort St. John on 21 May 1982, two at Boundary Lake on 24 May 1982,

and five along Peace Island Park Road on 21 May 1983. **Summer:** Breeding activities dominate June and early July. Southbound migration probably begins in late July and early August. Final autumn departure dates overlap between late August and early September. Notable records are three at Fish Creek on 17 June 1983, one chased Yellow Warblers at Beaton Provincial Park on 12 July 1983, one heard at Mile 115 Alaska Highway on 23 June 1984, and one juvenile at St. John Creek on 14 August 1986. **Autumn:** Six last autumn dates (1982 and 1984 to 1988) ranged from 23 August to 5 September. High single site counts for southbound migration numbered five or fewer birds. The latest departure date was a single bird at Boundary Lake on 5 September 1987.



Figure 21. Mixed forests of trembling aspen, scattered with spruce and balsam poplar trees, are one of the many mixed forest types used by Warbling Vireos. Photo by R. Wayne Campbell, Beaton Park, BC, 21 June 1996.

Breeding: The Warbling Vireo undoubtedly breeds throughout the North Peace River region, but no actual nests were discovered. Other breeding evidence, however, included one adult feeding another (courtship feeding?) on 11 June 1980 at km 1.6 of Johnstone Road, south Taylor; an adult feeding a fledgling on 2 July 1998 at Blackfoot Park, Clayhurst; and an adult feeding two fledglings at km 5 of Johnstone Road, south Taylor on 24 July 1982.

Comments: The subspecies occurring in the North Peace River region is Western Warbling Vireo (*swainsonii* group) following Voelker and Rohwer (1998).

Red-eyed Vireo *Vireo olivaceus*

Status: *Uncommon to fairly common migrant and summer visitor; breeds.*

Not listed by Williams (1933b). Cowan (1939) considered this vireo “not common” throughout the Peace District. Penner (1976) called it a “fairly common summer resident” along the Peace River valley.

Habitat: **Migration:** Similar to *Breeding* but also includes brushy thickets and willows. **Breeding:** Found in a variety of forest types including mature balsam poplar floodplain forest (e.g., Peace Island Park Road), trembling aspen mixed with balsam poplar (e.g., Charlie Lake), mature trembling aspen and white spruce (e.g., Stoddart “Fish” Creek), mixed woodlands (e.g., Johnstone Road, south Taylor, and Watson Slough), and young trembling aspen woodlands (e.g., above Bear Flat).

Distribution: **Migration** and **Breeding:** Widespread throughout the North Peace River region.

Occurrence: **Spring:** Nine first arrival dates (1981 to 1989) ranged from 19 May to 1 June, with five records between 22 and 27 May. High counts included 10 along Peace Island Park Road on 28 May 1988 and 4 June 1989. Notable records are one at Beaton Provincial Park on 19 May 1985 (early spring arrival); one at Peace Island Park Road, south

Taylor, on 20 May 1988; five along Peace Island Park Road on 25 May 1985; and one at Montney Centennial Park, north of Charlie Lake, on 30 May 1982. **Summer:** See *Breeding*. Southbound migration may begin as early as late July. A peak movement occurred about mid-August; the two highest counts were 19 birds along Peace Island Park Road and 18 along the same road on 13 August 1988. Notable records are 17 along Peace Island Park Road on 9 July 1997, eight from kilometre 0 to 3 of Upper Cache Road on 5 July 1997, and one at Boundary Lake on 30 August 1982. **Autumn:** Seven final autumn dates (1975, 1982, and 1984 to 1988) ranged from 28 August to 4 September. Notable late records are one along Peace Island Park Road on 4 September 1988 and one along Peace Island Park Road on 2 September 1984.

Breeding: No actual nests were found but Red-eyed Vireo probably nests locally throughout the North Peace River region. There were three records of adults feeding fledglings: One adult and one fledgling were seen at km 5 on the Johnstone Road on 24 July 1982 and 29 July 1982 and one adult with a fledgling just out of the nest was observed near the ski hill along Peace Island Park Road on 9 July 1997. Near Dawson Creek, in South Peace River region, Phinney (1998) found an empty nest on 15 June 1993; on 26 June it contained three vireo eggs and later two Brown-headed Cowbird eggs.



Figure 22. Nearly one-quarter of all Red-eyed Vireo nests reported in British Columbia were parasitized by Brown-headed Cowbird. *Photo by R. Wayne Campbell.*

Comments: The Red-eyed Vireo is a frequent host for the Brown-headed Cowbird in British Columbia. Of 35 nests found in the interior, nine (26%) contained at least one cowbird egg (Campbell et al. 1997; Figure 22).

Philadelphia Vireo *Vireo philadelphicus*

Status: *Rare to occasionally uncommon migrant and summer visitor; breeds.*

Not recorded by Williams (1933b). Philadelphia Vireo was first recorded in British Columbia by Cowan (1939) who secured a specimen at Tupper Creek on 21 May 1938 and a male from a nest-building pair at St. John Creek on 9 June 1938. He described the species as “rare.” Penner (1976) also described it as “rare” along the Peace River valley, giving one observation of a singing male along the river 22.5 (14 miles) downstream from the W.A.C. Bennett Dam. The location was also given in Thormin (1973).

Habitat: Migration: Brushy woodland edges and thickets. Breeding: Found in a variety of forest types and different age stands. Primarily inhabits early-to-mid-successional deciduous woodlands and woodland edges (Figure 23), trembling aspen parklands, and shrub thickets. Favoured tree species in North America include trembling aspen, birches (*Betula*), alder (*Alnus*), and ash (*Fraxinus*) (Moskoff and Robinson 1996). In the North Peace River region, Philadelphia Vireo was found in alder edge along a one lane forest road at the edge of a mature mixedwood forest dominated by middle-aged balsam poplars off Johnstone Road. Other breeding season observations are from a mature trembling aspen grove on Johnstone Road and in willows and shrubby birches around a pond in a wet poplar-spruce-tamarack swamp at Cameron Lakes south of Hudson’s Hope.

Phinney (1998) described the species’ habitat as pole-stage to mature trembling aspen and balsam poplar woodland with the bird occasionally wandering to other forest ages and types. See Enns and Siddle (1996), Campbell et al. (1997), and Cooper et al. (1995) for additional habitat descriptions.



Figure 23. The primary breeding habitat for Philadelphia Vireo includes deciduous forests, especially at the edge of pole-stage to mature trembling aspen forests. *Photo by R. Wayne Campbell, 25 June 1996.*

Distribution: Migration: This species may occasionally be found in mixed migrant flocks of warblers and other vireos. It is uncommonly encountered across the study area. Breeding: Poorly known. Philadelphia Vireo is locally distributed across the southern third to mid-North Peace River region.

Occurrence: Spring: Two arrival sightings (as opposed to heard-only records) were 25 May 1986 and 22 May 1989. These dates, in addition to the aural records of 17 May 1980 and 18 May 1985, suggest the Philadelphia Vireo arrives during the third week of May. Phinney (1998) gave an early arrival of 21 May 1994 for the Dawson Creek area. In

Alberta, arrival dates for 1971 to 1980 were between 12 and 26 May (Pinel et al. 1993). No peak in spring migration was noted in the North Peace River region. Notable spring arrival records include one at Peace Island Park Road on 22 May 1989 and one at Beaton Provincial Park on 25 May 1986. Summer: Southbound migration began in early August. The earliest observation of a possible migrant was of a single bird at St. John Creek near 101 Road on 8 August 1986. The highest single-site count was of four on 28 August 1984 near Peace Island Park. Five last autumn dates (1984 to 1988) ranged from 22 August to 6 September. In Alberta, autumn migration begins in mid-August with stragglers lingering until the first week of September (Salt and Salt 1976).

Notable records include two adults in young trembling aspen woods between Alaska Highway and south Charlie Lake south of Highway 29 turn-off on 9 June 1983 (Colin Butt and Michael Force pers. comm.), one on the west side of Boundary Lake on 13 June 1983 (Michael G. Shepard pers. comm.), one in the lower canopy of mixed forest at km 5 along Johnstone Road on 13 June 1982, two at km 6.4 along Johnstone Road on 15 June 1980, one seen well at Hudson's Hope during last week of August 1979, and two at St. John Creek near 101 Road on 22 August 1986. Autumn: Notable late autumn records include one at the south end of Cecil Lake on 2 September 1984; one at the bottom of Taylor ski hill, Peace Island Park Road, on 4 September 1988; and one at Peace Island Park on 6 September 1987.

Breeding: No nests were found in the North Peace River region. The only breeding evidence was an observation of two presumed adults feeding a "bob-tailed" fledgling about km 6 of Johnstone Road on 23 July 1981. In the South Peace region, two nests have been reported. The first was about 1.5 m high in a trembling aspen at the edge of a mature aspen forest along Road 1 between Tupper and Pouce Coupe on 28 June 1984 (Mike Force pers. comm.). It was a typical vireo's pendent nest suspended between two twigs high in the canopy. The adults were observed exchanging incubation duties. The second nest held three newly hatched chicks on 30 June 1993 (Phinney 1998).

JAYS, MAGPIES AND CROWS

Gray Jay

Perisoreus canadensis

Status: *Uncommon resident; breeds.*

Williams (1933b) recorded Gray Jay (Figure 24) as common throughout the Peace District. Cowan (1939) gave it no status but described the Gray Jay as “scattered widely” over the District. Penner (1976) called it a “common permanent resident” of the Peace River valley.

Habitat: Breeding: Mixed and coniferous woodlands, as well as black spruce muskegs. It is most frequently encountered in pure coniferous forests or deciduous forests with coniferous stands. During the non-breeding seasons, Gray Jay travels into trembling aspen forests. It occasionally visits bird feeders and the edges of suburban Fort St. John.

Distribution: Occurs throughout forested parts of the North Peace River region.

Occurrence: Spring: Nesting-building was noted in March. Fledglings with parents were seen from late

April to late May. Notable records include four at Rose Prairie on 12 March 1983 and two mobbed a Great Gray Owl along Peace Island Park Road on 4 April 1982. Summer: Often seen searching for the nests of smaller birds for eggs and nestlings. Notable records include a juvenile attacked by a Blue-headed Vireo at Beaton Provincial Park on 2 June 1984 and an adult and a juvenile hunting for nests along St. John Creek near 101 Road on 6 July 1976. Autumn: Often observed in small groups at a food source. Notable records include one at Hudson’s Hope on 29 October 1978 and eight at Boundary Lake on 1 November 1981. Winter: Notable records include three along 22 km of Upper Cache Road on 3 January 1983 and 12 along the first 13 km of Upper Cache Road on 12 February 1983.

Breeding: The Gray Jay is well known as an early nester. There is one record of a pair building a nest and nine records of recently fledged young begging from their parents. These records occurred between 21 April and 24 May. Nest-building in a white spruce was seen northwest of Charlie Lake on 15 March 1978 (Ed Zolinski pers. comm.). A nest found in the South Peace River region contained three eggs on 25 April and feathered nestlings on 11 May (Phinney 1998).



Figure 24. Throughout the North Peace River region, the subspecies of Gray Jay (*P. c. albescens*) is lighter overall than the darker coastal race with intermediate plumages being reported. *Photo by R. Wayne Campbell.*

Steller's Jay
Cyanocitta stelleri

Status: *Very rare, mostly in autumn and winter.*

Not recorded by Williams (1933a), Cowan (1939), or Penner (1976).

Habitat: Year-round: Mixed woodlands especially along the Peace River. Also reported at feeders near Stoddart Creek in Fort St. John where they were placed close to a thick young white spruce and trembling aspen forest.

Distribution: Found most frequently around bird feeders in Hudson's Hope and Fort St. John. Four of six records were from bird feeders.

Occurrence: Only six records this study period. Spring: One record of a bird along 281 Road off Highway 29 west of Charlie Lake on 6 March 1988. Likely the same individual was observed in the same area on 17 and 18 October 1987. Autumn: Four of six records occurred in late September and October, suggesting an eastwards movement some years from the Rocky Mountains. One was along 281 Road west of Charlie Lake on 17 and 18 October 1987, one was seen about 3 km east of North Pine on 26 October 1985, one regularly visited a feeder at Stoddart Creek in Fort St. John from 28 September to 26 March 1984, and one was present at Matthews Park in Fort St. John from 28 to 30 October 1987. Winter: Two at a Hudson's Hope feeder from December 1983 through February 1984 and one at Stoddart Creek in Fort St. John on 19 December 1987.

Blue Jay
Cyanocitta cristata

Status: *Uncommon resident; breeds.*

Neither Williams (1933a,b) nor Cowan (1939) encountered this species. Penner (1976) assessed it as a "rare resident" in the Peace River valley, giving eight records for the period 1973 to 1975, all obtained during fieldwork in the months of May and June.

Campbell et al. (1997) documented the arrival and expansion of the Blue Jay into British Columbia's Peace River country. The species probably expanded its range into northern Alberta, reaching Alberta's Peace River country during the 1950s (Salt and Wilk 1958) and some time later crossed into British Columbia. The earliest record for British Columbia was of five birds seen at Flatrock, northwest of Clayhurst, on 30 October 1951. The next reports were made by biologists studying the fauna of the Peace River valley during the 1970s. By the mid-1970s, Blue Jay appeared to be quite uncommon along the Peace River.

I arrived in Fort St. John in 1975 but did not encounter Blue Jay until 1979, which suggests that the species was still fairly local during the late 1970s. Ruth Ann and Bob Darnall (pers. comm.) reported that beginning in 1976, Blue Jays appeared regularly on their farm just north of Fort St. John. These were confirmed in the winter of 1982 when several jays regularly visited their feeders. Ruth later reported at that time that two families of Blue Jays used the feeder each summer. During the 1980s and 1990s, Blue Jay began to appear across the southern parts of the upland north of the Peace River. Their presence was being noted more often in the North Peace River region. In 1981 there were six records, in 1984 21 records, and in 1988 the number more than doubled to 50 records. The Blue Jay was quickly spreading and establishing itself throughout the study area.

Habitat: Year-round: Found around mixed coniferous and deciduous forests where they foraged. It also frequented human settlements, farm yards, and residential areas, especially with bird feeders.

Distribution: Recorded across the southern quarter of the study area. There were no records north of Montney and North Pine.

Occurrence: Spring: Notable records include a pair reacting to taped calls at Stoddart Creek in Fort St. John on 25 March 1984, a pair in mixed woods at the mouth of the Halfway River on 9 April 1982, two at Boundary Lake on 6 May 1984, one at Stoddart

“Fish” Creek in Fort St. John on 11 May 1982, one at km 4 along Johnstone Road on 15 May 1983, and two along Peace Island Park Road on 24 May 1986. **Summer:** See *Breeding*. Notable records include one flying across 103 Road about 2 km east of the Cecil Lake Post Office on 25 July 1982 and one at the north sewage lagoons in Fort St. John on 17 August 1984. **Autumn:** No flocks larger than five birds were seen and no obvious migrant flocks were recorded. At least some Blue Jays remained in the same locations apparently year-round. Notable records include one at Kin Park in Fort St. John on 7 September 1980, four at Hudson’s Hope on 8 September 1979, two at a wooded swamp at Two Rivers on 2 October 1982, five at Ruth and Bob Darnall’s feeder on the north side of Stoddart Creek in Fort St. John on 28 November 1882, one at Flatrock on 9 October 1982, three at Stoddart “Fish” Creek on 18 October 1986, and one at Montney on 27 October 1981 (Greg Saxon pers. comm.). **Winter:** Notable records include one at Stoddart “Fish” Creek in Fort St. John on 2 December 1979; one in a granary at Montney on 8 December 1981 (Greg Saxon pers. comm.); three at Darnells’ feeder at Stoddart Creek, north of Fort St. John, on 5 December 1982; 12 on the North Pine Christmas Bird Count around Fort St. John on 27 December 1986; three at Stoddart Creek in Fort St. John on 1 January 1984; and one at km 1 along the Upper Cache Road on 19 February 1983.

Breeding: No nests with contents were found. Fledglings with parents have been seen on a few occasions. Notable records include: two adults with three flying young and another in pin feathers were discovered at Cecil Lake on 16 July 1986 (Campbell and Petrar 1986), newly fledged young visited the Darnells’s feeder on the north side of Stoddart Creek on 6 July 1988, an adult with five short-tailed fledglings were at Beatton Provincial Park on 10 July 1997, and a family with at least three well-grown fledglings were in the same location on 30 June 1998.

Black-billed Magpie *Pica hudsoni*

Status: *Uncommon to fairly common resident; breeds.*

Neither Williams (1933b) nor Cowan (1939) saw Black-billed Magpie (Figure 25). However, Cowan noted that Ted Morton of Charlie Lake had seen individual birds occasionally during the 1930s and later had written to Cowan of a bird found along Morton’s Halfway River trap line in January 1939. The species spread into the Peace River area in the 1940s (Campbell et al. 1997) and was known to nest near Fort St. John in the 1960s. By 1975, Black-billed Magpie was an uncommon to locally common resident. Penner (1976) called it a “common resident” in the Peace River valley during spring and early summer fieldwork of 1973 and 1974.



Figure 25. Black-billed Magpie, now resident in the North Peace River region, was unknown in the area until the 1940s. *Photo by R. Wayne Campbell.*

Habitat: Nonbreeding: Forages along rivers, lake shores, around wetlands, in cities, around farms, ranches, edges of trembling aspen groves, fields, and brushy hillsides. This species is generally a bird of open habitats. Breeding: Nests in thickets of willow and trembling aspen in or adjacent to semi-open country.

Distribution: Most frequent in agricultural areas of the southern half of the study area, but also occurs in open land and around human settlements past the northern limit of the North Peace River region.

Occurrence: Spring: Magpies begin forming pairs in early March and some are already refurbishing nests towards the end of the month. Most egg-laying likely occurs in April and May. Notable records are one at the Hudson's Hope landfill on 5 May 1979, a pair at the south end of Charlie Lake around the marsh on 8 May 1976, and nine at Montney on 18 April 1982. Summer: Large flocks of adults and juveniles, from 10 to 60 birds, appeared in July and early August. In some cases birds may have aggregated near a food source, as on 3 July 1976, when 50 birds were at the Taylor landfill. Notable records are a family of one adult and three or four juveniles at Lynx Creek on 1 July 1998, two at Prespatou on 3 July 1998, and two adults chasing a small accipiter in a ravine at Tea Creek, Grand Haven, on 15 June 1983. Autumn and Winter: Magpies are hardy, withstanding temperatures at least as low as minus 40° C. They scavenge small and large animal carcasses, often among Common Ravens and Bald and Golden eagles. For example, four fed on an illegally discarded Moose (*Alces alces*) head at the north sewage lagoons in Fort St. John on 7 September 1986. Two fed on a dead Beaver at Cecil Lake on 27 April 1986. Magpies usually form the outer ring of scavengers, behind Common Ravens, and Bald and Golden eagles around a carcass (Figure 26). Notable records are four at Buick Creek on 27 September 1980, one at Boundary Lake on 11 November 1981, two at km 22 of Upper Cache Road on 16 January 1983, and nine in flock at Fort St. John on 5 January 1984.



Figure 26. Vehicle-killed mammals, like this Mule Deer, attract scavenging Black-billed Magpies throughout the year. *Photo by R. Wayne Campbell.*

Breeding: The large bulky stick nests built in the centre of willows, and occasionally other shrubs and saplings, are especially visible in the North Peace River country in winter (Figure 27). Nests are usually domed with sticks and twigs, having, as country children will point out, a “front door and a back door.” The earliest fledgling was seen near North Pine on 21 May 1980. Shorter-tailed juveniles, with attendant adults, were seen until late July. In the South Peace River region, where nests were investigated more thoroughly, eggs were laid between late April and early May, with an average clutch of 6.5 eggs. Hatching occurred in mid-May. The average brood size was 4.2 young at fledging. The number of nests sampled was not given (Phinney 1998).



Figure 27. During the spring and summer breeding season, Black-billed Magpie nests are surprisingly well hidden. In autumn and winter, they become more visible. *Photo by R. Wayne Campbell.*

Comments: The Black-billed Magpie is not protected by federal or provincial laws in Canada. In the first half of the twentieth century, thousands of magpies were shot for bounty in southern British Columbia (Campbell et al. 1997). During this study, many North Peace River region residents expressed negative attitudes toward magpies, considering them predators of “more desirable” songbirds and their eggs. Landowners often complained that “their” populations of songbirds around the farm or ranch were being decimated by magpies, and yet failed to understand that their own efforts at land-clearing, pesticide applications, wetland drainage, and allowing domestic cats to hunt outdoors were far more effective in decreasing species diversity and local population levels of native species.

American Crow *Corvus brachyrhynchos*

Status: *Uncommon to occasionally common migrant and uncommon summer visitor; breeds.*

Williams (1933b) called the American Crow (Figure 28) “occasional to rare” in wilder parts of the Peace River District in 1922 and 1930. He predicted that it was likely to increase with settlement. Cowan (1939) designated it “abundant” around Swan Lake and Charlie Lake in 1938 and reported five nests at the former location. Penner (1976) called it a “fairly common summer resident” of the Peace River valley.



Figure 28. In the North Peace River region, American Crow is a highly migratory species, unlike its year-round status across southern British Columbia. *Photo by R. Wayne Campbell.*

Habitat: Migration and Breeding: found along the shores of the Peace River (Penner 1976) and in groves around farms and agricultural land. It also frequented marshes and shallow lakes. Aggregations occurred at landfills and small numbers frequented school yards.

Distribution: Migration and Breeding: Found throughout the North Peace River region. This species appeared to be most common in agricultural regions.

Occurrence: Spring: Eight first arrival dates (1981 to 1988) ranged from 16 March to 28 March. From 1977 to 1980 arrival dates ranged from 7 to 13 April, but it is not clear whether these dates reflected birding effort in the late 1970s or delayed arrivals due to colder, longer winters. During spring migration flocks of five birds or fewer were the norm. A crow census of North Pine-Montney on 18 April 1982 resulted in seven sightings of individuals or groups, with an average flock size of three. The largest flock around Fort St. John was of 20 birds gathering to roost near the British Columbia Rail Depot on 22 April 1985. Spring migration peaked around mid-April. By mid-April local crows appeared to be paired and on territory. Notable records include four at Alwin Holland Park, Hudson’s Hope, on 14 April 1979, 12 at 248A Road marshes, North Pine, on 18 April 1987, 12 at the north sewage lagoons in Fort St. John on 28 April 1988, and 50 at Hudson’s Hope landfill on 5 May 1979. Summer: Following nesting and fledging of young, crows form flocks that became noticeable by late July through August. Numbers build through August. Notable records include four at Site One Dam, west of Hudson’s Hope, on 7 July 1998 and 60 along Peace River at Farrell Creek on 18 August 1986. Autumn: Most crows have departed the North Peace River region by the end of September. Eight final autumn records (1981 to 1988) ranged from 5 to 23 October, with a straggler on 14 November 1978 at Fort St. John. Notable records are 50 at Charlie Lake on 11 September 1988 and 10 at Grand Haven landfill on 11 October 1987. Winter: A flock of 13 crows overwintered in Fort St. John from December 1980 to March 1981, the only winter occurrence. Similar

over-wintering was also occasionally noted around settlements in the Peace River region of Alberta during the 1970s (Pinel et al. 1993).

Breeding: Breeding evidence is scanty for the North Peace River region, although American Crow undoubtedly is a regular breeder (Figure 29). Data from the South Peace River region is clearer. Phinney (1998) found a nest with five eggs on 5 May 1992 (fledged young in mid-June) and another with four eggs 26 May 1994. Cowan (1939) found a nest at Swan Lake with five eggs on 8 May 1938. In the North Peace River region, two adults with two begging fledglings were observed near the north sewage lagoons in Fort St. John on 4 July 1997.

Cowan (1939) found his nests in the tops of willows along the shore of Swan Lake.



Figure 29. A good time to locate American Crow nests is during the year when leaves have fallen and nests stand out. The sites can be checked for activity the following spring. *Photo by R. Wayne Campbell, Fort St. John, BC, 11 November 1996.*

Common Raven *Corvus corax*

Status: *Uncommon resident; probably breeds.*

Williams (1933b) listed a single sighting at Fort St. John on 13 May 1922. Cowan (1939) also encountered one bird at Tupper Creek on 20 May 1938. Penner (1976) called the raven “fairly common” in the Peace River valley.

Habitat: Nonbreeding: Wilderness of most types, ranches, farms, sanitary landfills (Figure 30) and dumps, and other human settlements as well as open agricultural country. Breeding: Mature forests, rock and sandstone cliffs, industrial sites, residential areas, parks, and logging burns (Campbell et al. 1997).



Figure 30. During the nonbreeding season, Common Raven is an opportunistic forager often taking up residence at sanitary landfills. *Photo by R. Wayne Campbell.*

Distribution: Nonbreeding: Throughout the North Peace River region. Breeding: Locally distributed mainly in the vicinity of Bear Flat, cliffs along east side of Charlie Lake, Beatton River valley, Cecil Lake, and Boundary Lake.

Occurrence: Spring and Summer: Generally became much scarcer than in winter, probably due to breeding activities. Notable records include six at Hudson’s Hope landfill on 21 February 1976, 10 riding up-drafts over Holiday Inn in Fort St. John on 1 March 1987, six mobbing a Red-tailed Hawk over

the Beatton River near 103 Road to Cecil Lake on 11 April 1982, three foraging in mice-infested fields at Cecil Lake on 24 April 1983, one at Boundary Lake on 13 May 1984, and two at cliffs on east side of Charlie Lake on 21 June 1980. A family of five was also seen at Boundary Lake on 4 July 1998. Autumn and Winter: There was a noticeable increase of ravens in the southern parts of the North Peace River region in late October. Ravens remained conspicuous and fairly common around Fort St. John each winter (Figure 31). Schoolyards and back alley dumpsters were well patrolled. Once, when a multi-storied hotel was built downtown, small parties of ravens used the updraft created by prevailing winds to play and patrol the area. Notable records include 25 with an immature Golden Eagle in a field north of the Charlie Lake on 11 November 1982, four feeding on discarded lunches at Doctor Kearney High School in Fort St. John on 21 November 1975, nine at Boundary Lake on 11 November 1981, 10 at Buick Creek on 25 January 1981, and 20 at the Montney landfill on 30 January 1983.

Breeding: No actual nests were located for the main study period (1975 to 1989). Adults attending

begging fledglings were observed four times between 25 June and 7 July. In the Dawson Creek area, Phinney (1998) saw five large chicks in a nest at Noel Creek on 12 May 1992 and a group of dependent fledglings near Dawson Creek on 2 July 1993.

Comments: Aggregations of ravens gather at food sources, including dead livestock (mainly horses and cows) or game carcasses such as Mule Deer and Moose. Bald Eagles, Golden Eagles, Black-billed Magpies, and Gray Jays join such gatherings. On 4 September 1988, 30 Common Ravens were observed eating from a dead Moose at km 2 of the Upper Cache Road. Smaller carcasses are also attended. During 1980, when Snowshoe Hares (*Lepus americanus*) were at the peak of their population cycle, ravens were frequent along the Alaska Highway and Highway 29 feeding on hares killed by collisions with vehicles. Flocks of ravens also form at landfills throughout the region. The largest flock away from a landfill was of 70 associated with a herd of Hereford cattle at km 21 along the Upper Cache Road on 19 February 1983.



Figure 31. Roosting Common Ravens silhouetted on white snow is a common sight in the North Peace River region. Photo by R. Wayne Campbell, Fort St. John, BC, 12 November 1996.

LARKS

Horned Lark *Eremophila alpestris*

Status: *Rare to very rare transient.*

Williams (1933b) recorded Horned Larks north of Fort St. John and on the Blueberry River on 17 and 20 May 1922 and at Nig Creek on 24 May 1922. Cowan (1939) recorded one with Lapland Longspurs at Tupper Creek, South Peace River region, on 6 May 1938. Penner (1939) did not record the species in the Peace River valley.

Habitat: Migration: Open fields and grassy dikes.

Distribution: Migration: Sparsely recorded on fields around Fort St. John and surrounding areas east to Boundary Lake. It was not found west of Charlie Lake.

Occurrence: Spring: The four spring records ranged from 29 March to 20 April. In the South Peace River region, Phinney (1998) regards the Horned Lark as a “rare migrant” in the Dawson Creek area. He gave an early arrival of 14 April and a late departure of 18 May. Spring flock size in the North Peace River region ranged from two to 20 birds. Notable records include 10 at the north sewage lagoons in Fort St. John on 16 April 1988, two at Montney on 29 March 1982 (Greg Saxon pers. comm.), and 20 about 4 km northeast of Baldonnel post office on 20 April 1982 (Greg Saxon pers. comm.). Summer and Autumn: The six autumn records ranged from 26 August to 18 September. Flock sizes ranged from one to 22 birds. Notable records included four at Boundary Lake on 26 August 1985 and 22 at the north sewage lagoons in Fort St. John on 10 September 1988. Winter: There is one unusual record of two Horned Larks at the junction of 101 and 270 roads 18 km north of Rose Prairie on 21 January 1984. The birds were photographed.

SWALLOWS

Purple Martin *Progne subis*

Status: *Casual transient.*

Williams (1933a,b) and Penner (1976) did not record this species. Cowan (1939) stated, “On June 12, at Charlie Lake, a group of eight birds came down to the river and hunted along the lake edge for several minutes. The female of the pair secured was laying, therefore, although we did not again encounter these birds again, it is probable that they were nesting nearby.”

Occurrence: The only other record was of a bird seen at the Fort St. John airport on 11 June 1982 by R.W. Campbell (Campbell et al. 1997). Phinney (1998) does not list the species for the South Peace River region.

Comments: For decades after the birds were collected in 1938 at Charlie Lake, North American distribution maps for Purple Martin erroneously showed northeastern British Columbia as part of the species’ breeding range (e.g., Godfrey 1986, Peterson 1990). This error has proven remarkably resistant to correction. Even recently, a popular field guide was published with a range map showing the martin’s breeding range extending into British Columbia’s Peace River area (Sterry and Small 2009). The nearest confirmed nesting to the study area is High Prairie, Alberta, about 300 km southeast of Fort St. John (Semenchuk 1992).

Tree Swallow *Tachycineta bicolor*

Status: *Uncommon to very common, and occasionally abundant, spring migrant and uncommon summer visitor and mid-to late summer migrant; breeds.*

Recorded by Williams (1933b) at Hudson’s Hope and by Cowan (1939) as “one of the most abundant breeding birds” around lakes. Penner (1976) found Tree Swallow (Figure 32) “common to abundant” along the Peace River valley.



Figure 32. Tree Swallow, a widely distributed species in the North Peace River region, is most often found near bodies of water, large and small. *Photo by R. Wayne Campbell.*

Habitat: Migration: Often recorded around wetlands including ponds, swamps, marshes, streams, rivers, and lakes. Cold wet weather often concentrated large numbers at such sites. Breeding: Cowan (1939) noted that Tree Swallows in the Tupper and Swan Lake areas were abundant around climax trembling aspen forests because of the availability of nest cavities excavated by Yellow-bellied Sapsuckers. Such is no longer the case in the South or North Peace River regions where old-growth trembling aspen has become very rare. During the period of this study, Tree Swallows were mainly recorded around snags in lakes or Beaver ponds and foraging over the sewage lagoons. The species also frequented urban environments where nest boxes were available.

Distribution: Migration: Widely distributed but somewhat locally around the southern parts of the study area. Usually found associated with wetlands such as ponds, lakes, streams, and rivers from Hudson's Hope east to Boundary Lake. The species has also been observed at Beryl Prairie, Upper Cache Road, Bear Flat, Fort St. John, and along Johnston Road south of Taylor. Breeding: Recorded in scattered locations across the southern part of the study area such as 281A Road off Highway 29 west of Charlie Lake, Charlie Lake, Fort St. John including the sewage lagoons, a ranch on the breaks above the Peace River west of Charlie Lake, the 248A Road marshes, and km 4 along Johnston Road.

Occurrence: Spring: First arrivals were often single individuals that appeared up to two weeks before others arrived. Thirteen arrival dates (1976 to 1989) ranged from 16 April to 30 April, with seven dates between 23 and 28 April. Cowan (1939) gave an arrival date of 6 May for Tupper, and Penner (1976) of 5 May for the Peace River valley. The earliest arrival date for the Dawson Creek area is 26 April (Phinney 1998). Spring aggregations of 100 to 200 birds are fairly frequent around lakes and ponds especially in cold weather. The largest aggregations were 800+ at Charlie Lake on 15 May 1984 (Figure 33). This estimation may have been too conservative as the flock blackened the limbs of a bare balsam poplar. Five hundred Tree Swallows were at the same location on 6 June 1984. As well, 400 were present at the south sewage lagoons in Fort St. John on 14 May 1987 and 400 were observed at the south end of Charlie Lake on 17 May 1984. Fifty-eight percent of flocks of more than 99 birds ($n=19$ flocks) occurred between 9 and 17 May, representing the peak of spring movement, although 500 swallows were recorded as late as 6 June suggesting that migration continued into early June. Notable records include one over a swamp at km 10 along the Upper Cache Road on 20 April 1985 (spring arrival); three over Fort St. John on 23 April 1977; two over the south end of Charlie Lake on 23 April 1983 (spring arrival); four at the south end of Charlie Lake hunting over ice-free ponds and frozen lake on 26 April 1981 (spring arrival); 56 with one Violet-green Swallow huddled on wires in

1°C rain at Hudson's Hope on 5 May 1979; over 100 flying low over Peace River shore at Lynx Creek on 6 May 1979; four adults inspecting holes in snags at the south end of Charlie Lake on 7 May 1977; and 50 flying over the northwest corner of Cecil Lake on 12 May 1983. Summer: Nesting activities are mainly carried out in June. See *Breeding*. The southward exodus from the North Peace River region is unspectacular with no large flocks observed. There was only one record of 50 birds in July. By August, Tree Swallows were hard to find with only eight observations for the entire study period. Five final autumn records (1977, 1984, and 1986 to 1988) ranged from 9 August to 17 August. Notable records include Tree Swallows seen frequently at Alwin Holland Park, Hudson's Hope, on 6 June 1976; two over small ponds along British Columbia Rail depot in Fort St. John on 24 June 1987; three along the north causeway at Boundary Lake on 11 July 1984; 10 gathered at the south end of Charlie Lake on 9 August 1977; and one over the north sewage lagoons in Fort St. John's on 17 August 1984. The latter date is the latest departure record. Autumn: No records.



Figure 33. In spring, the largest numbers of migrant Tree Swallows were found foraging over Charlie Lake, BC. *Photo by R. Wayne Campbell, 10 June 2007.*

Breeding: Due to the species' local distribution, nesting evidence was poorly investigated (Figure 34). Copulation was observed on 20 May 1985 (248A Road marshes) and on 23 May 1977 (Fort St. John). An adult added materials to a hole in a snag on 27 May 1984 along Johnston Road south

of Taylor. Confirmed breeding records follow. A female incubated eggs or brooded nestlings in a nest box on 7 June 1983 on 281A Road. Nestlings were in a nest box on 30 June 1987 at the north sewage lagoons in Fort St. John. Two adults fed three fledged but dependent young on 8 July 1976 at Charlie Lake. Ten nest sites have been found in holes in deciduous snags near water (5), in nest boxes (3) not necessarily near water, and in a tubular iron crosspiece of a swing set at Peace Island Park (2). In the Dawson Creek area, Phinney (1998) found eggs in two nests on 3 and 4 June 1992.



Figure 34. The breeding biology of Tree Swallow in the North Peace River region is poorly known, as most nest sites are in inaccessible natural cavities in trembling aspens. *Photo by R. Wayne Campbell.*

Comments: A melanistic adult male Tree Swallow appeared among a flock of conspecifics foraging over the north sewage lagoons in Fort St. John on 21 May 1985. This unusual plumage has been reported by Campbell and Siddle (2006) for British Columbia.

Violet-green Swallow
Tachycineta thalassina

Status: *Fairly common local migrant and summer visitor to the Peace River valley, especially in the vicinity of Hudson's Hope; rare local migrant and summer visitor outside of the valley; breeds.*

This species was first recorded in the Peace River region by Williams (1933b) at Hudson's Hope on 12 and 13 July 1930. Cowan (1939) considered the Violet-green Swallow (Figure 35) to be one of the rarest swallows in the British Columbia Peace River area; he only found it at Fort St. John and Charlie Lake. Penner (1976), who carried out the most extensive investigations in the species' preferred range and habitat, found it "fairly common" in the Peace River canyon (now flooded by the Site One dam) and "considerably more scarce" farther downstream where he noted it as a breeding species.



Figure 35. During the past six decades, Violet-green Swallow has become well established in the North Peace River region, but it is a habitat specialist and therefore occurs locally. *Photo by R. Wayne Campbell.*

Habitat: Migration: Cliffs, canyons, ponds, sewage lagoons, rivers, and lakeshores. Breeding: Nests in cracks, holes, and crevices in cliffs and canyon walls. Also uses nest boxes, holes in buildings, and was seen to at least try to nest in gaps between retaining wall blocks.

Distribution: Migration: Regular in the Peace River valley from Site One dam (Figure 36) east to Alces Creek near the Alberta border. The species is most frequent in the western half of the valley to about the Halfway River, becoming more locally distributed to the east. It is irregular and rare outside the valley. All upland records have been within 22 km and more usually five to 10 km of the Peace River valley. Violet-green Swallow is a regular visitor at Alwin Holland Park east of Hudson's Hope, Lynx Creek, Farrell Creek, Watson Slough, Bear Flat, Tea Creek Ravine, and near the confluence of Beatton River with Stoddart Creek. Individuals were also occasionally seen at Charlie Lake, Fort St. John (including both sets of sewage lagoons), Taylor, Boundary Lake, and Alces Creek near the Clayhurst Bridge. Breeding: Restricted to the Peace River valley and some of its tributaries (Beatton River and Tea Creek). Nesting has been confirmed on the teapot rocks in the river at Alwin Holland Park, Bear Flat, on the Peace breaks west of Charlie Lake, Tea Creek Ravine (Grand Haven) and near the confluence of the Beatton River with Stoddart Creek. Other breeding sites likely occur along the Peace River to the Alberta border.



Figure 36. The steep-walled cliffs at the south end of Williston Lake, BC, near the W.A.C. Bennett dam, with their numerous crannies and fissures, attract many nesting Violet-green Swallows. *Photo by R. Wayne Campbell, west of Hudson's Hope at W.A.C. Bennett Dam, BC, 15 June 2003.*

Occurrence: Spring: Nine arrival dates (1980 to 1987 and 1989) ranged from 20 April to 3 May. The largest spring assembly was of 30 birds flying over the Peace River west of Farrell Creek on 5 May 1979. Notable records include four at Hudson's Hope on 20 April 1985 (spring arrival), one at Watson Slough on 23 May 1982, and one among 250 Tree Swallows at south end of Charlie Lake on 9 May 1981. Summer: Nestlings were seen being fed by adults in late June and early July. Fledging can take place in early July. Young can be found in nests as late as 1 August. Departure times are poorly known. The latest record was of one near the confluence of the Beaton River and Stoddart Creek on 6 August 1980. Notable records include nine flying around the Sportsman Motel in Hudson's Hope on 6 July 1998, a pair nesting in a dryer vent at a house on the breaks above the Peace River west of Charlie Lake on 18 June 1988 (young were still in the nest on 1 August), and one at the mouth of Alces Creek on 2 July 1997 (Rick Howie pers. comm.). Autumn: No records.

Breeding: Mainly recorded nesting in crevices in rock faces at the "teapot rocks" in the Peace River off Alwin Holland Park. It probably nests in cracks in clay cliffs but this needs investigating. Nesting pairs were also found along the Beaton River breaks near its confluence with Stoddart Creek; they were associated with Cliff Swallows and may have nested in crevices or old Cliff Swallow nests (see Bent 1942).

Violet-green Swallow readily adapts to human structures. For example, three pairs nested in crevices formed at the corners of large contiguous concrete blocks in a retaining wall around a small highway bridge at the confluence of the Beaton River with Stoddart Creek. There is a single record of a pair nesting in a dryer vent in a house where they were reported as early as 16 May. Nestlings were being fed on 30 June 1998 at the concrete block nests and on 7 July 1997 at the teapot rock nests. Several recently fledged young were seen perched in riparian forest 7 July 1998 at Alwin Holland Park. The only nest in a house (west of Charlie Lake) still had young in it on 1 August 1988.

Northern Rough-winged Swallow *Stelgidopteryx serripennis*

Status: *Very rare migrant and summer visitor; breeds.*

Neither Williams (1933b) nor Cowan (1939) encountered this species. Penner (1976) gave one spring record (31 May 1973) for the Hudson's Hope area and called Northern Rough-winged Swallow (Figure 37) "rare, and probably a straggler."



Figure 37. Northern Rough-winged Swallow may be more common than records indicate as summer locations are along major rivers with dirt banks that require boats for access. *Photo by Mark Nyhof.*

Habitat: River, river banks, adjacent ponds, and open areas usually close to water.

Distribution: A scattering of records during the breeding seasons occurred along the Peace River from Lynx Creek to Watson Slough.

Occurrence: Summer: Notable records include two along the Peace River between Lynx Creek and Farrell Creek on 18 August 1986, one along Peace River at 6.5 km east of Farrell Creek on 21 July 1992, one along the Peace River 2.5 km upstream from the community of Farrell Creek on 21 July 1992, and one at Watson Slough on 1 June 1998.

Breeding: See Campbell et al. (1997) for breeding records.

Comments: This species appeared to be increasing in frequency during the 1990s along the Peace River west of Fort St. John.

Bank Swallow
Riparia riparia

Status: *Fairly common to occasionally abundant migrant; uncommon summer visitor (locally common to very common at colonies); breeds.*

This species was first reported at Hudson's Hope and Blueberry River by Williams (1933b). Cowan (1939) found a few pairs at Tupper Creek in the South Peace River region. Penner (1976) felt it was a "fairly common summer resident" in the Peace River valley, listing three colonies along the river.

Habitat: Migration: Ponds, rivers and lakes. Breeding: Most North Peace River region colonies were located in clay and silt banks along rivers. Some were in road cuts. Phinney (1998) speculated that in the South Peace River region "in most areas the clay soil is unsuitable for nest hole excavation," which may also be the situation in the North Peace River region.

Distribution: Migration: Observed across the southern portion of the study area mostly at water bodies from Hudson's Hope east to the Alberta border. Breeding: Sizeable colonies were established locally along the Peace, Beatton, and Halfway rivers. Penner (1976) reported colonies along the Peace River at 2.3, 6.6 and 79 miles west of the Alberta border.

Occurrence: Spring: Bank Swallow may arrive in early May but due to its localized distribution, dates may not be accurate. Seven arrival dates (1982 to 1988) ranged widely from 4 to 23 May. Cowan (1939) first saw this species at the mouth of Tupper Creek, South Peace River region, on 16 May 1938. The earliest arrival date for the Dawson Creek area is 12 May 1992 (Phinney 1998). In southern Alberta, the Bank Swallow arrives in early May (Pinel et al. 1993) and in northern Alberta at Fort MacKay on 10 May (Francis and Lumbis 1979). First arrivals are usually observed singly, or two together foraging among flocks of other swallow species. Spring flocks have been noted 14 times from 22 May to 9 June, which probably marked the

peak of spring migration. The largest flocks were 300 birds at the south end of Charlie Lake on 30 May 1984 and 200 at the south end of Charlie Lake on 24 May 1986. Notable spring arrival records include two at the south end of Charlie Lake on 14 May 1988, two at the south sewage lagoons in Fort St. John on 22 May 1985, and two at Boundary Lake with other swallows on 17 May 1986. Summer and early Autumn: See *Breeding*. Five last autumn records (1982, 1984, and 1986 to 1988) ranged from 14 August to 16 September. Notable records are two at km 10 of the Upper Cache Road on 17 June 1984, 20 at the south sewage lagoons in Fort St. John's (including several juveniles) on 20 July 1987, 50 at Old Fort, near Fort St. John, on 26 July 1985, and one at the north sewage lagoons in Fort St. John's on 16 September 1982. The latter date is the latest for the North Peace River region.

Breeding: Two colonies (100 and 20 burrows) were located in the north bank of the Peace River near Farrell Creek on 26 July 1985. Another colony of between 15 and 38 pairs persisted in a road cut along 103 Road on the east side of the Beatton River from 1981 to 1987. Another colony of about 15 pairs was located along Highway 29 near the mouth of the Halfway River on 17 June 1978. However, there is no specific information on occupancy of nests in the study area (Figure 38).

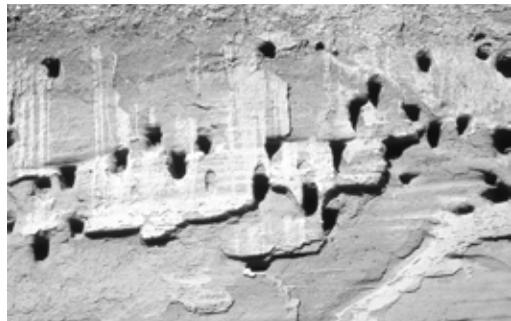


Figure 38. Most Bank Swallow colonies reported in British Columbia have information on absence or presence of attending adults but the contents of individual burrows are rarely examined. *Photo by R. Wayne Campbell.*

In British Columbia, most Bank Swallow colonies range in size between 15 and 75 burrows. Burrows are generally excavated in silt, clay or sand. Most nests were between 3 and 8 m above ground and averaged 90 cm in length. Clutch size ranges from three to five eggs and incubation lasts an average of 14 days. Seventy-eight percent of nest broods were recorded between 8 and 21 July. The nestling period lasted an average of 22 days (Campbell et al. 1997).

Cliff Swallow
Petrochelidon pyrrhonota

Status: *Uncommon to occasionally abundant migrant and summer visitor; breeds.*

Williams (1933b) found colonies along the Blueberry River in 1922 and at Cache Creek and the Gates (the Peace River at Hudson's Hope) in 1930. Cowan (1939) called Cliff Swallow (Figure 39) "exceedingly abundant" around Tupper Creek in the South Peace River region. Penner (1976) found it "very common" along the western half of the Peace River valley, and less common farther downstream.



Figure 39. By late May, Cliff Swallows are starting to collect mud for nests throughout the North Peace River region. *Photo by R. Wayne Campbell.*

Habitat: Migration: Open country, especially with lakes, ponds, and sewage lagoons. Breeding: "Natural" colonies were built on cliffs and "teapot" rocks standing along the Peace River, as well as the cliffs of canyons of tributaries to the Peace River. Colonies on human-made structures occurred on highway bridges and the exterior walls of taller buildings in urban settings.

Distribution: Migration: Most commonly encountered over the Peace River and wetlands across the study area. Breeding: Colonies are widely distributed, but local, in the Peace River, Lynx Creek, Halfway River, Tea Creek, Beatton River (Figure 40), Stoddart Creek, Blueberry River, and in settlements of Fort St. John and Wonowon.



Figure 40. Both natural and human-created sites are used for nesting by Cliff Swallow. This bridge, over the Beatton River east of Fort St. John, BC, supports a nesting colony of over 100 pairs. *Photo by R. Wayne Campbell, 10 June 2007.*

Occurrence: Spring: Nine arrival dates (1978, and 1981 to 1988) ranged from 24 April to 17 May. Cliff Swallow may arrive earlier in Hudson's Hope (where two were seen on 24 April 1982) than in the eastern half of the study area (where arrival occurred between 9 and 17 May). Migrant flocks were uncommon. The three largest spring flocks were 300 birds at the south end of Charlie Lake on 30 May 1984, 70 birds at the south sewage lagoons in Fort St. John on 24 May 1986, and 50 at the north end of Charlie Lake on 30 May 1984. Notable spring arrival records include three with 800 Tree Swallows at the south end of Charlie Lake on 15 May 1984 and one with 30 Tree Swallows at Boundary Lake on 12 May 1985. Summer: See *Breeding*. The largest late summer aggregation was of 25 birds at Lynx Creek on 18 August 1986. Notable records are 100 pairs at nests on the "teapot rocks" in Alwin Holland Park east of Hudson's Hope on 12 June 1976, at least 100 birds around the new arena in Fort St. John on 10 June 1981, and 17 nests on cliffs above the Beatton

River at its confluence with Stoddart Creek on 26 July 1982. Autumn: Most Cliff Swallows have left northern British Columbia by the end of August (Campbell et al. 1997). Last autumn dates (1979, 1984, and 1986 to 1988) ranged from 4 August to 16 September. Notable records are one at the south sewage lagoons in Fort St. John on 16 September 1986 and one north of Beaton Provincial Park on 8 September 1984.

Breeding: Colonies in the North Peace River area ranged from 10 to 300 nests. Both natural and human-made sites were used. Colonies were located on “teapot rocks” in the Peace River at Hudson’s Hope and Lynx Creek, as well as river cliff sites 10 and 18 km east of Hudson’s Hope. A colony was established on the Halfway River highway bridge in 1996 (R. Wayne Campbell pers. comm.). West of Fort St. John, a few pairs nested in the rimrock of a canyon along Tea Creek near Grand Haven. In Fort St. John, a colony was established on the community arena (Figure 41). Pairs were seen on the cliffs above the confluence of the Beaton River and Stoddart Creek. A large colony was situated on the Clayhurst bridge across the Peace River. In the northern part of the study area small colonies were recorded at the 101 Road bridge over the Blueberry River and on various buildings at Wonowon.

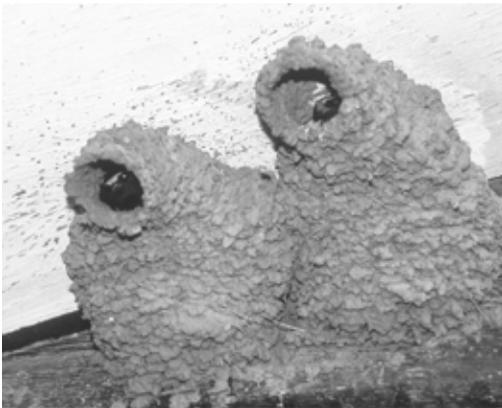


Figure 41. Nesting Cliff Swallows require access to damp mud that has the consistency and texture to provide the necessary adhesive bonding used in their nests. *Photo by R. Wayne Campbell.*

The timing of breeding events is poorly known. Adults, however, have been recorded still feeding nestlings as late as 26 July 1985 at Alwin Holland Park east of Hudson’s Hope.

Comments: Some nesting colonies in the North Peace River region are at risk because of human activities. Willful vandalism or efforts to eliminate colonies because of the “mess”, or unwanted early morning noise that the birds can create, does occur. In the early 1980s, an unconfirmed report was received of residents in the Buick Creek-Prespatou area eliminating colonies by deliberately spraying nests and birds with used motor oil. The provincial highways department also has sprayed nesting colonies at bridges with water to discourage nesting. It should be noted that most species of birds in the province are protected by provincial or federal laws against harassment and disturbance.

The construction of large buildings in cities and communities, and bridges in wilderness areas, has benefited Cliff Swallows. In northeastern British Columbia, Rand (1944) noted that within two years of a camp’s construction, swallows had probably abandoned nearby cliffs to nest on a large construction building near Sikanni Chief River.

The largest colonies in the province are found on bridges in the South Peace River region (Campbell et al. 1997, Phinney 1998).

Barn Swallow *Hirundo rustica*

Status: *Uncommon to occasionally very common migrant and uncommon to fairly common summer visitor; breeds.*

Barn Swallow (Figure 42) has recently extended its range into the Peace River region of Alberta and British Columbia. It was not recorded around Grande Prairie, Alberta, until the 1960s (Sadler and Myres 1976, Semenchuk 1992) and in northeastern British Columbia until the early 1970s. Both Thormin (1973) and Penner (1976) considered the species “uncommon.” By the beginning of this study in 1975, Barn Swallow occurred regularly in the North Peace River region.



Figure 42. Like many insect-eating birds in British Columbia, Barn Swallow has extended its range northward in the province during the past four decades. *Photo by R. Wayne Campbell.*

Habitat: Migration: Open and semi-open areas. It commonly feeds over wetlands, ponds and lakes, playing fields, seismic cuts, suburbia, and city parks. Breeding: Nesting recorded at farms, ranches, wetlands, grassy breaks above the Peace River, railway yards, gas well clearings, open edge of rivers, and on structures in small communities along the Alaska Highway.

Distribution: Migration: Widely distributed throughout the southern part of the study area. Breeding: Widely distributed and has been found breeding at Beryl Prairie, km 15.6 of Upper Cache Road, the Peace River breaks west of Charlie Lake, Beaton Provincial Park, Fort St. John, Cecil Lake, Goodlow, German Lake, Boundary Lake, Clayhurst bridge, and north to North Pine.

Occurrence: Spring: Ten arrival dates (1978, and 1980 to 1988) ranged from 4 to 15 May, with eight dates between 4 and 9 May. The peak of migration occurred between 15 and 30 May. Spring flocks were generally fewer than 20 birds. The two largest flocks were 100 birds at the south end of Charlie Lake on 21 May 1989 and 50 birds at the same location on 30 May 1984. Spring assemblies were usually associated with cold, wet weather. Nest-building was recorded as early as late May. Notable spring arrival records include one at Bear Flat on 4 May 1985 and one at Boundary Lake on 4 May 1986. A pair refurbished an old nest at 248A Road marshes at North Pine on 22 May 1977. Summer:

See *Breeding*. Southbound flocks were noted as early as the first week of August. Flocks sizes ($n=154$) ranged from one to five birds (66%), six to 10 birds (18%), 11 to 20 birds (11%), 21 to 30 birds (2%) and flocks greater than 40 birds (3%). The largest flocks were 100 birds at the south sewage lagoons in Fort St. John on 2 August 1987, 100 birds at Cecil Lake on 21 Aug 1980, and 61 birds at the south sewage lagoons on 15 August 1986. The peak of late summer/early autumn movement occurred from 15 August to 9 September, with one exception of 100 birds on 2 August 1987. Autumn: The latest period for departing Barn Swallows occurred in early September. Ten final autumn records (1979 to 1988) ranged from 7 to 18 September. Notable late records include four at Hudson's Hope on 8 September 1979, 37 at Watson Slough on 4 September 1982, 30 near Beaton Provincial Park on 8 September 1984, and six on 18 September 1986. The latter date is the latest for the North Peace River region.

Breeding: Fourteen nests (Figure 43) and one record of recent fledglings were recorded. Notable nesting records include a pair lining a nest built in the cab of a bulldozer at km 15.5 of Upper Cache Road on 9 July 1983, a pair nesting in a warehouse at Fort St. John on 5 June 1985, four large young flushed from a nest at 248A Road marshes near North Pine on 6 July 1983, a nest with five eggs at German Lake on 13 June 1987, and a nest containing four large chicks at Clayhurst bridge over the Peace River on 2 July 1998.



Figure 43. Barn Swallow is a well-established breeding species in agricultural and urban habitats. *Photo by R. Wayne Campbell, near Fort St. John, BC, 7 July 1986.*

Nest construction was observed as late as 9 July. Phinney (1998) noted a nest under construction on 1 June in the South Peace River region. In the North Peace River region, four nests with eggs were found on 9 June, 13 June, and 24 June. Nestlings were found on 2 July and 6 July. In the Dawson Creek area, Phinney (1998) reported a nest with eggs on 31 May and another with recently fledged young on 29 June. The latest recent fledglings attended by parents were seen on 17 September 1988 at Charlie Lake Provincial Park.

Nests in the North Peace River region were built most commonly on out-buildings and sheds, as well as a gas well shed, an empty granary, a concrete bridge, a hanging light fixture, and the cab of a bulldozer.

Comment: A behavioural observation of note was 60 Barn Swallows mobbing a Merlin (*Falco columbarius*) at the south sewage lagoons in Fort St. John on 6 September 1986.

CHICKADEES

Black-capped Chickadee *Poecile atricapilla*

Status: *Fairly common resident; breeds.*

Williams (1933b) called this species “common” in wooded parts of the Peace River Block. Cowan (1939) called it the common chickadee of the Peace River area but “nowhere abundant.” Penner (1976) designated Black-capped Chickadee (Figure 44) as “fairly common” in the Peace River valley.

Habitat: Year-round: Trembling aspen forests and other deciduous forest types such as mixed forest dominated by balsam poplar and mixed coniferous and deciduous forests, especially around willows, birches, and alders. It also favours deciduous edge and willow thickets along streams, and frequents residential and rural yards and gardens as long as some trees and shrubs are present.

Distribution: Found year-round throughout the North Peace River region.



Figure 44. Black-capped Chickadee, a resident species, is a welcome visitor at bird feeders during the long Peace River winters. *Photo by R. Wayne Campbell.*

Occurrence: Spring: Widely distributed and present throughout the season. Nesting activities (e.g., excavation) can begin as early as mid-April and last as late as 19 May. A notable record was two in courtship displays at Boundary Lake on 30 April 1988. Summer: Broods of fledged young attended by their parents were found from early June to mid-July. Beginning in early August, Black-capped Chickadee flocks are joined by migrant warblers and vireos and occasionally Red-breasted Nuthatches. A notable record included two adults with five fledglings just out of nest at Beaton Provincial Park on 19 June 1984. Autumn: With the absence of other migrant passerines, Black-capped Chickadees become the conspicuous small passerines of forests and backyards. Occasionally they can be found foraging in trees and shrubs surrounding country landfills. A notable record included 20 at Montney landfill on 18 November 1988. Winter: Present throughout the season. On 5 December 1982, a Northern Shrike persisted in chasing one of a pair of Black-capped Chickadees around thickets in open farming country near North Pine. The chickadee’s superior ability to turn sharply in flight prevented the larger, slightly less maneuverable shrike from catching it.

Breeding: Four records of nests under excavation and 10 records of fledged young accompanied by parents were recorded. Nest excavation has been

seen as early as 10 April 1976 at Stoddart Creek in Fort St. John. Nests sites have been located in snags or stumps where the decaying wood is soft (Figure 45). Active nests have been found in a large willow along a stream; 6 m up a balsam poplar snag at Taylor Landing Provincial Park on 19 May 1983; in a detached rotten trembling aspen top trunk suspended in the woods at Stoddart Creek in Fort St. John in mid-April 1976; and in a rotting trembling aspen at Stoddart Creek in Fort St. John on 24 April 1983. Cowan (1939) found a nest with seven eggs in a rotten willow stump at Tupper Creek, South Peace River region on 18 May 1938. Nests containing eggs and/or nestlings occurred from mid-to-late May in the South Peace River region where a nest with one large chick was examined near Dawson Creek on 24 May 1995 (Phinney 1998). All sites were located in mixed woodlands. Ten broods of fledged young, still being fed by their parents, were encountered from 9 June to 12 July, with eight of these observed between 9 and 22 June. Fledged family size ranged from one to five young.



Figure 45. Adult Black-capped Chickadee removing a fecal sac from its nest in a decaying deciduous stub. *Photo by Mark Nyhof.*

Boreal Chickadee *Poecile hudsonicus*

Status: *Uncommon and local resident; breeds.*

Williams (1933b) didn't encounter this species. Cowan (1939) found it only once, in spruce at Charlie Lake, on 16 June 1938 where he collected a male. Penner (1976) termed it a relatively "uncommon resident" of the Peace River valley.

Habitat: Migration: Mixed coniferous forests. Individuals were also observed wandering into deciduous forests and even thickets distant from forest in late summer. Breeding: Coniferous forests and coniferous stands within mixed forests. It was most regularly encountered in stands of mature white spruce, especially at Stoddart "Fish" Creek and Beatton Provincial Park.

Distribution: Non-breeding Season: (August to September). Birds were seen wandering into scrubby deciduous thickets, field edges, hedgerows and even suburban gardens around Fort St. John, Charlie Lake, and Cecil Lake. Breeding: Recorded throughout the North Peace River region wherever suitable habitat occurred such as the Peace River valley, Stoddart "Fish" Creek, and Beatton Provincial Park.

Occurrence: Spring: Few records. Notable records include four at Stoddart "Fish" Creek on 7 March 1976, two at the east end of 250A Road in North Pine on 2 March 1985, and one in lodgepole pine at Clayhurst Bridge on 20 April 1980. Summer: Notable records include two about 20 km north of Wonowon on 19 July 1992, two at Mile 73 of the Alaska Highway on 6 July 1998, and one along Peace Island Park Road on 29 June 1980. Autumn: Boreal Chickadee is known to show occasional "irruptions" especially in autumn and during such times individuals are found in a wider range of habitats than the usual boreal forest (Yunick 1984). This behaviour was also noted in the study area in the late summers and early autumns of 1980, 1981, 1984, 1986, and 1987. Notable records include two in a grassy yard with a few sapling spruce at 116 Avenue in Fort St. John on 28 September 1980, one in willows at Kin Park in Fort St. John on 5

September 1981, one at the north sewage lagoons in Fort St. John on 29 August 1984, and one in a birch tree in the front yard at 9535 112th Avenue in Fort St. John on 4 September 1987. **Winter:** Flock sizes were small, generally six or fewer birds. The size of 11 winter flocks ranged from two to 12 birds and averaged 4.5 birds. Notable records include seven at Beatton Provincial Park on 27 December 1987, two at Milligan Creek on 16 February 1984 (Joan Johnstone pers. comm.), and four at Stoddart “Fish” Creek on 30 January 1983.

Breeding: The chickadee’s breeding status is poorly known. On 15 May 1983, a pair copulated and excavated a hole in a punky dead birch snag between km 4 and 5 of the Johnstone Road south of Taylor. At Kiskatinaw Provincial Park, just to the south of the study area, two adults fed three fledglings on 30 June 1981. Campbell et al. (1997) recorded the only confirmed breeding record of seven recent fledglings observed at Beatton Provincial Park on 17 June 1984.

Comment: See Ficken et al. (1996) for summary information for this little known species in North America.

NUTHATCHES

Red-breasted Nuthatch *Sitta canadensis*

Status: *Uncommon migrant and summer visitor and occasional winter visitor; breeds.*

This species was recorded once by Williams (1933b) in the South Peace River region. Cowan (1939) called Red-breasted Nuthatch “common” in the white spruce and the pine forests of both the South and the North Peace River regions, and cited the forest west of Charlie Lake to be a place where this species was particularly common. He gave no spring arrival date, but didn’t label the species as resident either. Penner (1976) called it a “fairly common permanent resident” in the Peace River valley.

Habitat: **Migration:** During autumn Red-breasted Nuthatch (Figure 46) is often recorded in more open, less forested locations and is more likely to occur in pure trembling aspen forests and forests around muskeg habitats. **Breeding:** Recorded in mid-aged forests as nesting habitat. Such habitat is now more local in the North Peace River region due to logging. It favoured older mixed forests at Stoddart “Fish” Creek in Fort St. John and mixed woodlands around the mature spruce stand at Beatton Provincial Park, as well as mature forests along the Peace River. Red-breasted Nuthatch also frequented lodgepole pine forests at Hudson’s Hope.



Figure 46. Red-breasted Nuthatch is primarily a migrant and summer visitor in the North Peace River region. *Photo by R. Wayne Campbell.*

Distribution: **Migration** and **Breeding:** Recorded locally in forested locations throughout the North Peace River region.

Occurrence: **Spring:** Early arrival dates were difficult to determine because a few birds occasionally overwintered. Seven arrival dates following winters when no nuthatches had been found ranged from 1 April to 8 May. A peak of spring movement was not apparent. Migration seemed most widespread in late April and early May. Notable records include one at Stoddart “Fish” Creek in Fort St. John on 8 March 1987 and 20 February 1998 (possible spring arrival dates), and a flock of six birds passing through a suburban garden on 112th Avenue in Fort St. John on 30 April

1989. Summer: Because Red-breasted Nuthatch appears in suburban gardens during migration, far from its summer habitat, it is possible to detect the start of southbound migration. The earliest apparent migrants were noticed in a backyard in Fort St. John on 13 August 1987 and 3 August 1988. A third record indicating early southward migration was one bird observed at the 248 Road marshes in North Pine on 4 August 1977.

Red-breasted Nuthatches are often found among mixed species flocks of warblers and vireos in August and September. The largest single count was of 11 nuthatches at Beaton Provincial Park on 15 August 1987. Peak movement occurred between 13 August and 3 September. Notable records include one along Peace Island Park Road on 15 June 1980 and one or two at km 6 on the Johnstone Road on 5 June 1982. Autumn: Six dates of latest autumn departure (1980, 1982, and 1985 to 1988) ranged from 13 September to 22 October. November dates almost invariably occurred in years when the nuthatch was found over-wintering and were eliminated from the departure dates. In some years, small numbers remained until late September or mid-October with stragglers until the end of October. A notable record included one at Beaton Provincial Park on 18 September 1982, the final record for that year. Winter: In winter 1983-1984 and winter 1984-1985, a few over-wintered at Stoddart "Fish" Creek and along the Peace Island Park Road. Notable records include six attracted by a Northern Pygmy-Owl imitation at Stoddart "Fish" Creek in Fort St. John on 1 January 1984, 5 January 1985, and 20 February 1988.

Breeding: A single record. An adult fed a recently fledged chick at Beaton Provincial Park on 10 July 1980. Undoubtedly the species breeds throughout suitable habitat in the region. Campbell et al. (1997) gave two breeding records for the Dawson Creek area in the South Peace River region: nestlings on 2 June 1992 and very small nestlings on 19 June 1992.

White-breasted Nuthatch *Sitta carolinensis*

Status: *Rare and local resident; probably breeds.*

Not recorded by Williams (1933b), Cowan (1939), or Penner (1976). The White-breasted Nuthatch (Figure 47) recently extended its range across Alberta into the Peace River area of British Columbia. It began to appear in the Grande Prairie area of Alberta from 1976 onwards (Pinel et al. 1993) and now is known to breed there (Semenchuk 1992). The first record for this study was one in mixed forest at the mouth of the Halfway River 26 April 1981.



Figure 47. It is assumed that White-breasted Nuthatch arrived in northeastern British Columbia during the 1980s from northwestern Alberta. *Photo by Mark Nyhof.*

Habitat: Breeding: Recorded year-round in mature mixed forests that contain mature balsam poplars. In Alberta, it occupies mature deciduous forests (Pinel et al. 1993).

Distribution: Breeding: Recorded most frequently along the Peace Island Park Road south of Taylor where there were 14 records from 1983, 1987 to 1989, 1991, and 1997. There were also six records from 281 and 283 roads off Highway 29 west of Charlie Lake and a single observation at km 2 of the Farrell Creek Community Pasture Road.

Occurrence: The species appears to be extending its range, and establishing itself, in parts of the North Peace River region. **Spring:** Notable records include one at Peace Island Park Road on 12 May 1987 and 22 May 1989. **Summer:** Notable records include four at 281 Road on 6 June 1987, one along 283 Road on 1 July 1998, and three along Peace Island Park Road on 7 July 1991. **Autumn:** Notable records include one along Peace Island Park Road on 20 November 1983 and one along 281 Road on 18 October 1987 and two on 26 November 1988. **Winter:** Notable records include one along Peace Island Park Road on 11 December 1983, three along 281 Road on 4 December 1988, and at km 2 of the Farrell Creek Community Pasture Road on 17 December 1988.

Breeding: There are no definite records. However, on 6 June 1987, two pairs were seen carrying food from a feeder along 281 Road south of Highway 29 west of Charlie Lake into the forest. While the behavior was suspicious, it does not indicate or confirm nesting as nuthatches are known to store food. White-breasted Nuthatch breeds in the South Peace River region where on 25 June 1987, an adult was observed feeding a newly fledged young at a bird feeder on Bear Mountain near Dawson Creek.

CREEPERS

Brown Creeper *Certhia americana*

Status: *Very rare winter visitor; casual summer.*

Not mentioned by Williams (1933b), Cowan (1939), or Penner (1976).

Habitat and Distribution: Brown Creeper (Figure 48) is usually found in a large stand of mature white spruce, from November through March, at Stoddart “Fish” Creek in Fort St. John; occasionally it was seen in mature balsam poplars at the Taylor ski hill at the west end of Peace Island Park Road in August.



Figure 48. The Brown Creeper, a secretive habitat specialist, may be present year-round but locally distributed. *Photo by Mark Nyhof.*

Occurrence: Nine records in total. Most records were from Stoddart “Fish” Creek in Fort St. John as follows: One in the tall white spruces on 23 December 1985, one on 2 February and 8 March 1986, suggesting that it had over-wintered, two in the spruce trees on 28 January 1987, and one in spruces on 19 November and 18 December 1988. The only other record was from a patch of mature balsam poplars at the Taylor ski hill on 22 August 1986.

Comments: The Brown Creeper should be looked for in any extensive stands of mature or old-growth conifers or adjacent mature or old-growth mixed forests, such as along the banks of the Peace River. It is likely that a small, perhaps resident population of breeders has been overlooked.

WRENS

House Wren *Troglodytes aedon*

Status: *Uncommon migrant and summer visitor; breeds.*

Not reported by Williams (1933b). Cowan (1939) found House Wren (Figure 49) common in the Swan Lake area but less abundant around Charlie Lake. Penner (1976) called it relatively “rare” in the Peace River valley, citing one record for 1973 and a second for 1975.



Figure 49. House Wren reaches the northern limit of its range in British Columbia in the Boreal and Taiga Plains ecoprovinces where it is uncommon in summer. *Photo by Mark Nyhof*

Habitat: Migration: Essentially the same as *Breeding*. It has also been recorded in odd sites such as the red-osier dogwood understory in a fairly open mature balsam poplar flood plain forest, shore willows or among beach logs on a lakeshore. Breeding: Mature trembling aspen forests and young aspen edge of human settlements such as farms, which provide snags, stumps, buildings and other sites for nesting. It does not require much forested land. House Wren has been recorded in brushy openings around Beaver ponds at Bear Flat and along a thin margin of aspens growing along a seasonal creek on the arid south-facing slope of the Beaton River valley. It is also found in suburban gardens in Fort St. John especially if nest boxes

are provided. Cowan (1939) noted that in mature aspen forest House Wren nested in old nest cavities excavated by Yellow-bellied Sapsuckers.

Distribution: Migration: Few records. Obvious migrants were recorded at Beaton Provincial Park, the south end of Charlie Lake, and Taylor Landing Provincial Park. Breeding: Fairly restricted to the settled country around Taylor, Fort St. John, Charlie Lake, and west along the Peace River and Highway 29 to Hudson’s Hope. It was detected around Cecil Lake but not farther east. In the north it was found at North Pine and Mile 60 of the Alaska Highway.

Occurrence: Spring: Ten arrival dates (1980 to 1987) ranged from 17 to 27 May, with eight dates between 17 and 23 May. Penner (1976) gave an early arrival date of 10 May 1975 for the Peace River valley; so like the Cliff Swallow, the House Wren may arrive earlier within the more sheltered, warmer confines of the river valley. Notable records are: One at Two Rivers 17 May 1980, spring arrival, one at Beaton Recreational Park on 19 May 1985 (spring arrival), and one at Beaton Provincial Park on 23 May 1981 (spring arrival). Summer: See *Breeding*. Notable records are: One singing from an aspen all day in Fort St. John on 28 June 1978, three singing in Hudson’s Hope on 28 June 1980, one at Sutton’s farm in Baldonnal in mid-July 1976, one on the west side of Cecil Lake on 4 July 1980, and one along 250 Road north of Cecil Lake on 29 August 1984, the final autumn record. Autumn: Six dates of autumn departure (1977, 1982, and 1984 to 1987) ranged from 27 August to 12 September. Notable records are: One at Bear Flat on 1 September 1985 (final autumn record), two or three at Bear Flat on 8 September 1986 (final autumn record) and two to four at the southeast corner of Charlie Lake on 12 September 1982 (final autumn record).

Breeding: Nest-building may begin soon after spring arrival. A pair commenced nest-building at an outbuilding in Taylor on 24 May 1981 (Tony Von Hollen pers. comm.). A male was seen adding material to a nest in an old cavity-riddled aspen on 30 May 1982 at Montney Centennial Park, north Charlie Lake. Campbell et al. (1997) gave 24 June

1973 as a date for seven eggs in a Charlie Lake nest (Figure 50). In the South Peace River, a nest with six eggs was observed on 28 June 1991 and another with seven eggs was observed 28 June 1994 (Phinney 1998). Similar dates likely apply to North Peace River region nests.



Figure 50. For many years, a pair of House Wrens nested in this outhouse in Beatton Park, BC. Access was through a small hole near the bottom (lower right) of the structure. Needless-to-say, a nest check had to be well timed! *Photo by R. Wayne Campbell, 23 June 1998.*

A nest with young was recorded at Hudson's Hope on 25 June 1990. A family of three very young fledglings attended by two adults was seen at Beatton Provincial Park on 10 July 1987. Late breeding dates, or possibly second broods, have occurred. A Fort St. John nest box held tiny nestlings on 24 July 1987. These young remained in the box until at least 3 August. Campbell et al. (1997) also reported three chicks in a Charlie Lake nest box on 2 August 1976.

Winter Wren *Troglodytes hiemalis*

Status: *Casual.*

Not found by Williams (1933a,b) or Penner (1976), but Cowan (1939) collected a male at Tupper Creek 17 May 1938.

Occurrence: A singing bird was found by Greg Saxon (pers. comm.) in mature white spruce along Stoddart "Fish" Creek in Fort St. John on 23 April 1983. The author also saw this bird on 23 and 24 April at the same site. The bird's song was different from the coastal Pacific Wren, which I was familiar with, having lived in the Fraser River valley. I later matched its vocalizations with recordings of Winter Wrens recorded in Ontario.

Comments: A study (Toews and Irwin 2008) carried out near Tumbler Ridge, BC, proposed that populations of nominate Winter Wrens (*Troglodytes troglodytes*) should be separated into two distinct types with differences in genetics, appearance, and song. These two types did not interbreed within a zone of overlap near the study site. In July 2010, the American Ornithologists' Union accepted the proposed split. The western wrens were named Pacific Wrens (*Troglodytes pacificus*), whereas the eastern birds (found only in the Peace River region of BC) retained the name Winter Wren (*Troglodytes hiemalis*).

Marsh Wren *Cistothorus palustris*

Status: *Very rare migrant and uncommon summer visitor; breeds.*

Not encountered by Williams (1933b), Cowan (1939) or Penner (1975).

Habitat: Migration: Occurs in the same habitat as *Breeding* but also appears in smaller patches of sub-optimal marshes, bushes, and weeds. Breeding: Extensive beds of common cattail and bulrush around marshes, ponds, and lakes. One was encountered at km 10 of Upper Cache Road on 17 June 1984 at a wooded swamp containing willows.

Distribution: Migration: See *Breeding*. Marsh Wren (Figure 51) has also appeared at the north sewage lagoons in Fort St. John. Breeding: Very local. Found at Cecil Lake, Boundary Lake, the 248A Road marshes near North Pine, and Watson Slough along Highway 29. There is also an observation of one at the swamp at km 10 on the Upper Cache Road.



Figure 51. Marsh Wren is another wetland species that has moved recently into northeastern British Columbia, likely from northwestern Alberta. Photo by R. Wayne Campbell.

Occurrence: Spring: Three arrival dates (1983, 1986, and 1987) ranged from 2 to 4 May. In other years, trips to Boundary Lake were not made early enough to ascertain when Marsh Wren first arrived. Phinney (1998) gave an early arrival of 17 May 1992 for the Dawson Creek area. Numbers at Boundary Lake quickly built to the usual breeding season level by mid-to-late May. Notable records are: One at the 248A Road marshes 2 May 1983 (spring arrival), four at Boundary Lake on 16 May 1982, and one singing at the south end of Cecil Lake on 27 May 1976. Summer: See *Breeding*. Nine sang at the middle causeway, Boundary Lake, on 20 June 1987; four were heard at the south end of Cecil Lake on 30 June 1998; two sang at the 248A Road marshes near North Pine on 1 July 1977; eight were heard at Boundary Lake on 11 July 1982; and one was seen at Watson Slough on 15 July 1982. Twenty singing and territorial wrens were seen or heard during a canoe survey along the west side of Boundary Lake on 8 July 1997. A late summer migrant was at the

north sewage lagoons in Fort St. John on 24 August 1987. Autumn: Five last autumn dates (1982, 1983, and 1985 to 1987) ranged from 26 August to 18 September. However, too few late season visits to Boundary Lake obscured more accurate departure dates for Marsh Wrens in the North Peace River region. In Alberta, most Marsh Wrens leave during the second half of September and a few linger into October some years (Pinel et al. 1993). A notable record is one at Watson Slough on 18 September 1983 (final autumn record).

Breeding: Most records were from the marshes at Boundary Lake. These were: A nest (Figure 52) with four eggs was found on 24 June 1996 (R. Wayne Campbell pers. comm.), a brood of recently fledged young was seen on 21 July 1987; a begging fledgling, still showing traces of down, was seen on 11 August 1984; and a fledged family of five was recorded on 22 August 1984. The only other breeding record was of a tailless fledgling seen at the 248A Road marshes on 4 August 1977. In the Dawson Creek area, Phinney (1998) found a nest with seven eggs on 10 June 1995 and another, also with seven eggs, on 18 June 1993.



Figure 52. Marsh Wren nests (upper left) are usually interwoven around many stems of bulrushes or cattails. Photo by R. Wayne Campbell.

DIPPERS

American Dipper *Cinclus mexicanus*

Status: Rare winter and spring visitor along the Peace River at Hudson's Hope. American Dipper (Figure 53) may have bred formerly in the canyon of the Peace River upstream from Hudson's Hope.

Not recorded by Williams (1933b), Cowan (1939), or Penner (1976).



Figure 53. Clear, fast-flowing creeks and rivers give the American Dipper a local distribution in the North Peace River region. *Photo by R. Wayne Campbell.*

Habitat: Migration: Rivers and streams. Breeding: Waterfalls, bridges, and canyon walls.

Distribution: Migration: See *Status*. Breeding: See *Status*.

Occurrence: Spring: Notable records are: Two along Carbon Creek 24 May 1985 (Joan Johnston pers. comm.), one along the Peace River at Hudson's Hope on 18 April 1976 and 22 April 1984 (Joan Johnston pers. comm.), and one at the mouth of Morris Creek on 16 May 1976. Summer: Notable records are: None. Autumn: One at Alwin Holland Park east of Hudson's Hope on 27 November 1983 (Jim Buck). Winter: A notable record is one on Peace River at Alexander Mackenzie Bridge (Hudson's Hope) on 11 January 1987.

KINGLETS

Golden-crowned Kinglet *Regulus satrapa*

Status: Uncommon migrant and uncommon and local summer visitor; breeds.

Golden-crowned Kinglet (Figure 54) was first found in the Peace River District by Cowan (1939) who described it as "very scarce" and recorded it at Tupper Creek and Charlie Lake. Penner (1976) found it an "uncommon summer" resident in the Peace River valley.



Figure 54. In summer, Golden-crowned Kinglet is a bird of mature spruce forests. *Photo by R. Wayne Campbell.*

Habitat: Migration: In autumn migration it occurs in deciduous forests, as well as coniferous and mixed woodlands, and even shrubby non-forested areas such as willow thickets and hedges and brushy gardens. Breeding: Restricted to stands of coniferous trees, especially mature ones. Mainly found in stands of mature white spruce, and possibly black spruce. There is also one sighting of a male singing in a mature balsam poplar flood-plain forest along Peace Island Park Road on 1 July 1997. Logging of softwoods had rendered this species local in the North Peace River region.

Distribution: Migration: In autumn migration, Golden-crowned Kinglet was also found in thickets and even gardens throughout the study area. Breeding: Probably found wherever suitable habitat occurs. Likely this includes forests along the Peace River and its tributaries. It probably also occurs

along the Alaska Highway wherever coniferous or mixed forest remains. This kinglet was found at Mile 79, 80, 118, and 130 of the Alaska Highway as well as Mile 3 of the Mile 73 Road. It also occurred in the valley of the Beaton River by the old 103 Road bridge, at Fish Creek Community Forest, at St. John Creek at 101 Road, in the spruce stand of Beaton Provincial Park, along 281 Road off Highway 29 west of Charlie Lake, and in spruce at the mouth of the Halfway River.

Occurrence: Spring: Ten first arrival dates (1977 and 1980 to 1988) ranged from 1 April to 7 May, with five dates between 9 and 20 April. In Alberta, this species arrives in the last half of April in the south, and mid-May in the Fort MacKay area (Pinel et al. 1993). Spring migrants are not obvious in the study area, as the species arrives directly on its breeding areas. However, on 17 April 1977, Golden-crowned Kinglets were unusually common in a stand of old-growth white spruce at Fish Creek in Fort St. John. At least 50 birds were present. A week later only five were found, representing the normal spring and summer level detected for this site. Summer: See *Breeding*. Autumn: Nine final departure dates (1980 to 1988) ranged from 13 September to 18 October, with five dates between 23 September and 18 October. Migrants were obvious because of their occurrence in deciduous woodlands and thickets. The earliest record of autumn migrants was of 30 birds in a flock at Beaton Provincial Park 31 August 1986. This was also the largest autumn single count. Two examples of single migrants passing through suburban gardens occurred along 112th Avenue in Fort St. John on 15 September 1988 and 7 October 1988.

Breeding: No nests were found, but there are two records of recent fledglings. These include two fledglings at Beaton Provincial Park on 21 June 1996 (R. Wayne Campbell pers. comm.) and a pair feeding three tiny fledglings at Mile 3 of the Mile 73 Road to Buick Creek on 6 July 1998.

Comments: The Golden-crowned Kinglet is adversely affected by logging of coniferous forests (Wetmore et al. 1985).

Ruby-crowned Kinglet *Regulus calendula*

Status: *Uncommon to occasionally fairly common migrant and uncommon local summer visitor; probably breeds.*

This species was not listed by Williams (1933b). Cowan (1939) called it “abundant” in the Peace District especially in black spruce muskegs. He mistakenly assumed it was a resident. Penner (1976) called it a “common summer resident” of islands, flood plains, and slopes of the Peace River valley.

Habitat: Migration: Very widespread in brushy edge or wooded habitat including willow patches, and even suburban yards and gardens around Fort St. John and Hudson’s Hope. Breeding: Black spruce and black spruce-tamarack muskegs (Figure 55) are the home of the Ruby-crowned Kinglet during the nesting season. It was also found in white spruce dominated woodlands and possibly in stands of lodgepole pine.



Figure 55. In summer, Ruby-crowned Kinglet is mostly found in the vicinity of spruce muskegs. *Photo by R. Wayne Campbell, near Fort St. John, BC, 11 June 1996.*

Distribution: Migration: Very widespread as a migrant. Breeding: Widely distributed in muskegs and spruce dominated mixed woodlands across the North Peace River region. It was recorded along the Alaska Highway past Mile 115 and at Boundary and German lakes.

Occurrence: Spring: Twelve first spring arrival dates (1977 and 1979 to 1989) ranged from 11 to 29 April, with eight dates between 19 and 24 April. Cowan gave no arrival date, but Phinney (1998) gave 14 April 1992, 1994, and 1995 as the earliest arrival for Dawson Creek and area. Penner (1976) gave 10 May as spring arrival in the Peace River valley. Spring migrants often occurred in areas where they were not found later in breeding season. There appeared to be a steady migration through late April and early May through the North Peace River region. The three highest single site counts were 13 at Stoddart “Fish” Creek on 28 April 1987, five to 10 birds at the same site on 24 April 1977, and five birds at Beatton Provincial Park on 8 May 1982. Notable records are: A male sang along Beatton River about 18 km north of its confluence with Doig Creek on 11 April 1985 (early spring record, Mark Gardiner pers. comm), a male in song at Watson Slough area on 24 April 1982 (spring arrival), a male sang at Lost Lake, southwest of Boundary Lake, on 11 May 1982, and one sang in muskeg along 277 Road northeast of Charlie Lake on 21 May 1983. Summer: See *Breeding*. A steady autumn migration commenced in mid-August. Notable records are: A male sang on territory at Kin Park in Fort St. John on 1 June 1982, a singing male was in a small muskeg patch along 105 Road in Baldonnel on 17 June 1986, one sang 20 km south of Prespatou on 13 June 1981, a pair was very agitated at a Gray Jay searching through the mid-and lower canopy of a white spruce stand at Stoddart “Fish” Creek on 14 June 1980, and 12 were counted at Beatton Provincial Park on 31 August 1980. Autumn: Occasional peaks occurred between 2 September and 5 October. High counts of seven to 12 birds were observed at Beatton Provincial Park between 12 August and 5 October, those on the latter date considered stragglers. Eleven late departure dates (1977 and 1980 to 1988) ranged from 18 September to 21 October, with seven dates between 21 September and 5 October. Notable records are: One in willows at Fort St. John grain elevators on 22 September 1986, eight at Beatton Provincial Park on 26 September 1982, a migrant passing through a residential yard at 9535 112th Avenue in Fort St. John on 29 September 1987, one at Darnalls’ farm along 244B Road north of Fort St.

John on 15 October 1983 (final record for the year), and one in a residential backyard in Fort St. John on 21 October 1977. The latter date was exceptionally late.

Breeding: Although there are no records of nests with eggs or nestlings, Ruby-crowned Kinglet undoubtedly breeds in the North Peace River region. Males singing on territory were frequently encountered in spring. Agitated pairs followed nest-robbing Gray Jays through the spruce trees in June and early July. A fledgling showing the fleshy hinge of its beak was seen at Beatton Provincial Park on 11 July 1983. In the South Peace River area, Phinney (1998) found a nest holding at least four chicks in early June 1994.

BLUEBIRDS, THRUSHES, AND ALLIES

Mountain Bluebird *Sialia currucoides*

Status: *Rare migrant and summer visitor; breeds.*

Williams (1933b) noted that Mountain Bluebird (Figure 56) was “sparingly represented about farm buildings and pastures throughout the Block.” Cowan (1939) commented that he and Patrick Martin found only four pairs in their two months in the Tupper and Fort St. John areas. Penner (1976) did not report the species for the Peace River valley.

Habitat: Migration: Open farming and ranching country, clearings around rural properties, parks, and playing fields. Breeding: Woodland edges and open areas with snags containing cavities for nesting.

Distribution: Migration: Observations were scattered around Taylor, Baldonnel, Old Fort, Fort St. John, 281A Road west of Charlie Lake, the Old Hudson’s Hope Road, near Beatton Provincial Park, north and south ends of Charlie Lake, North Pine, Montney, 114 Road between Montney and the Alaska Highway, Cecil Lake, and Goodlow. Breeding: Summer season observations were made at Mile 62 (Alaska Highway).



Figure 56. Mountain Bluebird is a familiar species throughout the southern interior of British Columbia, but becomes rare in the Peace River region of the province. *Photo by R. Wayne Campbell.*

Occurrence: Spring: Five arrival dates (1977, 1979, 1982, 1988, and 1989) ranged from 11 to 25 April. Migration was evident until mid-May. Notable records are: One female at North Pine on 18 April 1982 (spring arrival), four males and two females at Baldonnel on 22 April 1982 (Greg Saxon pers. comm.), two males and a female at the south end of Charlie Lake on 14 May 1986 (Ed Zolinski pers. comm.), and two males in Taylor on 14 May 1986 (Betts Manley pers. comm.). Summer: One record: An adult male and a juvenile were foraging on a playing field in Fort St. John on 20 July 1987. Autumn: First southbound birds appeared in the North Peace River region between 8 August and 5 September (1982, 1983, 1986, and 1987). Autumn migrants were scarcer than spring migrants and were usually encountered as singles except for a flock of six along 121 Road in Montney on 4 September 1982 (Greg Saxon pers. comm.). Two final autumn records were both on 1 October in 1982 and 1986. Notable records are: a female was seen along Bypass Road in Fort St. John on 5 September 1986, one female in Fort St. John on 1 October 1986 (final autumn record), and one at Goodlow on 1 October 1982 (final autumn record, Greg Saxon pers. comm.).

Breeding: Only circumstantial evidence of breeding was available. A family of four was seen on a regenerating forest fire burn north of the study area at Mile 130 of the Alaska Highway (Jack Bowling pers. comm.). A female entered several old Yellow-bellied Sapsucker cavities at Mile 62, Alaska Highway on 5 May 1980.

Townsend's Solitaire
Myiodes townsendii

Status: *Rare spring migrant, casual autumn migrant, and very rare summer visitor; may breed locally.*

In 1930, Williams (1933b) found individuals at Hudson's Hope on 29 June, Bissett Flats on 4 August, and East Pine on 16 August. Neither Cowan (1939) nor Penner (1976) encountered Townsend's Solitaire (Figure 57).



Figure 57. Townsend's Solitaire is a rare find from spring to autumn each year. While suitable nesting habitat exists, breeding has not been confirmed. *Photo by R. Wayne Campbell.*

Habitat: Migration: Generally found around edges of open forest (north border of Beatton Provincial Park) or edge of trembling aspen forest and pasture (e.g., Bear Flat). It also frequents roadsides through aspens and farmland (e.g., 246 Road northwest of Fort St. John), willow hedgerows (e.g., 1.6 km east of North Pine), and black spruce muskeg (e.g., Boundary Lake). Breeding: Cut banks along road through trembling aspen parklands and grasslands (e.g., Old Hudson's Hope Road at Bear Flat) and roadside through aspen and farmland (e.g., 114 Road and Alaska Highway).

Distribution: Migration: Observations occurred in semi-open country along Highway 29 from Farrell Creek east to the Clayhurst bridge area near the Alberta border, with four records around Fort St. John. Breeding: Small populations may breed along the north side of the Peace River at points like Farrell Creek and Bear Flat.

Occurrence: Spring: Ten of a total of 18 observations were from spring. Migrants have appeared in a fairly well defined window between 10 April and 11 May, with seven records between 30 April and 11 May. In Dawson Creek, Phinney (1998) regarded Townsend's Solitaire as a "rare migrant and very rare summer visitor" between 1991 and 1995. He gave 29 April 1992 as the earliest arrival date. Notable records are: One at Kin Park, Fort St. John on 10 April 1987, one at Farrell Creek on 30 April 1983 and 5 May 1984, one at Bear Flat on 20 May 1984, one along 251 Road southwest of Cecil Lake on 10 May 1982; one at Beatton Provincial Park on 1 May 1985, and one along 103 Road northeast of the Fort St. John airport on 6 May 1978. Summer: Only three records. An adult was seen along the Jedney Road off Mile 123 of the Alaska Highway on 3 June 1984 (Tony Greenfield pers. comm.), another adult was seen that same day at the junction of 114 Road and the Alaska Highway just north of Charlie Lake, and a juvenile was seen along the Old Hudson's Hope Road at Bear Flat on 5 July 1997. Autumn: Two records: One was at 113 Road and 257 Road east of North Pine on 26 October 1985 and one on the northern edge of Beatton Provincial Park on 6 October 1986.

Breeding: No confirmed records.

Veery
Catharus fuscescens

Status: *Rare to very uncommon and very local summer visitor; possibly breeds.*

Not previously recorded in the North Peace River region. Phinney (1998) considered Veery "accidental" to the Dawson Creek area of the South Peace River with one record at Valley View on 16 June 1993. Likely Veery has recently expanded its range northwestwards from the Grande Prairie area

of Alberta where it is known as a rare but regular member of the summer avi-fauna (Semenchuk 1992).

Habitat: Migration: No records. Breeding: Appears restricted to deciduous forests, usually trembling aspen (Figure 58), with a border of willows and alder at a damp or wet site such as the interface of an aspen forest with sedge meadows around Boundary Lake, or a wooded swamp as along Upper Cache Road.



Figure 58. Veery, a locally distributed species, occurs mainly in young stands of trembling aspen. *Photo by R. Wayne Campbell.*

Distribution: Migration: No records. Breeding: Known regularly from two locations: the wet willow/aspen thickets and forest edge on the west side of Boundary Lake and a wooded swamp between km 10 and 11 on the Upper Cache Road. There is also one record of a singing Veery along 184 Road east of Cecil Lake about 1.6 km north of 103 Road on 20 June 1982.

Occurrence: Spring: No records. Summer: All records are in June and early July. Earliest dates for 1982 to 1988 ranged from 5 to 20 June. Veery may arrive in the North Peace River region earlier than records indicate, since in Alberta and the Okanagan valley of southern British Columbia it first arrives in mid-May (Salt and Salt 1976, Cannings et al. 1987). There were no records after 11 July in the study area. In Alberta, most migrants move through in early September (Salt and Salt 1976). Notable records are: Two or three birds at Boundary Lake

on 6 June 1982, one at Boundary Lake on 11 July 1982, one singing at Boundary Lake on 14 June 1983 (Tom and Alison Mickel pers. comm.), three or four males singing at Boundary Lake on 10 June 1984, one singing and one calling at km 11 along the Upper Cache Road on 9 June 1985, one heard from south causeway at Boundary Lake on 11 July 1986, and one singing at km 10.5 on the Upper Cache Road on 7 July 1997.

Breeding: The only suggestion of breeding are observations of singing birds on territory in season and of a pair agitated at the presence of a Red Squirrel (*Tamiasciurus hudsonicus*) along the Upper Cache Road on 15 June 1986.

Gray-cheeked Thrush *Catharus minimus*

Status: *Very rare transient.*

This species was mentioned by Williams (1933b) but only in the context that either it, or the Swainson's Thrush, was the common woodland summer thrush in the Peace River District. Clearly it was the Swainson's Thrush he was referring to. Gray-cheeked Thrush is not mentioned by Cowan (1939) nor Penner (1976).

Habitat: Migration: Deciduous thickets in mature mixed forest along Peace Island Park Road south of Taylor and willows at the edge of muskeg at Boundary Lake.

Distribution: Migration: Three observations from Peace Island Park Road and one from Boundary Lake.

Occurrence: Spring: Two records: One sang just before dawn at Peace Island Park Road on 17 May 1986. That same day another was heard singing in thickets at the edge of muskeg at Boundary Lake. Summer: Two records: One was seen at Peace Island Park Road on 22 August 1986 (Mike Force pers. comm.). One or two were seen at Peace Island Park Road on 19 August 1987 (Tony Greenfield pers. comm.). The latter sighting was incorrectly given as 19 August 1986 in Campbell et al. (1997).

Comments: Three other records have appeared in the literature. An early spring arrival date of "Fort St. John, May 13" is given in Bent (1949, 1964). The source of this record is unknown. Campbell et al. (1997) reported that a Gray-cheeked Thrush banded near Beloit, Illinois, on 9 September 1973 was recovered at Fort St. John on May 1978. Also in Campbell et al. (1997) is a noteworthy record for "Boundary Lake on 11 July 1976" without details.

Swainson's Thrush *Catharus ustulatus*

Status: *Uncommon to occasionally fairly common migrant and uncommon to fairly common summer visitor; breeds.*

Williams (1933b) did not specifically identify Swainson's Thrush but lumped it with the Gray-cheeked Thrush and stated that one or the other was the commonest woodland songbird in the Peace District. Cowan (1939) found Swainson's Thrush less abundant than Hermit Thrush in both the North and South Peace River region but still "distributed in fair numbers." Penner (1976) suggested this species was an "uncommon to common summer resident" in the Peace River valley.

Habitat: Migration: Most habitats are described in *Breeding*. In migration this species also frequents willows around swamps and suburban gardens. In late summer and early autumn, migrants congregated in the understory of red-osier dogwood beneath an open forest of mature balsam poplars. Breeding: Found in a wide variety of woodlands but most frequently in moist mixed woods of trembling aspen-balsam poplar-spruce. Also found in young aspen forests though perhaps not as frequently as the Hermit Thrush, the edges of black spruce muskegs, and mature balsam poplar floodplain forests along the Peace River. Occasionally is found in aspens and treed seeps even on otherwise arid south-facing slopes.

Distribution: Migration and Breeding: Widely distributed over the North Peace River region.

Occurrence: Spring: Ten arrival dates (1980 to 1989) ranged 9 to 20 May. Earliest arrivals were silent and inconspicuous. Birds detected after 15 May were usually singing. From 22 to 25 May 1978, a sudden cold front with snow flurries and temperatures as low as 0° C grounded thousands of Swainson's Thrushes from Hudson's Hope east at least to Fort St. John, where on 23 to 25 May, Swainson's Thrushes were common throughout Fort St. John on lawns and gardens. Notable records, all spring arrival dates, are: One silent bird at Stoddart "Fish" Creek in Fort St. John on 10 May 1980, three along Peace Island Park Road on 14 May 1983, several near Clayhurst bridge site on 26 May 1986, and one along 112th Avenue in Fort St. John on 9 May 1988. Summer: See *Breeding*. Migrants appeared uncommonly in wooded suburban gardens in Fort St. John as follows: one at 9535 112th Avenue in Fort St. John on 19 August 1987, an adult and an immature at the same location on 22 August 1987, and one at the same site on 11 September 1987. In the North Peace River region, the highest one-location count was of 20 birds along Peace Island Park Road on 25 August 1988. Notable records are: Five at Bear Flat on 5 July 1997, 11 singing at one site along Johnstone Road, south of Taylor on 3 July 1981, a juvenile at Beaton Recreational Area on 26 July 1982, and one at Boundary Lake on 10 June 1984. Autumn: Eight final autumn dates (1979, 1981 to 1982, and 1984 to 1988) ranged from 25 August (very early) to 13 September, with six dates between 1 and 13 September. Occasionally numbers could be found into September as on 6 September 1987, when several were heard passing over Fort St. John just before dawn. Notable records are: One at the south end of Charlie Lake on 4 September 1981 and one at Peace Island Park Road on 2 September 1984 (final autumn record).

Breeding: One nest and three observations of newly fledged young indicate that Swainson's Thrush breeds in the region. The nest, which had an incubating adult (Figure 60), was a cup composed of straw and grasses built at 3 m in a white spruce sapling near a trail at the interface of a mature white spruce stand and mature trembling aspen forest in Beaton Provincial Park on 12 June 1982. This date

matches well the two nests reported by Phinney (1998) for the Dawson Creek area. One was found on 18 June 1994 and the other on 24 June. Each contained four eggs.



Figure 59. Although Swainson's Thrush is a fairly common summer visitor, only a single nest was found. *Photo by Glenn R. Ryder.*

"Adults with newly fledged young were seen in the North Peace River region on three occasions: one adult with a fledgling along Johnstone Road on 1 July 1981, one adult with two fledglings at Beaton Provincial Park on 4 July 1981, and a tiny fledgling alone in streamside alders at Gravel Hill Creek on the road to Dunlevy Inlet 7 July 1997." An adult carrying food was seen along Peace Island Park Road on 1 July 1997. Independent, well-fledged juveniles were often encountered from mid-July onwards.

Hermit Thrush *Catharus guttatus*

Status: *Uncommon migrant and summer visitor; breeds.*

Hermit Thrush (Figure 59) is described as "common" throughout the Peace River Block by Williams (1933b) and labeled as a fairly abundant breeding bird in both the South Peace and North Peace River regions by Cowan (1939). Penner (1976) called it a "common summer resident" in the Peace River valley.



Figure 60. Generally considered a subalpine species in much of British Columbia, in the North Peace River region Hermit Thrush occurs in mixed forests throughout the area. *Photo by R. Wayne Campbell.*

Habitat: Migration: During southbound passage, this species accepted a wider variety of habitats including willow and dogwood thickets, and balsam poplar riparian forest. Breeding: Several types of woodlands including trembling aspen (*e.g.*, mid-causeway on west side of Boundary Lake), swamp aspen-poplar woods (*e.g.*, Swanson Lumber Road in Fort St. John), aspen-black spruce interface (*e.g.*, German Lake and Boundary Lake), white spruce-tamarack-aspen-willow-swamp birch (*e.g.*, Watson Slough), and lodgepole pine-aspen (*e.g.*, Hudson's Hope). In the South Peace River region, Phinney (1998) described pole-stage trembling aspen as its primary habitat.

Distribution: Migration: As in *Breeding*. Small aggregations were found in late summer in dogwood bushes at Peace Island Park south of Taylor. Breeding: Widely distributed in forests across the study area, but not as generally distributed as the

Swainson's Thrush. It occurs along Johnstone Road south of Taylor (especially between km 4 and 5), Baldonnel (105 Road muskeg), Grand Haven, and Fort St. John, especially along Swanson Lumber Road, Stoddart "Fish" Creek, and south sewage lagoons. In the west portion of the study area, it was seen Hudson's Hope, Beryl Prairie, the Upper Cache Road (km 1, 4, 5 and 12), Watson Slough, and the wooded slopes above Bear Flat. North of Fort St. John, Hermit Thrush was found occasionally around Charlie Lake, St. John Creek near 101 Road, the 248A Road marshes, the 101 Road over the Blueberry River, and the bridge at the Altona turn-off south of Prespatou. East of Fort St. John, it was observed in most woodlands to the Alberta border.

Occurrence: Spring: Thirteen arrival dates (1976, 1977, 1979, and 1980 to 1989) ranged 30 April to 15 May, with 12 records between 30 April and 10 May. The first arrival in 1982 (15 May) was very late, following an exceptionally long, cold winter with much snow remaining in the early spring. Cowan (1939) first recorded the Hermit Thrush at Tupper Creek on 12 May 1938. Phinney (1998) gave an early arrival of 19 April 1992 for Dawson Creek. A small peak in migration was evident in the North Peace River region between 5 and 15 May. For example, small numbers appeared on lawns and garden edges around Hudson's Hope on 5 May 1979. This species is usually widely distributed from 10 to 15 May. Notable records are: One migrant in scrubby aspens at 248A Road marshes, North Pine on 30 April 1977, two in woods on the west side of Cecil Lake on 3 May 1980 (spring arrival), one singing at Watson Slough on 3 May 1981 (spring arrival), six at Bear Flat on 5 May 1984 (spring arrival), and two at the north end of Charlie Lake on 21 May 1983. Summer: See *Breeding*. Autumn migration began by mid- August. Notable records are: One at German Lake on 15 June 1980, two heard in muskeg southwest of Boundary on 18 June 1984, an adult and a juvenile at St. John Creek near 101 Road on 25 August 1985, and one juvenile at Beatton Provincial Park on 27 August 1982. Autumn: Small numbers of migrants were observed until mid-September. The highest single site count was four birds at each of three sites between 4 and 18 September. Eight last

autumn dates (1980 and 1982 to 1988) ranged 6 to 24 September. Notable records (all final autumn dates) are: One at Beaton Provincial Park on 10 September 1983, one at the southeast corner of Charlie Lake on 18 September 1982, and at least one feeding on dogwood berries along the Peace Island Park Road on 23 September 1984.

Breeding: There is no recent evidence of breeding although Hermit Thrush is widespread with males singing on territory in summer. Nest searches are needed. Cowan (1939) found nests at Charlie Lake in June 1938. All nests contained eggs, and all were built in shallow depressions in the ground. Cowan found eight nests in the Peace River District, five at Tupper Creek and three at Charlie Lake. Of the eight nests, one contained four eggs (three thrush eggs and one Brown-headed Cowbird egg), one contained two eggs of each species, and finally one held one thrush egg and one cowbird egg. Cowan concluded that the Hermit Thrush seemed to be the chief host of the Brown-headed Cowbird. Phinney (1998) found four nests in the South Peace River region in the early to mid-1990s. One of the four nests had been parasitized by a cowbird. This nest held two Hermit Thrush eggs and three cowbird eggs on 28 May 1994.

American Robin
Turdus migratorious

Status: *Fairly common to occasionally very common migrant and fairly common to common summer visitor; breeds.*

Williams (1933b) found American Robin (Figure 61) common around farms and pastures and sparingly elsewhere in the Peace River Block. Cowan (1939) called robins “abundant” at Tupper Creek and Charlie Lake. Penner (1976) found them “common summer residents” in the Peace River valley.

Distribution: Migration and Breeding: Recorded throughout the North Peace River region.

Habitat: Migration: In spring, this species was often found in backyards and on lawns of country homes,

school grounds, in parks, along woodland edges of all types, lakeshores, and edges of Beaver ponds and other openings in mixed woodlands. In late summer and autumn, robins congregated in trembling aspen groves and in the red-osier dogwood understory of open balsam poplar-dominated forests. Breeding: Edges of most forest types including trembling aspen forest, aspen-white spruce-balsam poplar forests, poplar flood plain forests, black spruce muskegs, and gardens. It preferred human-influenced habitats such as roadsides, cut-lines, parks, and around ponds and lakeshores. Cowan (1939) observed that robins nested around farm buildings, and in climax trembling aspen forest and lakeshore willows. Penner (1976) noted that they foraged commonly on river banks.

Occurrence: Spring: Thirteen arrival records (1976, 1977, and 1979 to 1989) ranged from 27 March (very early) to 21 April, with seven dates between 5 and 15 April. The peak of spring migration generally occurred between 23 April and 17 May. Individuals and small flocks of 10 to 20 birds were frequently seen during this period. There were two instances of weather-caused “groundings” of large numbers that concentrated in the North Peace River region before continuing their dispersal. The smaller of the two occurred on 30 April 1986 when flocks were reported from many locations in an area from Fort St. John south to at least Taylor, and east to at least Cecil Lake. For example, Betts Manley of Taylor (pers. comm.) counted 150 robins in her backyard that day. The next day small flocks were common along the grassy roadsides of the Alaska Highway between Fort St. John and Dawson Creek. The most dramatic “grounding” was prolonged, and lasted between 21 April and 1 May 1988 during a spell of cold rain and occasional snow flurries. Robins appeared in the hundreds in many locations. Roberta Long of Old Fort (pers. comm.) counted 100 in her yard on 21 April while John Manley (pers. comm.) estimated over 1,000 around Taylor the same day. Even on 1 May, flocks of 50, 70, and 84 were encountered around Fort St. John. Notable records are: Two at 112 Road and 101 Road on 13 April 1988 (spring arrival), one at Fort St. John on 4 April 1989 (spring arrival), and 70 at the south



Figure 61. American Robin migrates and breeds in a wide variety of habitats including the edges trembling aspen forests, lakeshores, transmission corridors, and urban areas. Photo by R. Wayne Campbell, Beatton Park, BC, 23 June 1996.

end of Cecil Lake on 30 April 1986. Summer: See *Breeding*. Small assemblies of robins concentrate around Saskatoon berry bushes in early July, but are not migratory flocks. Small apparent migratory flocks first appear in early or mid-August. The earliest post-breeding flocks were 54 birds at St. John Creek near 101 Road on 11 August 1977, and 19 birds along Peace Island Park Road on 13 August 1988. The largest late summer flocks were noticed between 24 August and 23 September. A notable record is 20 robins feeding in a mountain ash in Fort St. John on 27 August 1980. Autumn: Seven final autumn records (1982 to 1988) ranged from 3 October to 13 November. Latest records (10 and 13 November) were of single birds staying very close to mountain ash trees in cold weather. Notable records are: at least 100 in dogwood bushes at the southeast corner of Charlie Lake on 12 September 1982, 300 in dogwood bushes along Peace Island Park Road on 23 September 1984, and one in a mountain ash tree on 13 November 1982 (final autumn record). Winter:

A single bird at Old Fort on 15 February 1987 (Ricki Davies pers. comm.) during a mild period in winter was a very early record.

Breeding: Seventeen nests and 17 records of recent fledglings. The earliest nests were being constructed 8 May, 18 May and 19 May, but it is likely that in very mild springs some robins may build significantly earlier. For example, around Dawson Creek, Phinney (1998) found a nest containing pin-feathered young on 11 May 1992, which places nest construction in mid-April. Other nests have been seen under construction between 1 and 8 June ($n = 3$).

Nests with eggs were found 13 May ($n = 1$) and 1 June-13 June ($n = 4$). In the South Peace River region, Phinney (1998) had a nest with eggs 7 May 1993 and found eggs in nests as late as 8 to 12 July. In the North Peace River region, seven nests containing young have been found between 4 and 29 June. Dependent fledglings were seen between 31 May and 2 August ($n=10$). Notable records are: A

female constructing a nest along Peace Island Park Road 19 May 1986, two adults and two juveniles in the campground at Beaton Provincial Park on 19 June 1986, a nest with two eggs along the north edge of Beaton Provincial Park on 12 June 1983, a nest with three eggs at km 6 along Johnstone Road on 13 June 1982, one well-fledged juvenile at Hudson's Hope on 28 June 1980, and adults feeding week-old chicks in a nest in Fort St. John on 29 June 1977. Fifteen nests were located in balsam poplar (3), trembling aspen (4; Figure 62), alder (2), willow (3), Manitoba maple (2), and white spruce (1). Other nest sites included a willow stump in a clear cut and the top rung of a ladder hanging on the side of a shed.



Figure 62. Female American Robin incubating at Beaton Park, BC. Photo by R. Wayne Campbell, 23 June 1996.

Comment: In the cold climate of the North Peace River region residents look forward for the first robins to appear as a sign that the long winter is finally over.

Varied Thrush *Ixoreus naevius*

Status: Rare, but annual spring and autumn migrant; likely an uncommon summer visitor along the Alaska Highway from about Mile 80 northwards.

Varied Thrush was not previously mentioned by Williams (1933a,b), Cowan (1939), or Penner (1976) for the Peace River area.

Habitat: Migration: Mixed woodlands or especially in shady stands of conifers such as the stand of White Spruce at Beaton Provincial Park and its counterpart at Stoddart "Fish" Creek. Occasionally it appeared in more deciduous forest such as Peace Island Park Road or Swanson Lumber Road.

Distribution: Migration: Occurred locally and sparsely around Fort St. John, Hudson's Hope, and along Peace Island Park Road south of Taylor. On single occasions it appeared in other forested sites including the mouth of the Halfway River, the southeast corner of Charlie Lake, St. John Creek at 101 Road, and along Swanson Lumber Road on the east side of Fort St. John. Breeding: Not recorded. The species likely breeds north of Mile 80 along the Alaska Highway.

Occurrence: Spring: There were 15 spring records for the period 1975 to 1989, all of which occurred between April 9 and 13 May. The latest spring record, 13 May, indicated the termination of spring passage. For the Dawson Creek area of the South Peace River region, an early arrival date of 22 April 1993 was given by Phinney (1998). In the North Peace River region, the largest number of birds per site was two at Hudson's Hope on 6 May 1979 and two along the Peace Island Park Road on 23 April 1988. Notable records are: A female killed by a house cat on the Swanson Lumber Road in Fort St. John on 29 April 1987, a male singing on an island in the Peace River, east of the Farrell Creek mouth, on 21 April 1984, and a female at the McKenzie highway bridge in Hudson's Hope on 5 May 1979. Summer: One summer record of a singing male at Beaton Provincial Park on 22 June 1985. Autumn: Southbound passage was well marked. Fourteen records were from the vicinity of Charlie Lake, Stoddart "Fish" Creek, and the Peace Island Park Road. These ranged from 28 August to 2 October. Most records were of one or two birds per site. However, four birds were seen at Beaton Provincial Park on 17 September 1983. Notable records are: One at Beaton Provincial Park on 6 September 1980, a male and two females at Beaton Provincial Park on 18 September 1982, and two along Peace Island Park Road on 23 September 1984.

MOCKINGBIRDS

Northern Mockingbird *Mimus polyglottos*

Status: *Casual.*

Not previously recorded in the North Peace River region.



Figure 63. Northern Mockingbird was first reported in in the Peace River region of British Columbia during the 1980s. *Photo by Chris Siddle, Fort St. John, BC, 11 November 1982. BC Photo 3738.*

Occurrence: Three records. An immature was seen by Joan Johnston (pers. comm.) between 1 and 12 November 1982 near 9308 - 102 Avenue in Fort St. John (Grunberg 1983, Campbell et al. 1997). The bird was photographed by the author and a print was deposited in the British Columbia Photo File for Vertebrate Records (see Campbell and Stirling 1971; Figure 63). The second record was an adult seen at Arnold and Nelda Bennett's farm at Two Rivers on 13 July 1985. In 1985, a Northern Mockingbird spent the summer and autumn in Taylor, often appearing at the feeder of Mrs. Gwen Bogewold at 10067 - 101 Street. The author was notified of the bird on 17 November 1985 and on 23 November it was seen floundering in the snow. It was rescued and given to two local veterinarians on 25 November but it died on 27 November. The carcass was preserved at the Beatty Biodiversity Museum (Cowan Vertebrate Museum) at the University of British Columbia in Vancouver.

STARLINGS

European Starling *Sturnus vulgaris*

Status: *Uncommon to occasionally local common migrant and summer visitor and rare in winter; breeds.*

Williams (1933b), Cowan (1939) and Penner (1976) did not record European Starling (Figure 64).



Figure 64. European Starling was first recorded in the Peace River region of British Columbia in 1952. Since then, the species has become a common sight from spring to autumn each year. *Photo by R. Wayne Campbell.*

Habitat: Migration: See *Breeding*. Also found in agricultural fields, burned grasslands in early spring, feedlots, pastures, and landfills. Breeding: Recorded in seven different habitats during the nesting season. These include fields, farms and roadsides, especially along the Alaska Highway between Fort St. John and Charlie Lake; regenerating old burns as at the mouths of Cache Creek and the Halfway River; open farmland with trembling aspen groves at Baldonnel; city parks with large aspens containing nesting

cavities; back alleys and yards in cities; balsam poplar stands along creeks and rivers; and the edges of aspen forests around lakes, marshes and ponds, especially near Beatton Provincial Park. Winter: Frequents bird feeders, dumpsters, warm chimneys, back alleys and buildings in Fort St. John.

Distribution: Migration: Most frequently recorded in the agricultural country around Fort St. John, North Pine, and Montney, and occasionally from Rose Prairie and east to Goodlow, Flatrock, and Boundary Lake. There is one remarkable record on 23 March 1984 of eight migrants at Anderson's ranch near the mouth of the Chowade River just north of the study area. Breeding: Locally distributed from Hudson's Hope and Beryl Prairie and at scattered points along Highway 29 (e.g., Cache Creek mouth, Halfway River mouth, and possibly Lynx Creek). This species is most frequent along the light-industrial section of the Alaska Highway between Charlie Lake and Fort St. John. It also nested just north of Beatton Provincial Park and throughout Fort St. John. Occasionally found around Cecil Lake, North Pine, Montney, and south to Taylor. Winter: A small flock overwintered in downtown Fort St. John during the 1980s.

Occurrence: Spring: Nine arrival dates (1977, 1978, and 1982 to 1988) ranged from 4 to 19 March, making the European Starling one of the earliest arriving spring migrants in the North Peace River region. Spring migration occurred over six or seven weeks, from about 9 March to 30 April with no evident peak in passage. Flock size was much smaller than in the autumn. Of 41 flocks of 20 or more birds each, only seven had 100 birds each. Generally flock size ranged between five and 50 birds. Notable records are: One hundred around cattle at km 8 along the Upper Cache Road on 13 April 1985, an adult carrying nest material in Fort St. John on 17 April 1989, and a pair with a nest (old Northern Flicker hole) in a living trembling aspen on the north edge of Beatton Provincial Park on 30 May 1985. Summer: See *Breeding*. Juvenile starlings form flocks in summer and often disperse over considerable distances (Feare 1984). Such movements are probably unrelated to autumn

migration. The earliest flock of juveniles on record was one of 200 birds, almost all juveniles, near km 5 to 6 of the Upper Cache Road on 17 June 1984. Autumn flocks formed in early August. Notable records are: Six at the south sewage lagoons in Fort St. John on 20 July 1987, 40 in Fort St. John on 28 July 1988, 30 juveniles at the grain elevator marsh east of Fort St. John on 24 June 1986, an adult feeding three juveniles at 248 and 101 roads in North Pine on 12 June 1985, and 600 at 250 and 101 roads in North Pine on 28 August 1986. Autumn: Largest numbers (Figure 65) appeared between 14 August and 20 September. The largest assembly recorded was 2,000 to 3,000 birds that roosted in the marsh on the east side of Fort St. John on 2 September 1984. Ten dates of last departure (1978 and 1980 to 1988) ranged from 12 October to 27 November. Most starlings depart by early November. Notable records are: Three hundred and fifty along 121 Road south of Montney on 17 September 1983 and three at the landfill in Montney on 277 Road on 27 November 1982 (final autumn record). Winter: One flock wintered in Fort St. John from 1984 to 1987. Notable records, all in Fort St. John, are: Two on 24 December 1984, 12 on 17 January 1986, 24 on 11 December 1986, and 10 on 22 December 1987.

Breeding: Local breeder. There are four records of nests and eight records of dependent broods of fledglings. Some starlings established territories as early as mid-March (e.g., two singing males at Stoddart "Fish" Creek on 19 March 1984) and birds carrying nest material were seen as early as mid-April (e.g., an adult at Fort St. John 17 April 1989). Northern Flicker holes in larger trembling aspens were favoured in the North Peace River region as nest sites. Phinney (1998) also noted this in the Dawson Creek area. Natural cavities, such as those in the large balsam poplars at the mouth of the Halfway River are also used for nesting. In Baldonnel, cavity trees were located near human habitation or in open edge habitat such as the river shore at the mouth of Cache Creek. Active nests were found between 30 May and 1 July. Broods of dependent fledglings were seen from 6 to 29 June. However, nests that were still active on 1 July indicate that broods may fledge well into early July some years.



Figure 65. The largest flocks of European Starling are reported for the late summer to early autumn period, mainly in aggregations at pre-roosts. *Photo by R. Wayne Campbell.*

Comment: European Starling was introduced into North America during the second half of the 19th Century. Following introductions to Central Park, New York, in 1890 and 1891, the species became successfully established and began its remarkable spread across the continent. In 1952, this species was first recorded in the Peace River region of British Columbia about 10 km north of Dawson Creek (Campbell et al. 1997).

PIPITS

American Pipit *Anthus rubescens*

Status: *Fairly common to common migrant.*

Williams (1933b) found American Pipit “common” at Arras and Sunset Prairie, both in the South Peace River region, from 28 August to 2 September 1930. Cowan (1939) found American Pipit (Figure 66) in small flocks at Tupper Creek from the party’s arrival on 6 May to about 15 May 1938. Penner (1976) termed the American Pipit (known then as Water Pipit) a “common to abundant migrant” in the Peace River valley.



Figure 66. American Pipit passes through the North Peace River region to and from its alpine breeding areas. *Photo by R. Wayne Campbell.*

Habitat: Migration: Favours sand and pebble beaches, lakeshores, mudflats, open edges of ponds and sloughs, grasslands including breaks, playing fields, and farm fields.

Distribution: Migration: Recorded in all open areas investigated in the North Peace River valley. The species undoubtedly breeds in alpine areas of the Rocky Mountains west of the study area.

Occurrence: Spring: Eleven first arrival dates (1978 and 1980 to 1989) ranged from 14 to 29 April, with six dates between 18 and 24 April. Pinel et al. (1993) found the first spring migrants were in southern Alberta between 13 and 27 April. In the North Peace River region, spring migration peaked between 24 April and 14 May. Penner (1976) noted that spring migration in the Peace River valley lasted for the first three weeks of May. He gave 9 May as a peak for spring 1975 when “a large number... was observed moving down the river valley.” Flock size in the North Peace River region ranged from 10 or fewer birds to 200. Flocks larger than 30 birds were unusual. Thirty birds was also the flock size given by Cowan (1939) in the Tupper Creek area in May 1939. Nine dates of spring departure ranged from 19 to 25 May (1977 and 1980 to 1987). Notable records are: Two hundred at Two Rivers on 24 April 1980 and 50 at Cecil Lake on 2 May 1982. Summer: The first few southbound pipits arrived around Fort St. John in late August. Eleven first autumn arrival dates (1976 to 1978, 1980 to 1982 and 1984 to 1988) ranged from 20 August to 4 September. Autumn: Migrant numbers peaked between 1 and 14 September, with flocks about the same size as in the spring or smaller. The three largest autumn flocks ranged between 100 and 200 birds. Nine final autumn records (1979 to 1980 and 1982 to 1988) ranged from 20 September to 30 October with five dates between 22 September and 3 October. Notable records are: One hundred along 271 Rd. on 1 September 1987 and 100 along 140 Road northwest of Charlie Lake on 12 September 1987. The latest North Peace River region record was of a single bird on 30 October 1986 foraging on the edge of wavelets along a beach at Charlie Lake Provincial Park as the lake was freezing over. The bird’s bare legs already had a thick coating of ice that likely prevented it from flying. Given that the ambient temperature was -10° C, it is unlikely that it survived.

WAXWINGS

Bohemian Waxwing *Bombycilla garrulus*

Status: *Locally very common migrant, uncommon to common winter visitor, and rare to uncommon summer visitor; may breed.*

Williams (1933b) found Bohemian Waxwing (Figure 67) “common” at Hudson’s Hope and south of the Peace River from July to September 1930. Cowan (1939) called it “an uncommon breeding species” in the Peace District. Penner (1976) did not list it for the Peace River valley.

Habitat: Migration and Winter: Edges of all types of forests, gardens, and backyards with fruit-bearing trees and shrubs. It is occasionally found in open, virtually treeless farm fields if fruit-bearing shrubs are present. Breeding: Appeared to favour forest edges, or open muskeg, with trees occurring in small patches or in isolation. Most frequent around black spruce muskegs.

Distribution: Migration and Winter: Erratic and locally distributed according to fruit supplies. It was frequent in Fort St. John where it favoured mountain ash trees and other fruit and berry trees and shrubs. Flocks were seen throughout the North Peace River region. Breeding: Locally distributed and may not re-occur at locations formerly favoured. It was also found near muskegs at German Lake and Boundary Lake and near km 1 of the Upper Cache Road.

Occurrence: Spring: Flocks disappeared from most of the North Peace River region around the first week of May, sometimes earlier. The latest large flocks (over 100 birds) are usually seen before mid-April. Notable records are: A pair at Hudson’s Hope on 6 May 1979, 120 in a flock at the mouth of Farrell Creek in lodgepole pines on 14 April 1984, 10 at German Lake on 7 May 1988, and seven flying over muskeg at Boundary Lake on 16 May 1982. Summer: Breeding is likely but was not confirmed. Pairs were typically seen perched on black spruce, in muskeg at German and Boundary lakes, as well as sedge fens near Watson Slough. Notable records



Figure 67. Bohemian Waxwing is primarily a common migrant in the North Peace River region. *Photo by R. Wayne Campbell.*

are: A pair in muskeg at Boundary Lake on 13 June 1983 (Mike Shepard pers. comm.), three flying over muskeg at Boundary Lake on 24 June 1984, one at km 1 of the Upper Cache Road on 9 June 1985, and one at German Lake on 11 July 1986. Autumn and Winter: Generally arrived in the Fort St. John area in October or early November, although somewhat erratic. It was more frequent some winters than others. Bohemian Waxwings have been seen feeding on frozen berries at minus 40° C in Fort St. John. Notable records are: Five hundred probably feeding on Saskatoon berries on south-facing grassy slope near St. John Creek and 101 Road on 29 October 1986, 65 eating grit at Montney on 27 November 1982, and 70 in two flocks in Fort St. John on 23 January 1987.

Breeding: A pair was collected near Tom's Lake, South Peace River region, on 23 June 1938 (Cowan 1939). The female had an incubation patch and probably had a nest nearby. Williams (1933b) found an active nest containing two nestlings in a young "poplar" at Jackfish Lake, north of Chetwynd, on 27 July 1930.

Comment: The Bohemian Waxwing is the popular and sometimes conspicuous "winter" waxwing that can appear in flocks numbering hundreds of individuals. They suddenly appear and move about in urban neighbourhoods, stripping fruit and berry-bearing trees like mountain ash (*Sorbus* spp.).

Cedar Waxwing
Bombycilla cedrorum

Status: Uncommon to occasionally fairly common migrant and summer visitor; breeds.

Cedar Waxwing (Figure 68) was not listed by Williams (1933 a,b). Cowan (1939) did not designate its status but noted its occurrence. Penner (1976) called it an “uncommon summer resident” in the Peace River valley.

Habitat: Migration: Recorded at the edges of woodlands and thickets around ponds, sewage lagoons, streams, and outlets of lakes. It also occurs in suburban yards, farmyards with open woodlands and/or shrub communities. Breeding: Nests in open woodlands, treed gardens, shrub communities on breaks, and in trees and thickets around bodies of water including Beaver ponds. This species is often associated with Saskatoon bushes and red-osier dogwoods where it feeds on fruit.

Distribution: Migration and Breeding: Appears to be restricted to the southern one-third of the North Peace River region, especially along the Peace River and the lower reaches of its tributaries and in rural areas around Fort St. John, Cecil Lake, and Boundary Lake.

Occurrence: Spring: One record. Penner (1976) gave an unusually early spring arrival date of 8 May for the Peace River valley. Summer: Ten arrival dates (1980 to 1989) ranged from 2 to 17 June, with seven dates between 2 and 8 June, making the Cedar Waxwing one of the last spring migrants to arrive in the North Peace River region. Notable records are: A pair at Watson Slough on 3 June 1986, 10 at Beatton Provincial Park on 8 June 1983, and an adult and a juvenile near Cecil Lake on 19 August 1984. Post-breeding flocks form in late July and August. Flock size was usually fewer than 25 birds. The two largest flocks were 30 at the north sewage lagoons in Fort St. John on 26 July 1987 and 33 at St. John Creek on 27 August 1986. Autumn: Nine latest autumn dates (1979 and 1981 to 1988) ranged from 7 to 18 September.

Breeding: No nests were found. Two recently fledged young fed by an adult at Alwin Holland Park on 8 September 1979 must have hatched in late August. In the South Peace River region, Phinney (1998) found nests with eggs between 15 June and 4 July. Old nests were often located in willows or trembling aspen saplings close to the forest edge.



Figure 68. Until the late 1930s, Cedar Waxwing was not known to occur in northeastern British Columbia. *Photo by Alan Wilson.*

WOOD-WARBLERS

Tennessee Warbler
Vermivora peregrina

Status: *Uncommon to occasionally fairly common migrant and summer visitor; breeds.*

Not recorded by Williams (1933 a, b). Cowan (1939) found the Tennessee Warbler “abundant” at Tupper Creek and Charlie Lake. Penner (1976) termed it a “common summer resident” in the Peace River Valley.

Habitat: Migration: In spring, occurs in most woodland types. More widespread in late summer and early autumn when it occurs with other warbler migrants in woodland edges as well as willow thickets and other tall shrub communities. Breeding: Found in the North Peace River region in pure young trembling aspen groves (e.g., km 5 of Upper Cache Road; Figure 69), trembling aspen-balsam poplar mix (e.g., Beaton Provincial Park), alder-willow thickets, around black spruce muskeg (e.g., north of Boundary Lake), trembling aspen-tamarack-willow-birch and black spruce (e.g., km 2 of Upper Cache Road) and white spruce- trembling aspen woods (e.g., Dinosaur Lake).



Figure 69. Tennessee Warbler breeds in a wide variety of forested habitats but prefers stands of pure trembling aspen with some shrub understory. *Photo by R. Wayne Campbell, west of Fort St. John, BC, 11 July 2003.*

Distribution: Migration and Breeding: Recorded throughout the North Peace River region in suitable habitat.

Occurrence: Tennessee Warbler is more common some summers than others. Spring: Nine spring arrival dates (1981 to 1989) ranged from 14 to 28 May, with five dates between 18 and 23 May. Phinney (1998) gave 13 May as the earliest arrival for the Dawson Creek area. Birds arrived in good numbers with the spring movement peaking during the third and fourth weeks of May. Notable records are: nine at Johnstone Road south of Taylor on 20 May 1981, 12 at Beaton Provincial Park on 23 May 1981, and one at Beaton Provincial Park on 14 May 1987 and 30 on 19 May 1987. Summer: Cowan (1939) found three or four breeding pairs on territory in a 400 yard strip at Charlie Lake on 10 June 1938. Cyclic fluctuations are well known for this species and may be correlated with outbreaks of spruce budworm (Curson et al. 1994). This may explain why Tennessee Warbler was scarce in summer 1981, but common during summer 1984 when 11 singing males were counted between Boundary Lake and Lost Lake on 24 June 1984. Southbound migration began during the fourth week of July. Numbers built toward the middle of August. Highest counts for 1986 to 1988 occurred between 13 and 23 August. Notable records are: 10 at a birdbath at 9535 - 112th Avenue in Fort St. John on 13 August 1987 and seven at St. John Creek on 17 August 1986 and seven on 23 August 1988. Autumn: Numbers dwindled by 1 September. Seven final autumn dates (1981 and 1982 and 1983 to 1988) ranged from 30 August to 18 September, with six dates between 6 and 18 September. Notable records are: one along Peace Island Park Road on 6 September 1987 and one at Charlie Lake on 18 September 1982.

Breeding: No nests were located. However, four fledged broods attended by adults were recorded, all in Beaton Provincial Park. The young birds were all recently fledged and dates ranged from 10 to 17 July. Phinney (1998) found nests in the Dawson Creek area on 17 June and 12 June. Both had been parasitized by Brown-headed Cowbirds. The Tennessee Warbler typically nests on the ground,

often using a sphagnum hummock as a nest site (Campbell et al. 2001).

Comments: Campbell et al. (2001) erroneously designated the Tennessee Warbler a very rare migrant and summer “visitant” in the Boreal Plains ecoregion.

Orange-crowned Warbler
Vermivora celata

Status: *Uncommon to fairly common migrant and summer visitor; breeds.*

Not recorded by Williams (1933a,b). Cowan (1939) found Orange-crowned Warbler (Figure 70) “abundant.” Penner (1976) called it a “common summer resident” on the floodplain of the Peace River.



Figure 70. Orange-crowned Warbler is a fairly common migrant and summer visitor that probably breeds in edge habitats throughout the North Peace River region. *Photo by R. Wayne Campbell.*

Habitat: Migration: This warbler appears to accept the widest range of habitats during the late summer to early autumn migration, when it was recorded from edge habitats as well as almost any area of shrubs, thickets, or regenerating saplings. In spring migration, it occurs most frequently in breeding habitats. Breeding: Avoids deep forest. It favours brushy edge and areas of regenerating saplings, second-growth trembling aspen stands on south-facing hillsides, shrubby edges of aspen groves with willow, Saskatoon, and saplings growing between

grass slopes. The species is also found in the red-osier dogwood and alder understory in open mature balsam poplar riparian woodlands, in regenerating brushy growth along transmission corridors, and in overgrowing clearings in spruce forest and in brush surrounding white spruce, alder, and willow. Orange-crowned Warbler is one of the characteristic birds of the Peace River “breaks.”

Distribution: Migration: Widespread in late summer and early autumn. Breeding: Occurs throughout the North Peace River region.

Occurrence: Spring: The second-earliest arriving warbler, arriving a few days after Yellow-rumped Warbler. Ten earliest spring arrival dates (1977 and 1981 to 1989) ranged from 26 April to 9 May, with seven dates between 26 April and 3 May. The peak spring movement came between 4 and 15 May. High counts at this time were 4 to 8 birds per site. Notable spring records are: One at Farrell Creek on 30 April 1983, five at Bear Flat on 4 May 1985, and eight singing along the first 5 km of Johnstone Road south of Taylor on 15 May 1983. Summer: This species remained fairly common, especially in thickets and large areas of sapling growth. Notable records are: One at Dunlevy Provincial Park on 7 July 1997, one at Mile 115 (Alaska Highway) on 23 June 1984, one singing at Beaton Provincial Park on 18 July 1983, and one carrying food at Peace Island Park Road on 1 July 1997. The southbound movement was detected by mid-August with eight migrants at Beaton Provincial Park on 15 August 1988. Autumn: A frequent member of mixed flocks with vireos and warblers. The peak of autumn movement occurred between about 31 August and 14 September, one to two weeks later than for most other warblers in the North Peace River region. It is also most widespread in early September with 10 at the British Columbia Rail depot on 7 September 1985. This species often remained in small numbers around Fort St. John until late September. The latest date was of two seen outside the old Fort St. John secondary school on 27 September 1984. Nine dates of final autumn record (1981 to 1988) ranged from 7 to 27 September, with six dates between 17 and 27 September.

Breeding: Undoubtedly this species breeds throughout the North Peace River region, but evidence is scarce. A pair was seen carrying food in a wooded ravine on the breaks above the old Beaton River bridge along 103 Road on 8 July 1977 where nestlings could be heard. An adult was seen carrying food into alders with red-osier dogwood understory of a mature and open balsam poplar forest off Peace Island Road south of Taylor on 1 July 1997. In the vicinity of Dawson Creek, Phinney (1998) found three nests, all with eggs, in late May and early June.

Comments: Three subspecies of Orange-crowned Warbler occur in British Columbia (Campbell et al. 2001). The subspecies occurring in the North Peace River region is *O. c. celata*. It has such a gray head, especially in late summer and autumn, that it can easily be mistaken for immature *Oporornis* warblers such as MacGillivray's, Mourning, and Connecticut warblers. However, Orange-crowned Warbler almost always shows faint streaking on the sides, a very thin incomplete eye-ring, and a dark line through the eye.

Yellow Warbler
Dendroica petechia

Status: *Fairly common to common migrant and summer visitor; breeds.*

Williams (1933b) found Yellow Warbler (Figure 71) "common" in the Peace River Block. Cowan (1939) noted it as "common." Penner (1976) called it a "fairly common summer resident" in the Peace River valley.

Habitat: Migration: Similar habitat to *Breeding*.
Breeding: Strong preference for deciduous woodlands and shrubby edges including balsam poplar stands, trembling aspen forests, and mixed forest edges. Common around streams, ponds, and lakes, in lines of willow and occasionally in treed backyards. It avoids heavy spruce growth. In Alberta, Yellow Warbler occurs along the edges of shrubby forests and is the only warbler to nest commonly in ornamental trees and shrubs near human dwellings (Salt 1973).



Figure 71. The highest numbers of Yellow Warbler in British Columbia are found in the Boreal Plains and Southern Interior Mountains ecoprovinces along the eastern boundary of the province. *Photo by R. Wayne Campbell.*

Distribution: Migration and Breeding: Occurs throughout the North Peace River region in suitable habitat (Figure 72).



Figure 72. Yellow Warbler is a common breeding species in the shrubby understory of deciduous woodlands. *Photo by R. Wayne Campbell, Beaton Park, BC, 23 June 1996.*

Occurrence: Spring: Spring first arrival dates (1980 to 1989) ranged from 9 to 16 May. The latter date stands out as a late arrival date following a particularly long winter and a short, cold spring. Yellow Warbler was first recorded on 11 May five years out of 10, making it remarkably consistent in its spring arrival date. Numbers rapidly increased

following the arrival of the first birds. By late May the species was common in bushes and deciduous forests around Charlie Lake, where hatches of “fish flies”, either mayflies or stoneflies, were easy prey. Notable records are: 12 migrants at the south sewage lagoons in Fort St. John on 24 May 1986 and 10 singing males along Peace Island Park Road south of Taylor on 28 May 1983. Summer and Autumn: See *Breeding*. Southbound migration began in late July and very early August. Small waves of migrants may appear any time in August. Dates of departure (1979, 1980, 1982, and 1984 to 1988) ranged from 29 August to 14 September. Most birds had departed by late August. Birds seen in September were likely autumn stragglers. Notable records are: a flock of five moving through a garden in Fort St. John on 27 July 1987 (earliest southbound migrants), 11 at Beatton Provincial Park on 31 July 1987, 10 at the south sewage lagoons in Fort St. John on 18 August 1987, and eight at Stoddart (Fish) Creek in Fort St. John on 24 August 1980.

Breeding: Yellow Warbler commonly breeds throughout the North Peace River region. Males establish territories soon after arrival. Cowan (1939) found the Yellow Warbler common at Charlie Lake with four or five nesting pairs in a 400-yard transect on 10 June 1938. A nearly complete nest was found as early as 29 May 1988 along the Peace Island Park Road south of Taylor. Of 24 North Peace River region nests, seven were in willows, four were in trembling aspens, three were in red-osier dogwoods, two were in Saskatoon bushes, two were in rose bushes, three were in balsam poplars, one was in an alder, one was in buckbush, and one was in a lilac shrub. Nest heights ($n = 21$) ranged from 0.7 to 9.1 m, with most from 1.0 to 3.65 m above ground. Most nests showed whitish plant down (likely balsam poplar) on the exterior base and in the cup lining. Fine straw, bark shreds, and mammal hair also lined nests. Dates for eggs ranged from 3 to 23 June ($n = 15$) with first nestlings noted on 11 June. The first dependent young out of the nest ($n = 28$ broods) were noted between 28 June and 31 July, with the majority (24 broods) recorded between 28 June and 16 July. Brown-headed Cowbird parasitism was noted on five occasions (Figure 73).

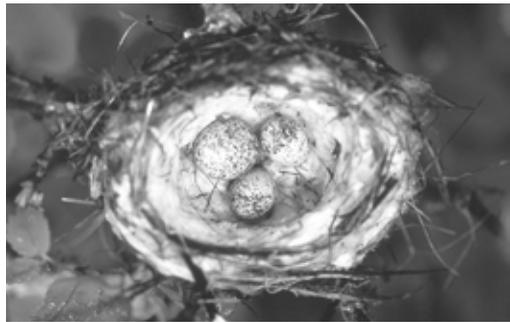


Figure 73. Yellow Warbler is one of the most frequently parasitized species in British Columbia. This nest contains one cowbird egg (left) and two Yellow Warbler eggs. *Photo by R.Wayne Campbell, Beatton Park, BC, 25 June 1998.*

Magnolia Warbler
Dendroica magnolia

Status: *Uncommon migrant and summer visitor; local breeder.*

Not recorded by Williams (1933a, b). Cowan (1939) found only four birds in the South Peace River region and termed the species “scarce” in the District. Penner (1976) called it an “uncommon to common summer resident” in forest along the Peace River.

Habitat: Migration: In late summer, migrants occur among flocks of other warbler species in brushy trembling aspen sapling growth, young balsam poplars, and willow tangles in younger woodlands and along most forest edges. Breeding: Dense young trees, usually nesting in spruce, either in pure stands or mixed with hardwoods (Hall 1994). In the study area, it was found in mixed forests of white spruce-trembling aspen (Figure 74), some balsam poplar, some birch, and willow-alder edge with an understory of highbush cranberry and red-osier dogwood. Penner (1976) found this species in open mixed woods and forest edges on the islands of the Peace River between Hudson’s Hope and the Alberta border. Phinney (1998) described its breeding habitat as “mixedwood or coniferous forests particularly around openings and edges where a coniferous shrub layer has developed.”



Figure 74. Magnolia Warbler breeds locally wherever mixed stands of spruce and trembling aspen occur. *Photo by R. Wayne Campbell.*

Distribution: Migration: Uncommon throughout the southern half of the North Peace River region. It probably also passes through the northern half of the region. Breeding: The only evidence during the summer period was birds found along the Johnstone Road south of Taylor. The species is far more common eastwards from Chetwynd into the Rocky Mountains.

Occurrence: Spring: Eight spring arrival dates (1981 to 1988) at Taylor ranged from 19 to 29 May. Penner (1976) gave an arrival of 25 May for 1974 during a study of the Peace River floodplain. For Dawson Creek, Phinney (1998) also gave 25 May as the earliest arrival date. No spring flocks were seen. In the North Peace River region, this species was generally detected on breeding territory in favoured lowland woodlands. Notable records

are: A male at Beaton Provincial Park on 19 May 1987 and a male at Peace Island Park Road on 29 May 1982. Summer: Pair formation, nest-building, and incubation occurred during June with eggs hatching by late June or early July, and fledglings leaving the nest about mid-July. A notable record was of a female, with two well-grown but dependent juveniles, observed at km 5.5 of Johnstone Road south of Taylor on 24 July 1982. Migrants began to appear in small numbers by the third week of August. Notable records are: four at Charlie Lake Provincial Park on 24 August 1979 and eight (the highest single site count) along the Peace Island Park Road on 28 August 1985. Autumn: Generally departed the North Peace River region by the first week of September. Seven dates of last record (1980, 1982, and 1984 to 1988) ranged from 28 August to 7 September, with four dates between 2 and 7 September.

Breeding: No nests were found. Besides the record of female and two juveniles given above, another record exists, of a pair carrying food also at km 5.5 of Johnstone Road on 8 July 1984. According to Campbell et al. (2001), Magnolia Warblers build their nests in elevated situations in shrubs or living trees, both deciduous and coniferous. Nests are loosely constructed of grasses, plant stems, and rootlets, with spider webs, twigs, hair, conifer needles, and plant fibres used less frequently.

Cape May Warbler *Setophaga tigrina*

Status: *Rare local migrant and summer visitor; breeds.*

This species was recorded for the first time in British Columbia by Cowan (1939) who collected an adult male at Charlie Lake on 17 June 1938. Penner (1976) did not find this species in the Peace River valley.

Habitat: Migration: Not known but in late summer may join mixed flocks of other warbler in edge habitats. Breeding: Fairly dense, tall stands of white spruce with mossy ground cover and the presence of openings (Figure 75) due to either surface bedrock or small selective logging openings (Enns and Siddle

1996). In Alberta, Salt (1973) described Cape May Warbler as a bird of dense spruce stands composed entirely of mature trees, but adds that “relatively open woods with poplars and birch interspersed among the conifers” are equally acceptable as long as there are a few taller spruces whose spires rise above the canopy. These are used as song perches. In the North Peace River region, there were only two records of birds in mixed woodlands.



Figure 75. In Beatton Park, BC, tall clumps of white spruce adjacent to park openings attract Cape May Warblers. *Photo by R. Wayne Campbell, 23 June 1996.*

Distribution: Migration: No records. Breeding: Recorded in breeding season at Stoddart (Fish) Creek, Beatton Provincial Park, km 6 of Johnstone Road, along Peace Island Park Road, and the Mile 73 Road.

Occurrence: Spring: Recorded from the third and fourth weeks of May. Five first spring arrival dates (1984 to 1987 and 1989) ranged from 19 to 25 May. Salt and Salt (1976) gave the arrival dates for central Alberta as “shortly after the middle of May.” Spring birds were inconspicuous, singing a high pitched,

hard to pinpoint song and frequenting tall spruces, making detection difficult. In the North Peace River region spring birds were found only at sites where they would later be recorded in the summer. Notable records are: A male at Peace Island Park Road on 31 May 1986, a male singing in spruce at Stoddart (Fish) Creek on 19 May 1989, and two males at Beatton Provincial Park on 24 May 1986 (spring arrival date). Summer: See *Breeding*. Five August records suggest Cape May Warbler begins to leave the North Peace River region in mid-August. Banding operations in Edmonton, Alberta, captured migrant Cape May Warblers from 17 August to 17 September (Salt 1973). Notable records are: A male along 7303 Forestry Service Road on 3 July 1998, a female at the same location 6 July 1998, a male singing on territory at Beatton Provincial Park on 8 and 12 June 1982, a male carrying insects at Beatton Provincial Park on 8 July 1984, a female carrying food at Beatton Provincial Park on 3 July 1997 (Rick Howie pers. comm.), and a male seen at Stoddart Creek on 7 July 1975. Autumn: Notable records are: A male at Beatton Provincial Park on 12 August 1987 (Tony Greenfield pers. comm.), a male at Beatton Provincial Park on 21 August 1988 (Stefan Zarembo pers. comm.), an autumn bird at St. John Creek at 101 Road on 14 August 1987, and a male at Stoddart (Fish) Creek on 19 August 1987.

Breeding: Although no nests were found, other evidence suggests Cape May Warblers have bred at least in some years in the North Peace River region. A female fed a fledgling Brown-headed Cowbird at Beatton Provincial Park on 18 July 1983. Two sightings of adults carrying food into a spruce stand during early July 1984 and July 1997 suggest breeding.

Comments: Suitable breeding habitat of mature white spruce stands have become scarce in the North Peace River region due to harvesting. An additional threat is the proposed flooding of the Peace River valley for hydro-electric projects. The only protected small stand of breeding habitat for Cape May Warbler is in Beatton Provincial Park.

Yellow-rumped Warbler
Setophaga coronata

Status: *Fairly common spring migrant, fairly common to occasionally very common autumn migrant, and fairly common summer visitor; breeds.*

Williams (1932a) recorded the "Myrtle" Warbler (Figure 76) at Nig Creek on 22 and 23 May 1922. Cowan (1939) found "Myrtle" Warbler "characteristic of ... [the] avifauna of the black and white spruce habitats" of the Peace River District. Penner (1976) called the species an "abundant summer breeder" in the flood plain forests of the Peace River valley.



Figure 76. The white throat of the common "Myrtle" Yellow-rumped Warbler helps separate it from "Audubon's" subspecies, which is casual in the North Peace River region. *Photo by R. Wayne Campbell.*

Habitat: Migration: Most woodlands as well as thickets and edges in open country, including backyards, gardens, live and dead trees around ponds and lakes (Figure 77), and occasionally edges of beaches and lawns. Breeding: Found in a variety of forest types: almost pure stands of mature white spruce; mixed conifers including tamarack, black spruce, and white spruce; edges of muskegs; mature mixed woodlands of trembling aspen, balsam poplar, spruce and birch; young and mature trembling aspen forests; and woodlands dominated by lodgepole pine.



Figure 77. In spring and autumn migration, "Myrtle" Yellow-rumped Warblers frequently forage in shrubby thickets bordering wetlands. *Photo by R. Wayne Campbell, near Fort St. John, BC, 22 June 1996.*

Distribution: Migration and Breeding: Widespread and the most common warbler throughout the North Peace River region.

Occurrence: The "Myrtle" Yellow-rumped Warbler (*D. c. coronata*) is the predominant subspecies in the North Peace River region. There are only three records of the western subspecies, "Audubon's" Yellow-rumped Warbler (*D. c. auduboni*).

Spring: This species is the first warbler to reach the North Peace River region each spring. Nine spring arrival dates (1980 to 1989) ranged from 21 to 27 April. Males arrive first and are usually seen in the Peace River valley followed a few days later in the uplands like Cecil Lake. The peak of spring migration occurred between 10 and 17 May when five highest counts (average 181 birds per site) were made. Notable records are: Seventy at Watson Slough on 20 May 1984, 15 males and four females feeding on insects on lake ice at Charlie Lake Provincial Park on 9 May 1981, and an adult gathering nest material at Stoddart (Fish) Creek on 10 May 1980. Summer: Most nesting took place in early summer. Migrants began to appear as early as 2 August. By the middle of August, migrant numbers had swelled. Notable records are: An adult with a fledged brood along Peace Island Park Road on 9 July 1997, a pair carrying food at German Lake on

13 June 1987, and a male carrying food along Upper Cache Road on 9 July 1983. Six at Beaton Provincial Park on 4 August 1987 were the first migrants of the season. **Autumn:** Migration continued until late September or early October. Birds were most abundant from about 11 August to 14 September, depending upon the weather. “Myrtle” Warblers remained widespread in small numbers from 14 to 21 September. Thereafter, one to three birds per day could be found until last departure. Seven dates of last record (1982 to 1988) ranged from 26 September to 3 October. Notable records are: Six migrants at the north sewage lagoons in Fort St. John on 2 August 1988, six at Boundary Lake on 5 September 1987, 30 at Beaton Provincial Park on 26 August 1984, and four at Charlie Lake Provincial Park on 3 October 1982.

Breeding: One nest (Figure 78) was found and several fledged broods were observed. Adults were seen gathering nesting material as early as 10 May. Fledged broods appeared in late June. Adults were commonly seen carrying food from mid-June through early July. Of 13 fledged broods, seven were found between 9 and 22 July. Yellow-rumped Warblers commonly have their nests parasitized by Brown-headed Cowbirds. Of 13 fledged broods, seven were composed of fledgling cowbirds.



Figure 78. Nests of “Myrtle” Yellow-rumped Warblers are often lined with soft body feathers of grouse and owls. *Photo by R. Wayne Campbell.*

Comments: Prior to 1973, Yellow-rumped Warbler was considered two separate species, Audubon’s Warbler (*D. auduboni*) and Myrtle Warbler (*D. coronata*). The zone of hybridization for each subspecies lies just to the west of the North Peace River region (Campbell et al. 2001).

Black-throated Green Warbler *Dendroica virens*

Status: *Uncommon migrant and summer visitor; breeds.*

This species was first recorded in British Columbia in June 1965 when several were heard and one was collected in the Chetwynd-Moberly Lake area (Salt 1966). Penner (1976) called it a “fairly common summer resident” in the Peace River valley. Phinney (1998) found it to be a “common migrant and breeding summer visitor” in the Dawson Creek area of the South Peace River region.

Habitat: **Migration:** Appears to have a slightly broader acceptance of habitats than during the breeding season, appearing not only in mature mixed woodlands but also occasionally in purely deciduous woods and edges. Phinney (1998) also found it occasionally in trembling aspen woodlands in migration in the Dawson Creek area. **Breeding:** In the North Peace River region, Black-throated Green Warbler breeds in mature mixed forests as it does for the Dawson Creek area farther south (Phinney 1998). Stands of mature white spruce mixed with mature balsam poplar and trembling aspen (Figure 79) appear to be essential breeding habitat. The species was formerly, and incorrectly, considered a species of riparian forests (Enns and Siddle 1992, Phinney 2003).

Distribution: **Migration:** It is occasionally found among mixed flocks of other warbler species in late summer and early autumn. In addition to the sites where it has been found in early summer, it has also been recorded at Charlie Lake Provincial Park and the south end of Charlie Lake. **Breeding:** Probably occurs in forested areas with a suitable mix of tree species from the south bank of the Peace River north to at least Mile 73 of the Alaska Highway.



Figure 79. Black-throated Green Warbler breeds in mature white spruce forests containing a mixture of younger trembling aspen and balsam poplar trees. *Photo by R. Wayne Campbell, south of Hudson's Hope, BC, 18 June 1997.*

Occurrence: Spring: Eleven earliest arrival dates (1979 to 1989) ranged from 9 to 21 May, with seven dates between 10 and 17 May. Phinney (1998) gave 11 May 1992 and 1993 as early dates for the Dawson Creek area. Penner (1976) gave 9 May as the earliest spring arrival for the Peace River valley. Spring numbers generally indicate birds on territory rather than a suggestion of passage migrants. Highest spring numbers occurred very shortly after first arrival. Notable records are: Four males were singing along Peace Island Park Road on 22 May 1982 (only seven days after the first bird arrived), a male at Clayhurst bridge on 17 May 1981, and a male along the Peace Island Park Road on 9 May 1987. Summer: See *Breeding*. Southbound migration began shortly after the middle of August although records are few. Records of single immature birds occurred

on 17 August 1986 at St. John Creek, on 21 August 1984 at Beatton Provincial Park, on 22 August 1984 along the middle causeway at Boundary Lake, and on 23 August 1988 at St. John Creek. The highest single count during late summer was of seven birds at Beatton Provincial Park on 11 August 1988. Numbers dwindled by late August. Notable records are: A male at the edge of a muskeg at Mile 115 on the Alaska Highway on 23 June 1984 (Mike Force pers. comm.) and five males between km 6.5 and 8.1 of the Johnstone Road on 21 June 1992. Autumn: There are only three September records, all from the first week. Nine dates of autumn departure (1975, 1978, 1980, 1982, and 1984 to 1988) ranged from 16 August to 5 September, with seven dates between 22 August and 2 September.

Breeding: Although there are no confirmed records for the North Peace River region, there is evidence that Black-throated Green Warbler breeds in the area. On 1 July 1981, a male was seen feeding a fledgling Brown-headed Cowbird along the Johnstone Road south of Taylor and a male was seen carrying food on 3 July 1997 at Beatton Provincial Park.

Comment: Loss of mature mixed forests in the Boreal Plains due to harvesting could impact breeding Black-throated Green Warblers. Phinney (2003) noted that "timber harvesting will have a detrimental effect upon warbler numbers. Most plans call for rotation ages in managed forests to be less than the ages of stands currently used by the species. In addition, government policy effectively prohibits the re-establishment of 'salt and pepper' mixedwood forest that the warbler prefers. Instead of mixedwood, pure coniferous or deciduous stands are regenerated, limiting future Black-throated Green Warbler habitat to the interface of these stand types. Thus, it seems certain that the local population of this species will ultimately decline, but it is doubtful that it will disappear from the province altogether."

Very little mature mixed forest remains in protected areas in the lower North Peace River region. Flooding the Peace River valley with a hydro-electric dam situated near Taylor will eliminate thousands of hectares of prime warbler habitat.

Townsend's Warbler
Dendroica townsendi

Status: *Very rare migrant.*

This species was not reported by Williams (1933b), Cowan (1939), or Penner (1976).

Habitat: Migration: Occurs in spring in mixed woods. In August, found in mixed woodlands and brushy edges, in mixed flocks with other warblers and vireos.

Distribution: Migration: Found most frequently in Beaton Provincial Park. The few records ($n=17$) are from a wooded residential backyard in Fort St. John, Stoddart (Fish) Creek, Ambrose School, St. John Creek, and along Peace Island Park Road south of Taylor.

Occurrence: Spring: Birds were seen on four spring dates between 7 and 19 May. Notable records are: A male at Beaton Provincial Park on 14 May 1987 (Bruce MacDonald pers. comm.), two males at the same site on 19 May 1987, and a male at 9636 - 112th Avenue in Fort St. John on 17 May 1987. Summer: Nine August dates ranged from 8 to 31 August. Notable records are: Two at Beaton Provincial Park on 8 August 1987 (Tony Greenfield pers comm.), one at the same site on 20 August 1988, one at Beaton Provincial Park on 26 August 1984, two immatures at Beaton Provincial Park on 30 August 1987, two at the same site on 31 August 1982, and one along the Peace Island Park Road on 22 August 1986.

Palm Warbler
Dendroica palmarum

Status: *Rare to very uncommon migrant and summer visitor; probably breeds.*

Palm Warbler (Figure 80) was not recorded by Williams (1933b), Cowan (1939), or Penner (1976).

Habitat: Migration: Brushy edges and open areas. Breeding: Enns and Siddle (1996) described breeding habitat as “tall black spruce bogs with occasional tamarack. Species of sedges, sphagnum, horsetails, bog cranberry, bog birch and Labrador tea were

common. Foraging by Palm Warblers occurred throughout all levels of the habitat. The males often used dead spruce saplings as song perches.” The habitat description is fairly similar to that given for Alberta by Wilson (1996): “... borders of receding muskeg where a few black spruce, tamarack, and birch are scattered together with a loose growth of alder, willow, and creeping ericaceous shrubs.”



Figure 80. The breeding distribution and biology of Palm Warbler, restricted to northeastern British Columbia, are among the least known for any species in the province. *Photo by Ervio Sian.*

Distribution: Migration: More widespread than in the breeding season. Small numbers occurred irregularly at Charlie Lake, grain elevators area in Fort St. John, the north and south sewage lagoons in Fort St. John, Beaton Recreational Area, Cecil Lake, and Lost Lake. Breeding: Very local in muskegs around Boundary Lake (Figure 81), German Lake, and a muskeg about 20 km south of Prespatou.

Occurrence: Spring: Seven arrival dates (1981 to 1988) near Boundary Lake ranged from 9 to 16 May. Arrivals were generally detected as one or two singing birds, apparently on territory in muskeg. The only spring migrant was a silent bird in roadside bushes northwest of Cecil Lake on 9 May 1981. Notable records are: One on territory at Boundary Lake on 11 May 1986, two males and a female at Boundary Lake on 16 May 1982, and a male at Lost Lake on 16 May 1982 (spring arrival date). Summer and Autumn: Southbound migration began during the second half of August and continued into the first week of September in the North Peace River

region. The earliest obvious migrant was a single bird at the old 103 Road bridge over the Beatton River on 19 August 1984. The remaining 15 records of southbound migrants occurred between 30 August and 14 September. Seven of these observations occurred near Boundary Lake, but the birds had shifted from muskeg to roadside habitat, often appearing on the dikes that lead to gas wells on the lake. Autumn migrants were encountered as singles, often among a flock of Yellow-rumped Warblers, or as small flocks of two to eight birds. The largest group encountered was a flock of eight birds at Boundary Lake on 26 August 1986 and eight again on 20 August 1987. Eight final autumn dates (1980 to 1982 and 1984 to 1988) ranged from 20 August to 14 September. Notable records are: A female 20 km south of Prespatou on 13 June 1981, six near German Lake on 15 June 1980, three males at Boundary Lake on 4 June 1983, one at Charlie Lake Provincial Park on 28 August 1978, one at the south end of Charlie Lake on 4 September 1981, one at the south sewage lagoons in Fort St. John on 14 September 1985 (latest autumn record), and one at Cecil Lake on 21 August 1980.



Figure 81. Muskegs with Labrador tea and *Sphagnum* moss adjacent to tall stands of spruce trees is the breeding habitat for Palm Warbler. *Photo by R. Wayne Campbell, near Boundary Lake, BC, 19 June 1996.*

Breeding: Breeding was not confirmed in the North Peace River region. However, an adult carrying food at a muskeg at Boundary Lake on 11 July 1984 suggested that a pair nested in the area.

Bay-breasted Warbler *Dendroica castanea*

Status: *Very rare migrant and summer visitor; breeds.*

Cowan (1939) added this species to the provincial bird list when he collected two males at Charlie Lake on 16 June 1938. The species was not recorded by Penner (1976) in the Peace River valley.

Habitat: Breeding: Observed in mixed mature to old-growth woodlands of white spruce and trembling aspen. Cowan (1939) recorded birds at Charlie Lake in mixed white spruce and balsam poplar. The associated trees were usually trembling aspen although birch was also common (Enns and Siddle 1996).

Distribution: Breeding: Recorded only at Beatton Provincial Park and Stoddart (Fish) Creek, Fort St. John.

Occurrence: Spring: Likely arrives undetected in mid-to-late May. The two spring records were of a male at Beatton Provincial Park on 23 May and 28 May 1981. Summer: Most frequently seen in June. Five dates (1981 to 1983, 1985 and 1989 to 1990) at Beatton Provincial Park ranged from 3 to 12 June, usually single males. Exceptions included records of two males on 3 June 1983 and two pairs on 17 June 1989. There was also a record of a female at Beatton Provincial Park on 31 August 1980 and a female at Stoddart (Fish) Creek on 7 July 1975.

Breeding: The only suggestion of breeding was of an agitated female repeatedly seen carrying food into the tall white spruce at Beatton Provincial Park on 10 July 1980.

Blackpoll Warbler
Dendroica striata

Status: *Uncommon to occasionally fairly common spring and uncommon autumn migrant and uncommon and very local summer visitor; may breed.*

This species was not recorded by Williams (1933b). Cowan (1939) called it one of the most “abundant breeding warblers” in deciduous and mixed forest around Tupper Creek and Swan Lake. One pair was found at Charlie Lake. Penner (1976) designated it as “rare” in the Peace River valley.

Habitat: Migration: Frequented bushes and trees along lakeshores, creeks, ponds and sewage cells, as well as mixed woodland and trembling aspen forest edges and willow thickets. Migrant Blackpoll Warblers were commonly associated with riparian thickets. Breeding: Trees and thickets at muskeg edges (Figure 82). Territorial males were found along the edges of black spruce muskegs where alders and willows form thickets. Phinney (1998) described its Dawson Creek area breeding habitat as “thickets, swales, and young forests.”



Figure 82. One of the less than 10 Blackpoll Warbler nests known for British Columbia was saddled on a branch of a small spruce tree at the edge of a muskeg near Boundary Lake, BC. *Photo by R. Wayne Campbell, 24 June 1996.*

Distribution: Migration: Widely distributed as a spring and autumn migrant, occurring regularly around Charlie Lake, Cecil Lake, along Johnstone Road and Peace Island Park Road, the south sewage lagoons in Fort St. John, Stoddart (Fish) Creek, and St. John Creek near 101 Road. Breeding: Recorded as a local summer visitor to the brushy edges of muskegs around German Lake and Boundary Lake.

Occurrence: Spring: Ten arrival dates (1980 to 1989) ranged from 9 to 23 May, with seven dates between 11 and 19 May. Phinney (1998) gave 12 May as the earliest arrival date for the Dawson Creek area. Early arrivals were always males, consistent with findings of other researchers, and were detected as one to two birds per location except in 1986 when Blackpoll Warblers did not appear until 22 May; numbers on the latter date were higher than usual. During years with the highest numbers, 1984 to 1986, the passage of Blackpoll Warblers around the shores of Charlie Lake coincided with huge hatches of flying insects (probably chironomids). Peak spring movement occurred between 18 and 25 May. Single-site counts ranged from one to four birds during the second week of May increasing to four to 15 birds during weeks three and four. The highest single count was of 29 birds at the bay just north of Beaton Provincial Park on 19 May 1987. The conclusion of spring passage ranged from 26 May to 3 June during years of highest passage. Although spring migrants were found from Taylor to Cecil Lake, the vast majority appeared around Charlie Lake. Notable records are: Two males along Johnstone Road south of Taylor on 15 May 1982 (spring arrival), one male at Charlie Lake on 9 May 1981 (spring arrival), at least nine males at Beaton Provincial Park on 18 May 1985, and four at Cecil Lake on 14 May 1981. Summer: Southbound migration began in early August. Eight dates of first appearance of migrants ranged from 8 to 27 August, with five dates between 8 and 17 August. No peak of movement was evident. Autumn migrants occurred in smaller number per location than spring migrants. The highest single count was five birds, and the average number of birds per location for all autumn sightings was 2. Notable records are: Six at Beaton Provincial Park

on 3 June 1984, a male at German Lake on 1 June 1980 and 21 June 1985, a pair at Boundary Lake on 7 June 1981, a male at Boundary Lake on 16 July 1984, four at Fort St. John on 29 August 1987, and three at Charlie Lake Provincial Park on 24 August 1980. **Autumn:** Eight dates of autumn departure ranged from 20 August to 13 September, with six dates between 31 August and 7 September. Notable departure dates are: One at Beatton Provincial Park on 5 September 1981, three on 7 September 1985 at Beatton Provincial Park, and one on 13 September 1987, at Fort St. John.

Breeding: A record of three fledglings at Taylor on 21 August 1975 is the only record (Campbell et al. 2001). It is suspected that Blackpoll Warbler breeds along the edges of muskeg at Boundary Lake and German Lake. In the South Peace River region, a nest with four partially feathered chicks was found on 25 June 1994 about 23 km south of Groundbirch (Phinney 1998).

Black-and-White Warbler
Mniotilta varia

Status: *Uncommon migrant and summer visitor; breeds.*

Williams (1933b) recorded one at Moberly Lake outside the study area on 27 July 1930. Cowan (1939) found the Black-and-White Warbler “generally distributed” at Tupper Creek and Charlie Lake. Penner (1976) designated it a “fairly common summer breeder” along the Peace River valley.

Habitat: Migration: Deciduous or mixed woodland edges as well as willow thickets in both dry and wet situations. It is also often seen in the dead tops of partially drowned willows in riparian habitat. Breeding: Young and mature trembling aspen forests (Phinney 1998; Figure 83), especially in damp or riparian situations where birch, alder, and willow grow, and mature balsam poplar flood plain forests and mature mixed forests. The species spends little time in conifers (Salt 1973).



Figure 83. Mixed young and mature trembling aspen and balsam poplar forests associated with willow is the preferred habitat for Black-and-white-Warbler. *Photo by R. Wayne Campbell, near Taylor, BC, 28 June 1998.*

Distribution: Migration: Shows a broader range during migration, appearing with chickadees, vireos, and other warblers wherever migrants occur. Breeding: Recorded throughout the study area north to about km 94.5 of the Alaska Highway but most frequently in the forests along the Peace River.

Occurrence: Spring: Nine arrival dates (1981 to 1989) ranged from 13 to 21 May. Phinney (1998) gave 10 May as the earliest date for the Dawson Creek area. Penner (1976) stated that 10 May was the earliest arrival for the Peace River valley. Arrivals were generally encountered as lone birds, usually singing males. The species quickly became widespread during the second half of May. For

example, on 17 May 1986, singing males were found at Taylor Landing Provincial Park, Peace Island Park Road, Boundary Lake, and a muskeg west of Boundary Lake. Notable spring arrival records are: A male at Boundary Lake on 14 May 1983 and a male at Beaton Provincial Park on 19 May 1984. **Summer:** See *Breeding*. Southbound migration began in early August. By the end of the third week of August migrants were fairly widespread. Counts at individual locations numbered one to three birds each, although occasionally slightly higher numbers were encountered. The largest count was of eight at Beaton Provincial Park on 14 August 1986. Seven dates of autumn departure (1980, 1982, and 1984 to 1988) ranged from 25 August to 1 September. Notable records are: A female feeding a fledgling at Alwin Holland Park near Hudson's Hope, on 7 July 1998, a female feeding two begging fledglings at Beaton Provincial Park on 17 July 1985, an agitated pair at km 5 of the Johnstone Road south of Taylor, on 1 July 1985, a female feeding a tiny fledgling along the Peace Island Park Road on 12 July 1987, a pair feeding two fledglings at Beaton Provincial Park on 4 August 1987, four at Boundary Lake on 22 August 1984, and one at Beaton Provincial Park on 30 August 1987 (latest autumn record). **Autumn:** Notable latest records are: One at the south end of Charlie Lake on 1 September 1982 and one at St. John Creek near 101 Road on 1 September 1985.

Breeding: Only a single nest has been found in British Columbia, at Tupper Creek, in the South Peace River region, on 6 June 1941. It contained three Black-and-White Warbler eggs and one Brown-headed Cowbird egg (Campbell et al. 2001). Six broods of dependent fledglings, with attendant adults, were found in the North Peace River region between 3 July and 4 August. All broods had one or two fledglings.

American Redstart *Setophaga ruticilla*

Status: Fairly common migrant and summer visitor; breeds.

In July 1930, Williams (1933b) found this species "common" around Moberly Lake west of the study area. Cowan (1939) considered American Redstart (Figure 84) the most abundant warbler in the Peace River District. Penner (1976) designated the American Redstart a "fairly common summer resident" in the Peace River valley.



Figure 84. American Redstart is closely associated with brushy thickets, often near wetlands. *Photo by R. Wayne Campbell, Beaton Park, BC, 23 June 1996.*

Habitat: Migration: Almost any brushy woodland edge and stands of willows. Breeding: Willow, alder, and birch thickets often bordering streams, ponds, and lakes. Typical habitats in the North Peace River region include the alder-willow-birch understory of a balsam poplar flood plain forest (e.g., Peace Island Park Road), dense willow thickets overgrowing a transmission corridor through mature mixed woodlands (e.g., upslope from Peace Island Park Road), damp alder-willow edge to mature mixed woodlands (e.g., Beaton Provincial Park), and alder-willow thickets around a receding black spruce muskeg (e.g., Boundary Lake).

Distribution: Migration: Widely distributed. Breeding: Found across the southern half of the North Peace River region. Breeding was recorded at Bear Flat, Beatton Provincial Park, and along Peace Island Park Road south of Taylor.

Occurrence: Spring: Seven arrival dates (1981 and 1984 to 1989) ranged from 15 to 24 May. Early arrivals in this period were males, with females following a few days later. The species is widespread and numerous by late May with peak numbers encountered from 24 May onwards. Notable records are: Four males at a site along Peace Island Park Road on 23 May 1984 (spring arrival date), and a male at Boundary Lake on 28 May 1989. Summer: A high count was 14 redstarts between km 5 and 6 of the Johnstone Road on 3 July 1981. See *Breeding*. Fledglings were commonly well-feathered and nearing independence usually by 20 July. The first southbound migrants appeared during the first week of August. A peak for autumn migrants appeared to be similar to that for Edmonton, Alberta, which ranged between 21 August and 5 September (Salt 1973). Notable records are: An agitated female at Gravel Hill Creek (Dunlevy Inlet) on 7 July 1997, a brood on the south side of Peace River opposite Farrell Creek on 21 July 1992, a pair feeding two fledglings at Beatton Provincial Park on 10 July 1997, a female feeding a Brown-headed Cowbird fledgling along Peace Island Park Road on 12 July 1987, and 29 along Peace Island Park Road on 16 August 1986. Autumn: After the first five days of September, redstarts were hard to find. There were only two records later than 5 September. Eight dates of last record (1980 to 1982 and 1984 to 1988) ranged from 30 August to 14 September, with five dates between 4 and 14 September. Notable records are: A female at the W.A.C. Bennett Dam on 27 August 1975, three at Bear Flat on 1 September 1985, and two at Beatton Provincial Park on 5 September 1982.

Breeding: Five nests and 27 broods of fledged young were found. Nests were constructed from the last days of May through the first half of June. The earliest nest under construction was one found by Phinney (1998) in the South Peace River region on

31 May with four eggs on 19 June. Eggs were laid in June. A nest along the Peace Island Park Road on 13 June 1982 held five eggs. “Two South Peace River region nests held four and five eggs on 19 June (Phinney 1998).” Eggs hatched during the last week of June. For example, a nest with three young was found on 29 June 1980 along Peace Island Park Road. Fledging was noted from the end of the first week of July through to the middle of the month. For example, at km 5 of Johnstone Road, a female fed one tiny nestling on 5 July 1983 while on 17 July at the same site there were eight broods being fed.

Two nests were situated in a willow (Figure 85) and one in a balsam poplar sapling. Two of 25 broods were solely a Brown-headed Cowbird chick.



Figure 85. Often American Redstart nests are built in a crotch of a spindly stem of a dead willow sapling. This nest (top left) was 2.4 m above ground. *Photo by R. Wayne Campbell, Taylor, BC, 12 June 1990.*

Ovenbird
Seiurus aurocapilla

Status: *Fairly common migrant and summer visitor; probably breeds.*

Not recorded by Williams (1933b). Cowan (1939) found this species “dominant” in second-growth trembling aspen around Tupper Creek in the South Peace River region and “abundant” in dense aspen thickets and spruce forest at Charlie Lake. Penner (1976) called Ovenbird (Figure 86) a “common summer resident” of the Peace River valley.



Figure 86. Although widely distributed each summer in the North Peace River region, no Ovenbird nests have been found. *Photo by Ervio Sian.*

Habitat: Migration and Breeding: Primarily found in mature mixed woodlands along the south bank of the Peace River. These forests are made up of mature white spruce, trembling aspen, balsam poplar, birch and alder. It also is found in mature balsam poplar floodplain forests with alder and willow edges (Figure 87) and some small clumps of white spruce, young aspen forests (*e.g.*, Boundary Lake), and mixed young and mature aspen forests (*e.g.*, Beaton Provincial Park). All wooded habitats have a closed canopy, a fairly dense understory, little or no shrub layer, and an abundance of leaf litter. See Phinney (1998) for a description of South Peace River region habitat.



Figure 87. Even during years of flooding, Ovenbirds can be heard singing on territory in mature balsam poplar woods associated with various age stands of willows. *Photo by R. Wayne Campbell, near Taylor, BC, 12 June 1990.*

Distribution: Migration and Breeding: Widely distributed across the southern two thirds of the North Peace River region but not found north of about km 94 of the Alaska Highway.

Occurrence: Spring: Nine arrival dates (1981 to 1989) ranged from 13 to 23 May, with six dates between 17 and 21 May. Phinney (1998) gave 11 May as the earliest arrival date for the South Peace River region, and Penner (1976) gave 10 May as the first arrival date for 1974 in the Peace River valley. Arrivals were detected as single birds and all first arrivals were singing males as the species is otherwise reclusive. By the final week of May, singing birds were commonly heard throughout the forested areas of the North Peace River region. Notable spring arrival dates are: One near the

north end of Charlie Lake on 29 May 1985, one at Centennial Park in Montney on 21 May 1983, one at Stoddart (Fish) Creek in Fort St. John on 13 May 1988, and eight along Peace Island Park Road on 18 May 1985. **Summer:** Singing abated in mid-July and thereafter birds were hard to find. Late summer birds are generally encountered as singles or pairs that sometimes responded to “pishing” in woodlands or along wooded edges. Although no “fall” peaks could be discerned for the North Peace River region, banding of migrants in Edmonton (1957 to 1971) had a peak in captures during the last two weeks of August. The earliest date was 7 August and the latest 9 September (Salt 1973). Seven dates of “fall” departure (1976, 1979, 1982 and 1984 to 1987) in the North Peace River region ranged from 8 August to 1 September, with five dates between 21 August and 1 September. Notable records are: Two at Alwin Holland Park east of Hudson’s Hope on 7 July 1998, one at Blueberry River 101 Road bridge on 3 July 1998, three at Beaton Provincial Park on 3 July 1997, four along Johnstone Road on 21 June 1992, one at Boundary Lake (near airfield) on 4 July 1998, one at Beaton Provincial Park on 22 August 1985 (departure date), and one along Peace Island Park Road on 28 August 1984 (departure date).

Breeding: No nests were found. There was one record of fledged young. On 21 July 1992, an adult was closely accompanied by two fledglings in the forest along the south bank of the Peace River about six km downstream (east) of the mouth of Farrell Creek.

In the South Peace River region, Phinney found a pair lining their nest in the Del Rio area about 25 km southwest of Fort St. John on 28 May 1999. On 10 June, there were five eggs but on 24 June the nest was empty (M. Phinney pers. comm.).

Comments: Ovenbird is an “area sensitive” species. It selects territories deep within forests, at distances from the edge not possible within smaller woodlots. Fragmented forests, such as those commonly found in the North Peace River region, are not suitable Ovenbird habitat and may act as “sinks” for predators and parasitism by Brown-headed Cowbird parasitism (Campbell et al. 2001).

Northern Waterthrush *Parkesia noveboracensis*

Status: *Uncommon migrant and uncommon and local summer visitor; breeds.*

Williams recorded one along the Blueberry River on 20 May 1922. Cowan (1939) called it “abundant” around Swan Lake, Austin’s Pond (South Peace River region), and Charlie Lake. Penner (1976) called it “fairly common” around the flood plain and island forests along the Peace River valley.

Habitat: **Migration:** Appears in a wide range of habitats that includes wooded ponds, dugouts, watery ditches that have some brush around them, and in wooded upland situations. **Breeding:** Occurs around wooded lakeshores, ponds, streams, and large depressions filled with water within both deciduous and coniferous forests. The species has been found along the shores of Charlie Lake, in a wooded swamp along the Upper Cache Creek Road (Figure 88), at a small water-filled excavation along Johnstone Road, and around a beaver pond at the base of the hills at Bear Flat.



Figure 88. In migration and during the breeding season, Northern Waterthrush is closely associated with a wide variety of wetlands. *Photo by R. Wayne Campbell, along Upper Cache Creek Road, 19 June 1996.*

Distribution: Migration: Found across the North Peace River region. Breeding: Found locally along the south banks of the Peace River, on wooded islands and forests in the Peace River valley to the Alberta border and in the remaining wooded lakeshores, ponds, and streams of the North Peace River region north for an undetermined distance.

Occurrence: Spring: Nine spring arrival dates (1980 to 1988) ranged from 9 to 27 May, with seven dates between 11 and 19 May. Phinney (1998) gave 3 May as the earliest arrival date for the Dawson Creek area. Most spring records were of single singing males in traditional locations where the species would presumably nest. Four birds at a wooded pond on the 248A Road marshes near North Pine on 14 May 1981, was the largest number of migrants found at a single location. Notable records are: A male singing at km 6.7 of the Upper Cache Road on 22 May 1983 and one at Boundary Lake on 11 May 1986. Summer: Eleven latest departure dates (1975, 1977 to 1980, 1982, and 1984 to 1988) ranged from 22 August to 1 September, with seven dates between 27 and 31 August. The peak of southbound migration appeared to be between 18 and 28 August, with five records of more than one bird per location at that time. Notable records are: One at Watson Slough on 1 July 1982, one singing from the southwest corner of Charlie Lake on 21 June 1980, one agitated bird at Cecil Lake on 23 June 1985, one at North Pine on 27 August 1977, and three in a floodplain forest off Peace Island Park Road on 28 August 1984 (latest departure date). Autumn: There is one very late sighting of a single bird at St. John Creek on 21 September 1985.

Breeding: Although the male waterthrush sings a loud song and is easily detected, breeding evidence is difficult to obtain. Even fledged young can be very hard to find. There are only two breeding records, both of fledged young. The first was a bob-tailed juvenile seen on 29 July 1982 at a water-filled depression on the edge of a mixed forest at km 7 of Johnstone Road south of Taylor, where a male had been singing that spring. The second was of an adult feeding a begging fledgling beside a pond along Highway 29 south of Hudson's Hope on 7 July 1998.

Connecticut Warbler *Oporornis agilis*

Status: *Rare migrant and summer visitor; breeds.*

Not recorded by Williams (1933b). Cowan (1939) found six near Swan Lake in the South Peace River region. These were the first records of the species for British Columbia. Penner (1976) designated this species a "rare summer resident" in the Peace River valley.

Habitat: Migration: Poorly known, but likely found in trembling aspen and mixed forests. Occasionally birds are found in urban and residential areas. For example, a male collided with a window of a staffroom at North Peace Secondary School. The school was situated along a typical city street with a few isolated young aspen along it. The only other record of a migrant came in late summer from a brushy selective cut in mixed forest along a creek. Breeding: Phinney (1998) found this species most consistently in pole-stage and mature trembling aspen forests with a closed canopy, sparse shrub layer, and a well-developed herbaceous layer. This description appears to fit the locations where territorial birds were found at Cecil Lake, Charlie Lake, Boundary Lake and, to some extent, Stoddart Creek in the North Peace River region.

Distribution: Migration: Two records of migrants. A male struck a window in Fort St. John on 24 June 1986 and two males were found in a mixed flock of migrant warblers along St. John Creek on 17 August 1986. Breeding: Recorded as a rare summer visitor to the following locations: the Peace River valley south of Watson Slough, Stoddart (Fish) Creek in Fort St. John, the forested northwest corner of Charlie Lake, Beatton River valley 14 km north northeast of Rose Prairie, trembling aspen forests at the junction of 103 and 251 roads southwest of Cecil Lake, forests at the south end of Cecil Lake, aspen forests south of the Boundary Lake airfield, and the forest southwest of the junction of 248 Road with 103 Road east of Cecil Lake. Penner (1976) gave two locations within the Peace River valley: one 5.3 miles west of the Alberta border and one 41.7 miles west of the border (approximately due south of Fort St. John).

Occurrence: Spring: This is one of the latest North American migrants to arrive on its breeding grounds. In the North Peace River region, the earliest arrival date was 29 May 1985 when a single male was briefly heard in a trembling aspen sapling forest at the northwest corner of Charlie Lake. Summer: “Spring” migration probably extends well into June. A male was first heard at Stoddart Creek on 16 June 1983 at the site where the pair later bred. There are records of singing males near Watson Slough on 24 June 1983 and Cecil Lake on 14 June 1990 and 29 June 1984. One sang in a young aspen forest at Boundary Lake on 16 June 1985. Very few southbound migrants have been encountered. In the North Peace River region there is only one other August record besides a female and fledgling at Stoddart Creek (see below). Two males were found in a mixed flock of warblers along St. John Creek near 101 Road on 17 August 1986. Other notable records are: One male heard at the north end of Charlie Lake on 29 May 1985 (spring arrival date), a male seen singing from young aspens on west side of Boundary Lake on 16 June 1985, one male singing in the Peace River valley opposite Watson Slough on 24 June 1983, a male sang in forest at junction of 103 Road and 251 Road southwest of Cecil Lake on 27 June 1986, and a male was heard in a forest south of the junction of 248 Road and 103 Road east of Cecil Lake on 14 June 1990.

Breeding: One confirmed breeding record. An agitated pair was seen on 20 and 22 July 1983 in a mixed woodland of mature and decadent trembling aspen and young white spruce at Stoddart (Fish) Creek on the northern edge of Fort St. John. Both sexes called loud “spik” notes, like those of a Rose-breasted Grosbeak. The male had been discovered singing at this site 16 June. On 2 August, an agitated female was seen with a newly fledged young. The last record was of an unattended juvenile still showing a fleshy flange on its mandibles encountered on 24 July 1992 in a brushy clearing on an aspen covered ridge above the Beatton River 14 km north northeast of Rose Prairie.

Comments: Connecticut Warbler populations are small and local, and are associated with mature trembling aspen forests; many of these are currently being logged for pulpwood.

Mourning Warbler
Oporornis philadelphia

Status: *Uncommon migrant and summer visitor; probably breeds.*

Not recorded by Williams (1933b) or Cowan (1939). Evidence suggests that Mourning Warbler has recently expanded its range into British Columbia’s Peace River country. Weber (1976) added the species to the British Columbia list in a short note with records from Taylor. Penner (1976) found a single bird near the Clayhurst ferry (later replaced by a bridge).

Habitat: Migration and Breeding: Mourning Warbler was found in thick shrubbery along the edges of woodlands, in overgrown transmission corridors, willow thickets backed by mature mixed forest and less frequently in the understory of trembling aspen woodlands usually near an opening in the canopy. Most commonly the species is found in willow, alder, and red-osier dogwood shrub edge of mixed forest of mature balsam poplar, trembling aspen and white spruce (Figure 89).



Figure 89. Pure or mixed forests with a dense, well-grown shrubby edge, is the habitat most frequently associated with Mourning Warbler. *Photo by R. Wayne Campbell, north of Fort St. John, BC, June 1996.*

Distribution: Migration: Occasional birds have been found at Cecil Lake, Charlie Lake, Beatton Provincial Park, and St. John Creek. Breeding: This species is locally distributed in the North Peace River region with the majority of observations along the south bank of the Peace River at Peace Island Park Road and Johnstone Road south of Taylor. Other locations included Mile 79 of the Alaska Highway, the Mile 73 Road between the Alaska Highway and Buick Creek, Beatton Recreational Area, the south sewage lagoons in Fort St. John, and Alwin Holland Park east of Hudson's Hope. The species may be expanding its range throughout the lowlands in the North Peace River region.

Occurrence: Spring: Eight arrival dates (1982 to 1989) ranged from 24 to 31 May. Phinney (1998) gave 24 May as the earliest arrival date for the South Peace River region. Notable spring arrival records are: Two males along Peace Island Park Road on 25 May 1985 and a male along the same road 29 May 1982. Summer: By early June, all Mourning Warblers have returned. The song of the male is conspicuous although he sits so still that he is hard to spot in the branches of a tree that usually arches over the thickets. Females are non-vocal and move quietly through the vegetation. The species is probably well distributed in suitable habitat. For example, a census on 9 June 1989 and 9 July 1997 along Peace Island Park Road from the Alaska Highway to the ski hill found four and six males respectively in 5 km of shrubby forest edges. Mourning Warblers quietly disappear from the North Peace River region during late August. Notable records are: A male at Alwin Holland Park east of Hudson's Hope on 7 July 1998, a male at Mile 97 of the Alaska Highway on 23 June 1984, a male along the first few km of the Mile 73 Road toward Buick Creek on 6 July 1998, a male along St. John Creek near 101 Road on 5 July 1976, one at Beatton Provincial Park on 2 July 1998, and an immature at the southeast corner of Charlie Lake on 21 August 1985. Four dates of last record (1984 to 1988) ranged from 22 August to 2 September. Autumn: A notable record, the latest departure date for the North Peace River region, was one found at north end of 251 Road, west of Cecil Lake, on 2 September 1984.

Breeding: No nests with contents or fledged young were observed. Evidence of breeding, however, included a pair of Mourning Warblers feeding a Brown-headed Cowbird fledgling at km 5.5, Johnstone Road on 24 July 1982, a female warbler feeding a cowbird fledgling along Peace Island Park Road on 21 July 1988, agitated adults carrying food on 7 July 1991 and 9 July 1997 near the ski hill at the far end of Peace Island Park Road, and another near the turn-off to the mouth of the Pine River on 21 July 1987.

Comments: Nest parasitism of Mourning Warblers by Brown-headed Cowbirds appears significant and may impact breeding success locally. Phinney (1998) noticed hybrid Mourning x MacGillivray's warblers in the South Peace River region. No such plumage traits were observed in the North Peace River region.

MacGillivray's Warbler *Oporornis tolmiei*

Status: *Casual in spring and summer.*

Not recorded by Williams (1933b). Cowan (1939) mentioned that this species was "rather rare" at Charlie Lake in June 1938. Penner (1976) called it "occasional" in the Peace River valley, giving two dates for individuals: 31 May 1973 and 14 June 1975, but no specific locations.

Occurrence: One record. An adult male was seen in roadside brush on the west side of Charlie Lake on 21 June 1980.

Common Yellowthroat
Geothlypis trichas

Status: *Uncommon spring migrant, uncommon to fairly common autumn migrant, and uncommon to fairly common summer visitor; breeds.*

Not recorded by Williams (1933b). Cowan (1939) called it “abundant” at Swan and Charlie lakes. Penner (1976) found it “rare” along the Peace River valley.

Habitat: Migration: Tall willow thickets in fields, bushes at woodland edges, rural gardens, and shrubby creek sides and tall willows at the edge of trembling aspen forests. Breeding: Varied, from low saplings and shrubs in grassy or sedge edges to wetlands such as agricultural ponds, Beaver ponds (Figure 90), creeks, sewage cells, and brushy edges to muskegs. The species also frequents drier sites

such as brushy roadsides, shrubby overgrowing fields, overgrowing burns and open balsam poplar stands. Cowan (1939) identified two habitats: clumps of low willows bordering muskegs and similar willows along with Saskatoon and cherry on dry unforested parkland hillsides. Phinney (1998) found Common Yellowthroat in riparian scrub and marsh, but more commonly in upland shrubs, particularly regenerating trembling aspen clear cuts.

Distribution: Migration: Widespread. Recorded at Rose Prairie, Baldonnel, Beatton Provincial Park, north and south sewage lagoons in Fort St. John, the British Columbia Rail depot area in Fort St. John, Stoddart (Fish) Creek, and St. John Creek. Breeding: Fairly widespread, occurred from the south bank of the Peace River at Peace Island Park Road and Johnstone Road north to Wonowon. This species was not recorded from Hudson’s Hope, perhaps due



Figure 90. Beaver ponds are one of the many wetland habitats Common Yellowthroat visits each summer to breed. Photo by R. Wayne Campbell, west of Charlie Lake, BC, 18 June 1996.

to lack of suitable habitat, but was found at Lynx Creek east to Boundary Lake.

Occurrence: Spring: Eleven arrival records (1977 and 1980 to 1989) ranged from 20 to 31 May, with 10 dates between 24 and 31 May. Phinney (1998) gives 18 May as the earliest arrival date for the Dawson Creek area. Arrivals were generally detected as singing males in favoured wetlands, or willow upland sites, where the species resided for the summer. Singing birds were commonly heard throughout typical habitat in the North Peace River region until the final week of May. No peak passage was detected. Notable spring arrival records are: A male at the BC Rail depot marsh in Fort St. John on 20 May 1985 and a male in flood plain bushes along Peace Island Park Road south of Taylor on 24 May 1986. Summer: See *Breeding*. Southbound migration began as early as late July. Earliest observations of yellowthroats at locations where they did not summer ranged from 4 to 15 August. Early in migration single birds were usually encountered, rather than flocks. However, peaks of movement were noted from 22 August to 11 September, with the highest single count of 21 birds at Boundary Lake on 26 August 1985. Notable records are: A pair at Lynx Creek on 24 June 1983 and a male at the mouth of the Halfway River on 12 June 1982. Autumn: Yellowthroats continued to move southwards during the first half of September. Nine dates of last record for the year (1980 to 1988) ranged from 2 to 28 September, with five dates between 12 and 28 September. Notable records are: Two along St. John Creek near 101 Road on 18 September 1986 and four at the north sewage lagoons near Fort St. John on 11 September 1983.

Breeding: Although Common Yellowthroat is a summer visitor throughout the North Peace River region, little evidence of breeding was collected. On 7 July 1997, a female was heard feeding fledglings at a Beaver pond near Watson Slough. Agitated males and females were also seen during the first half of July as well as a female seen carrying food on 18 July 1982 around a backwater of the Peace River at km 5 of Johnstone Road.

Wilson's Warbler *Wilsonia pusilla*

Status: *Uncommon spring transient and fairly common autumn transient; may breed locally.*

Not recorded by Williams (1933 b). Cowan (1939) noted it as an "abundant spring migrant" at Tupper Creek in the South Peace River region, with very few remaining to nest. Penner (1976) considered it an "uncommon migrant" along the Peace River valley.

Habitat: Migration: Occurs in mixed woodlands and thickets. In southbound migration it may commonly be found away from forests in muskeg edges, willow thickets and hedgerows, and shrubby wet areas. Breeding: Possibly breeds in willow edges of muskegs. Cowan (1939) noted "nesting" birds in willow thickets bordering the big muskeg 12 miles north of Tupper. However, he provided no specific details on nesting. Phinney (1998) suspected nesting in the higher-elevation mixed woodlands or coniferous forest of the South Peace River region, based upon birds holding territory and acting agitated at the observers' presence.

Distribution: Migration: Widespread across the North Peace River region. Breeding: Appears to breed at higher elevations in the mountains west of Chetwynd. This species undoubtedly breeds at higher elevations north of the North Peace River region. It may also breed in small numbers in the muskeg edges north of Boundary Lake.

Occurrence: Spring: Nine earliest spring arrival records (1981 to 1988) ranged from 30 April to 14 May, with seven occurring between 9 and 14 May. Spring migrants were generally encountered in small numbers or loose associations of two to three birds. Spring migration peaked between 15 and 20 May. Single location counts ranged from one to six birds with a high of 10 warblers at Beaton Provincial Park on 19 May 1987. Cowan (1939) termed the species "abundant" with 15 counted along a 5-km strip. His count would match those found in the North Peace River region although his use of "abundant" would be considered too generous

for the numbers involved. Latest spring records occurred from 28 May to 6 June. Notable records are: One at Hudson's Hope on 16 May 1976, three at Bear Flat on 20 May 1984, one at Grand Haven on 30 April 1987 (spring arrival date), and one male at Fort St. John on 11 May 1981. **Summer:** One late record of two at Beaton Provincial Park on 3 June 1984. Four June records of singing males around Boundary and German lakes. A notable record is of one male at Boundary Lake on 20 June 1987. Southbound migrants first appeared (1980, 1982, and 1984 to 1988) from 4 to 22 August. The highest count at a single location was 42 at Stoddart Creek in Fort St. John on 20 August 1984. The peak of southbound migrants occurred between 20 August and 1 September with usual counts of three to eight birds. This peak corresponds with capture results at a bird-banding station at Edmonton, Alberta, which showed the heaviest concentrations of Wilson's Warblers occurring during the final week of August and the first 10 days of September (Salt 1973). **Autumn:** Wilson's Warbler is among the last warblers to depart the North Peace River region. It remained fairly widespread through the first week of September. Nine dates of final autumn records (1980 to 1988) ranged from 6 to 22 September, with six records between 16 and 22 September. Notable late departure records are: One at Beaton Provincial Park on 21 September 1980 and a male at Fort St. John on 22 September 1985.

Breeding: No direct evidence. The species may nest in the vicinity of Boundary Lake and German lakes.

Canada Warbler *Wilsonia canadensis*

Status: *Uncommon local migrant and summer visitor; breeds.*

Canada Warbler was not recorded by Williams (1933b), Cowan (1939) or Penner (1976).

Habitat: **Migration:** Mixed forests. **Breeding:** Found most frequently in the tall understory of mixed trembling aspen forests growing on slopes. Small openings in the canopy created by fallen trees allow the growth of a fairly thick understory of green alder (Figure 91), red-osier dogwood, highbush cranberry, and other tall shrubs.



Figure 91. Green alder, a large shrub that ranges across the cooler parts of the Northern Hemisphere, is an important constituent of habitat for breeding Canada Warbler. *Photo by R. Wayne Campbell, 22 June 2007.*

Distribution: **Migration:** Rarely encountered as a migrant (e.g., Beaton Provincial Park). **Breeding:** Found along the south bank of the Peace River along Peace Island Park Road, Johnstone Road, and opposite Farrell Creek and along 10 km downstream. It was also found where Danish Creek crosses the road to Dunlevy Inlet northwest of Hudson's Hope, once at St. John Creek near 101 Road prior to selective logging of that site, and once along the west side of Beaton River at 256 Road near North Pine.

Occurrence: Canada Warbler was first recorded for British Columbia in 1970 at Clayhurst (Campbell et al. 2007). Since then it has become well established throughout the entire northeastern portion of the province. **Spring:** Nine arrival dates, directly on breeding territory (1981 to 1989), ranged from 22 May to 1 June. No spring migrants were observed in the North Peace River region. In the South Peace River region, Phinney (1998) gave 27 May as the earliest arrival for the Dawson Creek area. Notable records are: A male along Peace Island Park Road south of Taylor on 25 May 1985 (arrival date), a male at km 5 of Johnstone Road south of Taylor on 22 May 1981 (arrival date), and three males and a female at km 5 Johnstone Road on 31 May 1982. **Summer:** See *Breeding*. Four dates of “fall” departure ranged from 14 to 28 August. Singing ceased in mid-July and thereafter Canada Warblers became hard to find. Late summer birds were generally detected as singles. Migrants were recorded only three times (all in Beatton Provincial Park) away from traditional nesting sites. Notable records are: A male singing at Danish Creek on road to Dunlevy Inlet on 7 July 1997, a male at St. John Creek near 101 Road on 5 July 1976, an adult quiet and molting at 256 Road above Beatton River on 24 July 1992, a molting male at Blackfoot Park in Clayhurst on 2 July 1998, one migrant at Beatton Provincial Park on 22 August 1985, and one along Peace Island Park Road on 18 August 1987.

Breeding: Most breeding evidence is of family groups. These include: A pair feeding two or three fledglings on south side of the Peace River about 8 km downstream from Farrell Creek on 21 July 1992; a female feeding a still slightly downy fledgling on south side of the Peace River, about 10.5 km east from Farrell Creek, on 21 July 1992; an agitated male carrying food at km 6.4 of the Johnstone Road (Figure 92) on 2 July 1980; a female collecting food at km 6.5 Johnstone Road on 2 July 1980; and a male and female carrying food at km 5 of the Johnstone Road on 8 July 1984. In addition, a female Canada Warbler was seen feeding a fledged Brown-headed Cowbird along Johnstone Road in July 1982 and 1983.



Figure 92. Fledged Canada Warbler young were found in the dense shrub layer in this mixed stand of trembling aspen and balsam poplar. The nest may have been located under the fallen log (bottom centre) where other nests have been found in the south Peace River region. *Photo by R. Wayne Campbell, south of Taylor, BC (along Johnstone Road), 11 June 2007.*

Comments: See Campbell et al. (2007) for a detailed updated account of Canada Warbler in British Columbia.

TANAGERS

Western Tanager *Piranga ludoviciana*

Status: *Uncommon to fairly common migrant and uncommon summer visitor; breeds.*

This species was recorded once in the Peace River District by Williams (1933b), near Moberly Lake. It was recorded by Cowan (1939) in the South Peace River region and at Charlie Lake but no status was given. Penner (1976) described Western Tanager (Figure 93) as a "fairly common" breeding bird in the forests along the Peace River valley.



Figure 93. Western Tanager is more common as a migrant than a breeding species in the North Peace River region. *Photo by R. Wayne Campbell.*

Habitat: Migration: Similar to breeding habitat but also occurs in most forest types and even in wooded yards. In springs with poor weather, it frequents roadside shrubbery. Breeding: Found in most forest types including mature mixed forests with some conifers, mature balsam poplar woodlands on flood plain forests, and trembling aspen forests with a few scattered large conifers. Phinney (1998) found it most common in mature mixed woodlands and less so in pure stands of trembling aspen in the South Peace River region.

Distribution: Migration and Breeding: Although Western Tanager was recorded north to Mile 79 of the Alaska Highway, it was most frequently encountered where large white spruce could be found, especially along Peace Island Park Road and Johnstone Road south of Taylor, Beatton Provincial Park, Beatton Bridge along 103 Road, and Watson Slough.

Occurrence: Spring: Eleven first arrival dates (1976, 1977, and 1980 to 1988) ranged from 9 to 17 May, with seven dates between 9 and 13 May. Males arrived first. Cowan (1939) first recorded males between 21 and 25 May 1938 with females beginning to arrive on 25 May. The peak spring movement in the North Peace River region occurred very soon after arrival. From 1976 to 1988, the highest numbers were seen between 11 and 22 May. High spring counts included eight males along 5 km of the Johnstone Road south of Taylor on 18 May 1981 and eight along the Peace Island Park Road on 18 May 1985. Notable records are: Four at the south sewage lagoons in Fort St. John on 11 May 1987, one male at Stoddart (Fish) Creek (Figure 94) on 14 May 1977, and seven along the Peace Island Park Road on 15 May 1988. Summer: See *Breeding*. Southbound migration is usually noticed in late July when a few migrants appeared in suburban gardens. Migration continued through August. Six "fall" departure dates (1976, 1982, and 1985 to 1988) ranged from 18 August to 7 September. Most tanagers were gone by the end of August. Notable records are: Eight along Johnstone Road at 6 km on 5 June 1982, one at Watson Slough on 16 June 1990, one at Mile 79 of the Alaska Highway on 23 June 1984, a female collecting food at Beatton Provincial Park on 30 June 1998, and one at Bear Flat on 5 July 1997. Autumn: Individuals were recorded some years during the first week of September. Notable records are: One at Charlie Lake Provincial Park on 1 September 1982 and one at St. John Creek near 101 Road on 7 September 1985.



Figure 94. Migrating and breeding Western Tanagers are most often found in mature mixed forests. *Photo by R. Wayne Campbell, Stoddart (Fish) Creek, BC, 12 June 2007.*

Breeding: Western Tanager is probably a widespread breeding species. Nest-building began as early as late May and fledglings appeared in early July. No nests were located, but breeding evidence included a female building a nest 19 m high in a mature white spruce in mixed woodland at km 5 of the Johnstone Road on 23 May 1983, a female feeding a newly fledged chick in Beaton Provincial Park on 4 July 1981, a pair carrying food and acting agitated at St. John Creek near 101 Road on 6 July 1976, a male feeding a begging fledgling in a stand of lodgepole pine at Hudson's Hope on 1 July 1998, and a pair of adults accompanied by two juveniles foraging along Peace Island Park Road on 5 July 1998. Phinney (1998) found a nearly completed nest on 2 June and a female incubating eggs or brooding nestlings on 12 July in the Dawson Creek area. There were two records of Brown-headed Cowbird parasitism. A pair of tanagers fed two newly fledged cowbirds along Peace Island Park Road on 22 July 1985 and a female fed a juvenile cowbird at Beaton Provincial Park on 10 July 1980.

TOWHEES, SPARROWS, LONGSPURS AND ALLIES

American Tree Sparrow *Spizella arborea*

Status: *Uncommon to very common spring and autumn transient.*

Williams (1933) listed a male taken at Dawson Creek on 13 September 1930. Cowan (1939) and Penner (1976) did not record American Tree Sparrow (Figure 95) because of the timing of their field work.



Figure 95. American Tree Sparrows pass through the North Peace River region as transients from mid-April to early May and mid-September to early October. *Photo by R. Wayne Campbell.*

Habitat: Migration: Frequently occurs in willows and other brushy thickets at the edges of fields, marshes, lakeshores, overgrowing meadows, and clearings. Sometimes it occurs along the edges of mixed woodlands.

Distribution: Migration: Occurs in suitable habitat throughout the North Peace River region.

Occurrence: Spring: Seven earliest spring arrival records (1976 and 1983 to 1988) ranged from 4 to 20 April, with five dates between 10 and 20 April. Phinney (1998) gave 13 April as the earliest arrival for the Dawson Creek area. In the North Peace River region, first tree sparrows arrived as singles or in very small flocks that numbered fewer than 10 birds. Larger flocks were not encountered every spring. The largest flocks noted ranged between 100 and 200 birds, but such flocks were encountered only four times in 12 years. Spring numbers peaked from mid- to-late April. Small numbers were observed frequently through the first week of May, with stragglers seen until the end of the second week of May. The latest spring record, of a single bird, was at Peace Island Park Road south of Taylor, on 17 May 1986. Notable records are: 200+ birds at Cecil Lake on 24 April 1983, 200+ at North Pine on 2 May 1983, between 100 and 200 at east side of the grain elevators in Fort St. John on 23 April 1988, three at Beryl Prairie north of Hudson's Hope on 6 May 1978, 20 at Montney on 12 April 1986, one early arrival at Cecil Lake on 4 April 1986, and two at Boundary Lake on 14 May 1983. Autumn: The first autumn migrants appeared in small numbers around Fort St. John during the first week of September. Nine records of autumn arrival (1980 to 1988) ranged from 30 August to 15 September, with seven dates between 1 and 7 September. Largest numbers occurred between 19 September and 8 October, with flock sizes usually ranging between one and 50 birds. Only rarely were larger flocks seen. The three largest autumn flocks ranged between 75 and 100 birds. Eight dates of final autumn departure (1980 and 1982 to 1988) ranged from 5 to 31 October, although most tree sparrows left the North Peace River region by 10 October. There were no winter records. Notable records are: One at Buick Creek on 27 September 1980, one a few kilometres northwest of Fort St. John on 30 August 1984, 18 at Montney on 8 October 1984, and 75 at the British Columbia Rail depot in Fort St. John on 28 September 1985.

Chipping Sparrow *Spizella passerina*

Status: *Uncommon to occasionally common migrant and uncommon summer visitor; breeds.*

Williams (1933b) found this species "common" along the Peace River. Cowan (1939) noted flocks of up to 20 migrants around Swan Lake, but felt it was scarce after migration. At Charlie Lake, he listed Chipping Sparrow (Figure 96) as the least abundant nesting sparrow. Penner (1976) termed it a "common migrant and summer resident" in the Peace River valley.



Figure 96. Chipping Sparrow is less common as a summer visitor than as a migrant species. *Photo by R. Wayne Campbell.*

Habitat: Migration: Found around openings in coniferous, mixed, and deciduous woodlands such as transmission corridors, landfills, lawns in parks, and roadsides. It also frequents open woodlands, muskegs, white spruce stands in mixed woodlands, and trembling aspen grove edges, overgrown clearings (Figure 97), abandoned farmyards, brushy areas around grain elevators, hedgerows, and willow hedges. Breeding: Recorded in suburban backyards, especially those with evergreen shrubs, and in open woodlands such as black spruce muskegs, lodgepole pine forests, and openings in trembling aspen parklands around beaver ponds, as well as mixed and coniferous woodland edges.

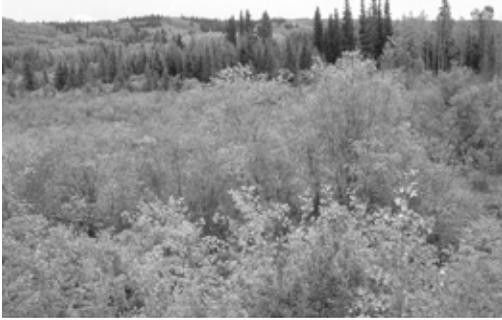


Figure 97. Chipping Sparrow migrates and breeds in a wide variety of habitats including openings in forests with dense shrubs. *Photo by R. Wayne Campbell, near Goodlow, BC, 18 June 1996.*

Distribution: Migration and Breeding: Widely distributed throughout the North Peace River region.

Occurrence: Spring: Eleven spring arrival dates (1977 and 1980 to 1989) ranged from 6 to 15 May. Phinney (1998) gives 6 May as the earliest arrival for the Dawson Creek area. Early arriving birds were usually encountered as individuals, or in flocks of two to four birds. Larger flocks were generally observed during the peak of spring movement in the last half of May. Peak numbers for 1982 to 1986 were six at Kin Park in Fort St. John on 21 May 1982, seven at Beaton Provincial Park on 25 May 1984, nine at the north sewage lagoons in Fort St. John on 27 May 1984, 11 at Peace Island Park south of Taylor on 18 May 1985, 10 just north of Beaton Provincial Park on 18 May 1985, 49 at the south sewage lagoons in Fort St. John on 24 May 1985, and 84 at Beaton Provincial Park on 22 May 1986. Four decades earlier, the peak of spring migration, at least in the South Peace River region, came almost a half a month earlier. At Swan Lake, Cowan (1939) commonly found Chipping Sparrows in flocks of up to 20 birds from 8 to 15 May in 1938. By 18 May birds were scarce. Summer: Hatching began about mid-June. Adults feeding fledglings were frequently seen in late June and July. Southbound migration probably began in early August. There was no definite peak in August records. Notable records are: An adult feeding a fledgling at Dunlevy

Provincial Park on 7 July 1997 and a nest with four eggs at Fort St. John on 9 June 1985. Autumn: Chipping Sparrow left the North Peace River region by the first or second week of September. Four dates of autumn departure (1984 and 1986 to 1988) ranged from 29 August to 11 September. A notable record was seven juveniles at a Fort St. John feeder on 11 September 1988, the latest autumn record.

Breeding: Evidence suggests that Chipping Sparrow formed pairs and began nesting in late May. A bird carrying nesting material was seen 23 May 1981 at Peace Island Park Road. Notable records are: A nest with four eggs being incubated was found 9 June 1985 at Fort St. John, a nest with at least two unfeathered young was found on 14 June 1981 at Mile 98, Alaska Highway, and another containing four downy nestlings was found on 16 June 1985 at Boundary Lake. Fledglings were frequently encountered in late June and early July. In the South Peace River region, Phinney (1998) found three nests on 11 June 1993: two with five eggs each and the other with four newly hatched young. A nest on 19 June 1994 contained two sparrow eggs and two Brown-headed Cowbird eggs.



Figure 98. Adult Chipping Sparrow attending young in a nest built in the middle of a wild rose shrub. *Photo by Mark Nyhof.*

Nests located in the North Peace River region were situated in a low rose shrub (Figure 98), ornamental cedar bush, and a lodgepole pine sapling. The rose nest was 30 cm above ground in the centre of the bush, the cedar nest was 45 cm above ground near the top, and the pine nest was at 2 m. The rose nest was at the edge of a young trembling aspen grove next to a grain field. The cedar bush was in a border shrub beside a lawn. The nest in this cedar was a neat compact cup that could easily fit into the palm of one's hand. It was lined with animal hair and had a base of thick straw. The pine nest was in the edge of a young pine forest.

Clay-colored Sparrow *Spizella pallida*

Status: *Common migrant and summer visitor; breeds.*

Not reported by Williams (1933b). Cowan (1939) felt Clay-colored Sparrow (Figure 99) was the most abundant sparrow in the eastern part of the Peace River District. Penner (1976) found it an "abundant summer resident" in the Peace River valley.



Figure 99. In British Columbia, the highest numbers of Clay-colored Sparrow in summer occur in the Boreal Plains ecoprovince. *Photo by R. Wayne Campbell.*

Habitat: Migration and Breeding: Found around thickets and patches of shrubs, wolf-willows, Saskatoon and rose bushes (Figure 100), brushy edges to fields, roadsides, hedgerows, and forest edges. It is a characteristic breeding bird of south-facing prairie-like "breaks" as well as being common in regenerating trembling aspen clear cuts.



Figure 100. Thick patches of tall rose bushes, isolated in fields or along roadsides, are favourite breeding sites for Clay-colored Sparrow. *Photo by R. Wayne Campbell, west of Fort St. John, BC, 23 June 1996.*

Distribution: Migration and Breeding: Recorded from about the Halfway River in the west to the Alberta border in the east and at Taylor in the south, and north through the North Peace River region. Clay-colored Sparrow is locally distributed, however, north of the extensive farmlands around Fort St. John and Rose Prairie.

Occurrence: Spring: Ten arrival dates (1980 to 1989) ranged from 10 to 20 May. Phinney (1998) gave 11 May as the earliest arrival for the Dawson Creek area. Penner (1976) gave 15 May as the earliest record for the Peace River valley. Flocks of migrants were not observed. Rather, arriving birds appeared suddenly at traditional summer locations. Certain thickets were favoured by birds each year and males began to establish territories and sing as soon as they arrived. Notable spring arrival records are: One at Bear Flat on 10 May 1981 and one at Boundary Lake on 16 May 1982. Summer: See *Breeding*. The majority of birds appeared to depart in late August. Flock size in August and September

was often only two to three birds each. Of 13 flocks with more than three birds, numbers ranged from four to 22 birds, with 13 birds the average size. Flocks of more than three birds were recorded between 9 August and 6 September. The largest flock recorded was of 22 birds at 267 and 121 roads northwest of Fort St. John on 30 August 1984. Notable records are: One at km 6.5 of the Upper Cache Road on 9 June 1985 and an adult feeding two fledglings at Umbach Creek crossing south of Buick Creek on 3 July 1998. Autumn: Notable records are: Ten at the south end of Charlie Lake on 1 September 1985 and a small flock at Stoddart Creek in Fort St. John on 6 August 1977. Six final autumn records (1982 and 1984 to 1988) ranged from 4 to 22 September, with four dates between 12 and 22 September.

Breeding: Clay-colored Sparrow is probably a common nesting species in the North Peace River region but little is known about its breeding ecology (Figure 101). Cowan (1939) found nests with fresh eggs on 10 June 1938 “and several times during the subsequent week” at Charlie Lake. Phinney (1998) found nests with four eggs between 6 and 30 June and newly hatched young between 10 June and 3 July in the Dawson Creek area. In the North Peace River region, an adult carrying food was seen at Taylor Landing Provincial Park on 22 June 1986 and adults were feeding fledglings between 1 and 4 July. However, an adult with a young just out of the nest, able only to flutter, were seen at the south sewage lagoons in Fort St. John on the late date of 2 August 1987. The latter may have been a replacement or second nesting attempt.

Cowan (1939) did not report Brown-headed Cowbird parasitism nor were any incidents seen in the present study. Phinney (1998), however, reported cowbirds laying eggs in Clay-coloured Sparrow nests in the Dawson Creek area.



Figure 101. A careful examination of dense patches of rose bushes for nests will undoubtedly contribute to the nesting biology and phenology of Clay-colored Sparrow in the North Peace River region. *Photo by R. Wayne Campbell.*

Vesper Sparrow *Poocetes gramineus*

Status: *Uncommon migrant and uncommon to fairly common summer visitor; breeds.*

Williams (1933b) found this species “common” in the Peace River Block. Cowan (1939) reported that it occurred “in fair numbers” in the Tupper Creek, Dawson Creek, and Charlie Lake area. Penner (1976) termed Vesper Sparrow (Figure 102) “uncommon” in the Peace River valley.



Figure 102. Vesper Sparrow is an uncommon migrant and reaches the northern limit of its breeding range in British Columbia near Hudson’s Hope. *Photo by R. Wayne Campbell.*

Habitat: Migration: Open areas including fields, grasslands, and roadside edges and graveled dikes. Breeding: Grasslands of south and west-facing

slopes on the hillsides lining the major rivers and streams. It is also found in dry agricultural fields.

Distribution: Migration and Breeding: Grassy hills north along the Peace River from Cache Creek and Bear Flat east to the Alberta border. It also occurs on the “breaks” above Taylor, north through Fort St. John to at least Charlie Lake and east across the Beatton River through Cecil Lake and Goodlow to Boundary Lake. It is local throughout this southeastern corner of the North Peace River region.

Occurrence: Spring: Eleven arrival dates (1977 and 1980 to 1989) ranged from 27 April to 9 May, with seven dates between 29 April and 5 May. Phinney (1998) gave 5 May as the earliest arrival for the Dawson Creek area. There is one record of five birds in a mixed flock of sparrows west of Cecil Lake on 9 May 1981. There was no discernible spring peak. Notable records are: One at Bear Flat on 30 April 1987 (spring arrival date), four at Montney on 15 May 1976, and one at Boundary Lake on 2 May 1982 (spring arrival date). Summer: Found in suitable habitat throughout the breeding period. There was no noticeable buildup of southbound migrants in August. The species simply dwindled in numbers through the late summer and early autumn. Notable records are: One about 3 km east of Lynx Creek on 1 July 1998, one in an overgrown pasture west of Watson Slough on 1 July 1998, and one on the “breaks” near Clayhurst on 2 July 1998. Autumn: Seven final autumn records (1982 to 1988) ranged from 3 to 17 September. Notable late departure records are: One south of Montney along 121 Road on 13 September 1986, one northwest of Fort St. John at the 146 and 267 roads junction on 17 September 1983 (latest autumn record) and one at North Pine on 16 September 1984.

Breeding: No nests with contents were found. An adult was carrying food at km 2 along the Old Hudson’s Hope Road at Bear Flat on 5 July 1997 and another adult carried food along 251 Road, southwest of Cecil Lake, on 28 July 1983. Campbell et al. (2001) reported a nest with five eggs at Farrell Creek on 22 June 1979.

Lark Bunting *Calamospiza melanocorys*

Status: *Accidental.*

Not previously recorded in the North Peace River region.

Occurrence: A male in full alternate plumage was photographed at the north sewage lagoons in Fort St. John on 28 May 1988 (Siddle 1988). The closest area of regular occurrence is southern Alberta (Semenchuk 1992).

Savannah Sparrow *Passerculus sandwichensis*

Status: *Fairly common to occasionally very common migrant and fairly common summer visitor; breeds.*

Not recorded by Williams (1933b). Cowan (1939) found Savannah Sparrow (Figure 103) to be the most abundant sparrow breeding at Tupper Creek in the South Peace River region. He also found a nest with eggs at Charlie Lake on 14 June 1938. Penner (1976) called it a “very common migrant and summer breeder” in the Peace River valley.



Figure 103. Savannah Sparrow is a familiar bird from spring to autumn each year in open habitats. Photo by R. Wayne Campbell.

Habitat: Migration: Open, grassy and weedy environments. Breeding: Farm fields, hay fields, long grass fields around wetlands, and wide transmission corridors with grasses and shrubs. It also frequents habitats characterized with small shrubs and weeds.

Distribution: Migration and Breeding: Found throughout the North Peace River region.

Occurrence: Spring: Fourteen earliest spring arrival dates (1976 to 1989) ranged from 17 April to 3 May, with eight dates between 20 and 30 April. The earliest arrival date for Dawson Creek was 19 April (Phinney 1998). The peak of spring migration in the North Peace River region varied from year to year but generally occurred between 3 and 18 May. In southern Alberta, Savannah Sparrow numbers peaked in the first week of May (Pinel et al. 1993). Birds were abundant in spring some years, as on 8 May 1976 when Savannah Sparrows were numerous on lawns and roadsides in Fort St. John and Charlie Lake. Between the first silent arrivals and the widespread peaks of mid-May, occasional compact, silent flocks were encountered, as on 30 April 1977 when 30 were seen along the 248A Road marshes. Nest-building and egg-laying began by late May. Notable records are: 30 in a silent flock on the edge of a pond along 251 Road, southwest of Cecil Lake, on 6 May 1984, 100 to 200 along 259 Road to the north sewage lagoons near Fort St. John on 13 May 1983, hundreds in small flocks of 10 to 20 birds each along 103 Road from Fort St. John to the Alberta border on 16 May 1982, 40 at the south end of Charlie Lake on 18 May 1984, and 12 at North Pine on 3 May 1986. Summer: See *Breeding*. Southbound migration probably began by early August. By mid-August migration was easily detectable. The “fall” peak varied from year to year. For example, in 1984 the peak occurred between 28 August and 8 September, but in 1987 the peak occurred between 20 and 26 August. Generally, it occurred sometime between 24 August and 12 September. The largest count at a single location was of 52 birds along 259 Road just north of the north sewage lagoons near Fort St. John on 24 August 1986, with an additional 50 birds around the lagoons. Twenty-three counts between 24 August and 12 September (1982 to 1988) totalled 705 birds with a range of 14 to 52 birds per location and an average of 30.6 birds per location. Notable records are: Twenty-five along 259 Road near north sewage lagoons near Fort St. John on 26 August 1988, two agitated pairs at the south end of Charlie Lake on 7 July 1998, 10 at the north sewage

lagoons in Fort St. John on 31 August 1982, and 13 at Boundary Lake on 22 August 1984. Autumn: After 15 September, only stragglers were recorded. Dates of last autumn records (1975, 1980, and 1982 to 1988) ranged from 18 September to 11 October, with five records between 27 September and 3 October. Notable latest departure records are: 50 at Charlie Lake Elementary School on 3 September 1988, two at Buick Creek on 27 September 1980, and one at Fort St. John sewage lagoons on 11 October 1987.

Breeding: Three nests were found (Figure 104). Nest-building commenced as early as the fourth week of May. An adult was recorded carrying nest material at the south sewage lagoons in Fort St. John on 24 May 1987. Two nests with three and five eggs were found at the 248A Road marshes in North Pine on 13 June 1983. This is within the time period for a nest with four eggs found at the south end of Charlie Lake on 14 June 1938 (Cowan 1939). In the South Peace River region, three nests with eggs were found between 27 and 30 May (Phinney 1998).



Figure 104. Typical ground nest of Savannah Sparrow (lower right) placed at the base of an overhanging clump of grass. *Photo by R. Wayne Campbell, Boundary Lake, BC, 21 June 2004.*

Nests found in the North Peace River region were situated along the edge of an alfalfa field. Nests were grass-lined cups in dry depressions among tall grasses. The 248A Road nests were both built at the bases of alfalfa tufts. One of the South Peace River region nests contained two sparrow eggs and two Brown-headed Cowbird eggs (Phinney 1998).

Le Conte's Sparrow
Ammodramus leconteii

Status: *Uncommon local summer visitor; breeds.*

First discovered for British Columbia by Cowan (1939) when he and Patrick Martin encountered this species at Swan Lake (South Peace River region) and Charlie Lake (North Peace River region) in 1938. Penner (1976) found only one bird along the Peace River valley, about 6.7 miles west of the Alberta border.

Habitat: Migration: Unknown in the North Peace River region. Breeding: Le Conte's Sparrow is an inhabitant of "wet grasslands and marshes" as well as a variety of dry grassy meadows and fields (Lowther 1996). In Alberta, breeding habitat is "damp grassy meadows and sedge marshes" (Pinel et al. 1993) and "open grassy marshes, open bog lands with scattered willow and alder and the low damp parts of cultivated hayfields" (Salt and Salt 1976). In the North Peace River region, the secretive species was found most consistently near Boundary Lake in damp grassy and sedge meadows (Figure 105) growing on land originally cleared for oil and gas exploration. Short willow saplings (0.5 to 2 m tall) grow in scattered patches across or along the edges of the meadows. The airfield at Boundary Lake is similar but drier with fewer sedges and more grasses. This sparrow also occurred in long grasses along the edges of cultivated fields near German Lake and between Goodlow and Cecil Lake. East of Cecil Lake, along 184 Road, singing males were found in long grasses around ditches on the edges of damp pastures. At the marshes along 248A Road birds sang in long grasses at the edge of a freshwater marsh. Singing birds were found in 1990 and 1997 to 1998 in sedge meadows around muskeg-type pools in mixed white spruce-tamarack-trembling aspen forest along Highway 29 around Watson Slough.

Distribution: Migration: No records. Breeding: See *Habitat* for details. It is locally distributed in a few marshes and certain field edges from Watson Slough east to Boundary Lake.



Figure 105. Le Conte's Sparrow probably arrives directly on its breeding grounds, primarily in wet sedge meadows. *Photo by R. Wayne Campbell, Boundary Lake, BC, 24 June 1996.*

Occurrence: Le Conte's Sparrow arrives directly on its breeding grounds in the North Peace River region. Spring: Six first arrival dates (1982 and 1984 to 1988) ranged from 5 to 23 May. Cowan (1939) reported the first arrivals on 18 May 1938. Phinney (1998) gave 15 May as the earliest arrival date for the Dawson Creek area. Notable records are: One singing at Stoddart "Fish" Creek on 23 May 1984 and three at Boundary Lake on 16 May 1982 (spring arrival date). Summer: See *Breeding*. A few birds were found along the south causeway at Boundary Lake as late as 26 August 1986. Notable records are: Two near Watson Slough on 5 July 1997, one at Stoddart "Fish" Creek on 10 June 1989, one along 248A Road near North Pine on 12 June 1985, one in flight song at Boundary Lake on 7 July 1986, one at Boundary Lake on 3 August 1987, two at Boundary Lake on 13 August 1986, and one at German Lake on 11 June 1989. Autumn: No records.

Breeding: Cowan (1939) suggested Le Conte's Sparrow was nesting at the marshy south end of Charlie Lake but did not give details. The only report for the North Peace River region is of a nest with four eggs found at Boundary Lake on 18 June 1978 (Campbell et al. 2001). The nest was situated in "a dense patch of sedges just above moist ground."

Nelson's Sparrow
Ammodramus nelsoni

Status: *Locally uncommon summer visitor; breeds.*

This wetland species was not recorded by Williams (1933b). Cowan (1939) recorded the first Nelson's Sparrow for British Columbia when he collected four birds from six seen at the south end of Charlie Lake between 12 and 15 June 1938. On 19 June, returning to the South Peace River, he found Nelson's Sparrows "abundant" at the south end of Swan Lake and Austin's Pond in the South Peace River region. The species remained unreported from the North Peace River region until 1978 when an active nest was found at Boundary Lake (R.W. Campbell pers. comm.). He also made several observations of adults in wetlands he surveyed for nesting birds in the Peace River lowlands (Campbell 1978a).

Habitat: Migration and Breeding: Wet sedge meadows with scattered willows along lakeshores and wetlands (Figure 106). Cowan (1939) described birds at Charlie Lake as occurring in grass clumps and sedges in marshes surrounded by willows at the outlets of creeks and streams. The related Le Conte's Sparrow occurred in more upland situations, with drier grasses, willow saplings, and sedge meadows that grew farther from the lake. Phinney (1998) found Nelson's Sparrow in the South Peace River region in "wet grass-sedge meadows, especially where scattered dead willows are present."

Distribution: Migration and Breeding: The Nelson's Sparrow has one of the most restricted breeding ranges of all birds in British Columbia. It was found at Charlie Lake, probably as a nesting species, in 1938 (Cowan 1939) but the only recent record for that locale was of an autumn migrant in 1982. In the present study, a few singing birds were found each summer between 1982 and 1989 along the west side of Boundary Lake. A census of singing birds on 2 July 1978 found six singing sparrows (Campbell et al. 1978a). A census of the same area on 8 July 1997 during this study found four singing birds. Campbell also observed two birds at the north end of Boundary Lake on 7 July 1978 and one on

30 June 1979. He also reported a singing bird at the north end of Cecil Lake on 3 July 1978, three along 184 Road northeast of Cecil Lake on 16 June 1996, and one at "Barker" Lake (location uncertain) on 20 June 1996 (R.W. Campbell pers. comm.). During the present study, one was heard singing at the north sewage lagoons in Fort St. John in early July 1998. In the South Peace River region, small numbers have been found at Swan Lake, McQueen Slough, Tom's Lake, Alcock Lake, Tupper, and a few other locations (Phinney 1998).



Figure 106. Nelson's Sparrow, formerly known as Nelson's Sharp-tailed Sparrow, occurs locally in sedge wetlands with adjacent willows. *Photo by R. Wayne Campbell, east of Fort St. John, BC, 16 June 1996.*

Occurrence: Summer: Nelson's Sparrow arrived late compared with other migrants, usually in early to mid-June. There are so few records that a range of arrival dates could not be determined. In 1983 and 1989, the first birds of the year were found singing on 10 June, which is similar to the date Cowan (1939) found them at Charlie Lake, 12 June. Phinney (1992) reported two at McQueen's Slough, north of Dawson Creek, on 8 June 1992. Even during June and early to mid-July, birds were difficult to locate due to the species' habit of not singing for several hours at a time. Notable records are: One singing at the north sewage lagoons in Fort St. John on 5 July 1998, one at Boundary Lake on 10 June 1989 and 16 June 1985. Autumn: One migrant was recorded in the marsh at the south end of Charlie Lake on

12 September 1982, which is the latest date for the North Peace River region. In northern Alberta, the last autumn migrants were seen in the second week of September (Pinel et al. 1993).

Breeding: The nest of Nelson's Sparrow is very hard to find (Harrison 1979). The only North Peace River region nest was found on 2 July 1978 in a large sedge marsh with clumps of willows on the west side of Boundary Lake. The very compact nest was concealed in a clump of dead grasses next to a willow on a spongy islet in mid marsh. It contained four eggs about three-quarters incubated (Campbell 1978a).

Comments: Nelson's Sparrow was previously known as Nelson's Sharp-tailed Sparrow and before that, as Sharp-tailed Sparrow (Chesser et al. 2009).

Fox Sparrow
Passerella iliaca

Status: *Uncommon migrant and summer visitor, accidental in winter; breeds.*

Not listed by Williams (1933b). Cowan (1939) described this species as "common but inconspicuous" in the South Peace River region. Penner (1976) did not list it for the Peace River valley.

Habitat: Migration: Thickets along forest or wetland edges. Breeding: Brushy edges of black spruce muskeg around Lost Lake (Figure 107), German Lake and Boundary Lake. Males selected tall spruce snags as song perches. On the south side of the Peace River, Fox Sparrow frequented willows and alders growing as thickets around backwater channels as well as the understory of mature balsam poplar floodplain forests. Around Cecil Lake and Charlie Lake, Fox Sparrow was found in deciduous thickets along the shore and marshy outlets, a habitat similar to that described by Cowan (1939) for the South Peace River region.



Figure 107. The shrubby edges of black spruce muskeg is one of the various breeding habitats for Fox Sparrow. *Photo by R. Wayne Campbell, Lost Lake, BC, 27 June 2002.*

Distribution: Migration: In addition to the sites above, migrants were found at St. John Creek and Nig Creek. Breeding: Found regularly along Highway 29 at Bear Flat, Watson Slough, and along the Upper Cache Road east of the Halfway River. It was also located along the backwaters of the Peace River at Taylor, including Peace Island Park Road and Johnstone Road and north locally, through Fort St. John to Charlie Lake, North Pine, and Rose Prairie. Fox Sparrow was found regularly near the Beaton River bridge along 103 Road, Cecil Lake, and around German and Boundary lakes.

Occurrence: Spring: Twelve arrival dates (1976 to 1978 and 1981 to 1989) ranged from 13 to 30 April. Phinney (1998) gave 19 April as the earliest arrival for the Dawson Creek area. Fox Sparrow rarely forms flocks and is an inconspicuous migrant. No

spring migration peak was evident, as the birds arrived directly on their breeding locations. Notable records are: One singing at km 10 of Upper Cache Road on 14 April 1984 (spring arrival date), one at Charlie Lake Provincial Park on 25 May 1980, one singing at the British Columbia Rail depot wetland in Fort St. John on 29 May 1981, and one singing at Rose Prairie on 17 April 1976 (spring arrival date). Summer: Southbound migration began in the latter half of August as evidenced by a migrant seen at Stoddart “Fish” Creek in Fort St. John on 20 August 1984. Notable records are: One singing at the south end of Charlie Lake on 8 June 1983, one singing along Peace Island Park Road on 24 July 1982, and one in muskeg at Boundary Lake on 15 June 1980. Autumn: Most migrants appeared in early September when individuals turned up in locations not frequented by birds during the breeding season. The peak of autumn movement ranged from 4 to 22 September. All sightings (n=6) of two or more birds per location occurred during this period. The largest number at a single location was five birds, a situation recorded three times. These were Beatton Provincial Park on 21 September 1980 and at Peace Island Park on 4 and 17 September 1987. Most Fox Sparrows departed during the last half of September. Nine dates of latest autumn record (1980 to 1988) ranged from 3 to 28 September, with six dates between 13 and 28 September. Notable records are: One at Nig Creek on 15 September 1984 and one at Beatton Provincial Park on 28 September 1980 (latest autumn record). Winter: One record of one bird at a feeder at 102 Avenue in Fort St. John on 3 January 1988.

Breeding: Although Fox Sparrow probably breeds throughout the North Peace River region, there is only one convincing record. A pair of adults was found with a tiny fledgling on 6 June 1982 at Boundary Lake at the edge of muskeg where territorial males had been singing all spring. Cowan (1939) collected a female on 10 May 1938 that was already laying, which suggests Fox Sparrow may breed earlier than most other sparrows.

Comments: Eighteen subspecies of Fox Sparrow are recognized, 10 of which have been recorded in British Columbia (Campbell et al. 2001). One subspecies is easily recognized in the Peace River portion of the province. This is the “Yukon” Fox Sparrow (*P. i. zaboria*), which is the most brightly coloured of the subspecies; this breeding race is restricted to extreme northern British Columbia (Rising 1996, Beadle and Rising 2002).

There were three records in the North Peace River region of birds with plumage appearing more like those on the coast than the summering subspecies. These three were either “Sooty” Fox Sparrow (*P. i. unalashensis*)s or “Slate-coloured” Fox Sparrow (*P. i. schistacea*) and were recorded as singles at St. John Creek near 101 Road on 30 August 1978 and on 12 September 1986, and along Peace Island Park Road south of Taylor on 28 August 1985.

Song Sparrow *Melospiza melodia*

Status: *Uncommon local migrant and summer visitor; probably breeds.*

Song Sparrow was not found by Cowan (1939) and although Williams (1932) called it “common” in the Peace District he was very likely confusing it with the more common Lincoln’s Sparrow. The first specimen was collected at Swan Lake in the South Peace River region on 30 May 1965 (Jobin 1955). By the early 1970s, Song Sparrow was found to be a “common summer resident” along the Peace River valley (Penner 1976). The species was uncommon and local in the North Peace River region from 1975 through the late 1980s and had become much more widespread and frequent in the latter half of the 1990s.

Habitat: Migration: In thickets, usually willow, around damp field edges, riverside flats, marshes, and lakeshores. Breeding: Usually riparian thickets of willow, Saskatoon, or red-osier dogwood near water. It also favoured willows along creeks backed by open woodlands, riverine flats with sandbar willows, dogwood thickets, and driftwood piles and willow thickets around marshes (Figure 108),

ponds, sewage lagoons, and lakeshores. A few birds were recorded in terrestrial habitats.

Distribution: Migration and Breeding: Locally distributed, mostly along the Peace River corridor, especially at its confluences with creeks and rivers large enough to have formed sandbar and gravel alluvial fans with thickets. It was also found around certain lakes, ponds, creeks and marshes and regularly around the backwaters of the Peace River at Taylor, the north and south sewage lagoons in Fort St. John, Charlie Lake, and the 248A Road marshes. Other locations included Hudson's Hope, Lynx Creek, mouth of Farrell Creek, mouth of Cache Creek, mouth of the Halfway River, mouth of Beaton River, and at Cecil Lake, Goodlow, and Boundary Lake.

Occurrence: Spring: Eleven arrival dates (1977, 1978, 1980, 1981, and 1983 to 1989) ranged from 18 to 30 April. Early arrivals usually appeared at locations that would be occupied for the summer. All records were of singles or pairs. No spring peak was evident. Notable spring arrival records are: One at mouth of the Halfway River on 20 April 1986 and one at Taylor on 23 April 1988. Summer: Southbound migration probably began in mid-

August but records of obvious migrants were few. Notable records are: One along backwater of the Peace River at km 6.4, along Johnstone Road on 2 July 1980, and two migrants with a flock of Clay-colored Sparrows northwest of Fort St. John on 30 August 1984. Autumn: No autumn flocks were recorded. Dates of final autumn observations were few. Four latest autumn dates (1980, 1984, 1987, and 1988) ranged from 4 September to 14 October. Notable latest departure records are: A migrant in willows at the marshy outlet of Charlie Lake on 28 September 1980, one at the north sewage lagoons in Fort St. John on 14 October 1984, and one along Peace Island Park Road on 13 September 1987.

Breeding: Undoubtedly breeds in the North Peace River region but no nests were found. Campbell et al. (2001) gave a record of nestlings at Charlie Lake on 25 July 1964. Birds encountered at spring and summer locations were usually territorial males; occasionally agitated pairs were encountered. Other breeding evidence was a juvenile able to fly at Lost Lake near Boundary Lake on 15 July 1985, an independent juvenile at the mouth of Alces Creek on 2 July 1998, and an adult carrying food at the mouth of Farrell Creek on 1 July 1998.



Figure 108. Song Sparrow breeds mainly close to wetlands, especially in shrub thickets surrounding marshes. Photo by R. Wayne Campbell, north of Fort St. John, BC. 27 June 1998.

Lincoln's Sparrow
Melospiza lincolnii

Status: *Fairly common to common migrant and summer visitor; breeds.*

Not recorded by Williams (1933b). Cowan (1939) found it “a dominant member of the bird fauna” of all marshy areas with willows in the Peace River area. Penner (1976) called Lincoln's Sparrow (Figure 109) “fairly common” in the Peace River valley.



Figure 109. Although a common and widely distributed species, very few breeding records have been documented for Lincoln's Sparrow in the North Peace River region. *Photo by Ervio Sian.*



Figure 110. Regenerating clearings, with fallen branches and trunks and a lush herbaceous growth, are used by Lincoln's Sparrow for breeding. *Photo by R. Wayne Campbell, east of Hudson's Hope, BC, 18 June 1997.*

Habitat: Migration: See *Breeding*. In migration, may occur in more open country and in smaller patches of habitat including hedgerows, lines of willow, and shrubby edges around roads, grain elevators, and ponds. Breeding: A range of habitats from large brushy, overgrown city lots often adjacent to playing fields and wooded parks (e.g., Fort St. John) and regenerating clearing (Figure 110), to muskeg edges (e.g., Boundary Lake). It also likes damp sites including edges to trembling aspen forests (e.g., Johnstone Road), shrubby and grassy transmission corridors, semi-open patches of willow shrubs and long grasses along creeks (e.g., St. John Creek), willow thickets around a lake (e.g., Charlie Lake), brushy marsh edge (e.g., Boundary Lake and 248A Road marshes), and brush around beaver ponds (e.g., Old Hudson's Hope Road east of Bear Flat).

Distribution: Migration and Breeding: Generally distributed across the North Peace River region.

Occurrence: Spring: Eleven earliest spring arrival dates (1977, 1978, and 1981 to 1988) ranged from 29 April to 12 May, with seven dates from between 29 April and 5 May. Phinney (1998) gave 2 May as the early arrival date for the Dawson Creek area. The species became more widespread between 11

May and 16 May in the North Peace River region, and was common thereafter. Spring migrants were generally encountered as singles and pairs. Notable records are: 5+ at Boundary Lake on 16 May 1982, many at German Lake on 10 May 1987, and one near Beatton Provincial Park on 3 May 1985 (arrival date). Summer: See *Breeding*. Southbound migration began in mid-August. A peak in numbers occurred between 21 August and 7 September in most years. For 1980 to 1986, 56 records were between 21 August and 7 September with a total of 236 birds for an average of 4 birds per record. Notable records are: A nest with three eggs at km 2 of the Johnstone Road on 11 June 1980, a nest with four eggs at Boundary Lake on 10 June 1984 and tiny young on 18 June 1984, two adults attending two fledglings along Peace Island Park Road on 29 June 1980, 15 along the south causeway at Boundary Lake on 26 August 1985. Autumn: Remained widespread, but uncommon, until 21 September and thereafter the species was very hard to find. Nine dates of last record (1975, 1980, and 1980 to 1988) ranged from 12 September to 5 October, with seven dates between 25 September and 5 October. Notable records are: Six at Stoddart “Fish” Creek on 6 September 1986, 18 at St. John Creek at 101 Road on 21 August 1986 (Mike Force pers. comm.), and one at the north sewage lagoons in Fort St. John on 1 October 1983 (latest record).

Breeding: Three nests (see *Occurrence*) and a few sightings of family groups were found but Lincoln’s Sparrow is a common and widespread breeding species. Nest construction occurred in late May and eggs were laid from late May and early June onwards. In the South Peace River region, Phinney (1998) found nests with eggs from 27 May to 9 July. The incubation period is 11.5 to 13 days and chicks remain in the nest for 10 or 11 days (Ammon 1995). Fledglings remain with their parents for up to three weeks (Baicich and Harrison 1997). Elsewhere in its North American range, this species is occasionally

known to raise two successive broods per season. Two sightings of adults were made of adults carrying food or acting agitated as if a nest were nearby on 27 July 1983 and 29 July 1982; these sightings may suggest late or second broods in the North Peace River region.

Nests are built in small depressions on the ground (Figure 111). A nest along Johnstone Road was placed beneath a cover of forbs and situated at the edge of a bush on a gentle slope covered with a regenerating trembling aspen forest in an old clearing. A nest at Boundary Lake was in mosses at the base of a tiny black spruce sapling near the brushy edge of a muskeg.



Figure 111. Lincoln’s Sparrow nests (centre) are built on the ground usually at the base of dead grasses. *Photo by R. Wayne Campbell, east of Hudson’s Hope, BC, 18 June 1996.*

Brown-headed Cowbird parasitism was recorded once: an adult Lincoln’s Sparrow was seen feeding a fledgling cowbird on 12 July 1987 along the Peace Island Park Road south of Taylor.

Comments: On 27 June 2003, Chris Charlesworth and Ryan Tomlinson studied an apparent hybrid Lincoln’s Sparrow x Song Sparrow at Boundary Lake (Charlesworth 2002).

Swamp Sparrow
Melospiza georgiana

Status: *Uncommon to fairly common migrant and uncommon local summer visitor; breeds.*

This species was not recorded by Williams (1933b). In the South Peace River region, Cowan (1939) found Swamp Sparrow occurring locally in “colonies” of a few to 50 pairs at two sites but absent from other apparently suitable habitat. It was not recorded in the Peace River valley by Penner (1976).

Habitat: Migration: See *Breeding*. Also found in smaller damp brushy spots and damp thickets around grain elevators, sewage lagoons, weedy dugouts at an abandoned farmyard, in wet edge to a trembling aspen grove, and once along a shaded path through a dry alder copse in Beaton Provincial Park. Breeding: Wet bogs or fens, and freshwater marshes (Mowbray 1997). In the North Peace River region, Swamp Sparrow was found in drowned and live willow and other shrubs around slow streams, marshes, small ponds and marshy lakeshore, and around beaver ponds, as well as in the more open edges of swamps (Figure 112). At Boundary Lake, it favoured willow and birch saplings between trembling aspen woodlands, as well as *Typha* beds around small wetlands and drowned and live willows and other shrubs in wet sedge meadows on the west side of the lake. Along the Upper Cache Creek Road, it was observed in brush around wooded swamps that were often created when Beavers damned nearby creeks. At North Pine, this species was frequent in willows around a pond surrounded by agricultural fields.

Distribution: Migration: Likely to turn up at almost any moist thicket or marsh throughout the southern half of the North Peace River region. Breeding:

Local. Found around swamps at the British Columbia Rail depot of east Fort St. John, the 248A Road marshes near North Pine, Cecil Lake, 219A Road at 103 Road near Goodlow, German Lake, Lost Lake, and Boundary Lake. It formerly bred at the south end of Charlie Lake. Along Highway 29, it occurs at Watson Slough and along the Upper Cache Road at km 1, 2.5, and 11. It was also recorded at swamps between Hudson’s Hope and the W.A.C. Bennett Dam.



Figure 112. Wetlands with drowned branches of shrubs and small trees are a favourite breeding habitat for Swamp Sparrow. *Photo by R. Wayne Campbell, north of Fort St. John, BC, 2 July 2006.*

Occurrence: Spring: Six arrival dates (1983 to 1988) ranged from 24 April to 7 May. Spring migrants arrived in substantial numbers from early to mid-May. Earliest observations of three or more birds per location ranged from 4 to 16 May, depending to a large extent upon the early or late advance of spring. Notable records are: Three at Boundary lake on 27 April 1986 (arrival date), one at Watson Slough on 4 May 1985 (arrival date), and one at Cecil Lake on 31 May 1986. Summer: See *Breeding*. Southbound migrants were first noticed in early August at St. John Creek and 271 Road south of Beatton Provincial Park where birds were absent during the breeding season. First migrants were seen sometimes as early as 4 August but were more usual by 15 August. Migrants were widespread and in largest numbers from late August onwards. Notable records are: An adult feeding a Brown-headed Cowbird chick at Boundary Lake on 23 June 1985, 24 Swamp Sparrows along the south causeway at Boundary Lake on 26 August 1985, and 13 on 26 August 1986. Autumn: After early September, Swamp Sparrow became quite uncommon. Five final dates (1982 to 1986) ranged from 21 September to 14 October. Notable final records are: One juvenile at Cache Creek on 8 September 1986, two at Cache Creek on 3 October 1982, one immature at the south end of Charlie Lake on 23 September 1984, one at St. John Creek on 4 October 1986, an immature at the north sewage lagoons in Fort St. John on 14 October 1984, and one northeast of Cecil Lake on 16 October 1983 (latest departure date).

Breeding: Swamp Sparrow undoubtedly breeds in the North Peace River region but evidence is scanty due to the inhospitable nature of its wetland habitat. A nest with four eggs was found in a swamp at km 11 of Upper Cache Road on 16 June 1990 (R. Wayne Campbell pers. comm.). Also, an adult fed a well-fledged Brown-headed Cowbird chick at Boundary Lake on 23 June 1985. Fledged young became conspicuous in nesting areas such as Boundary Lake by late July and early August.

White-throated Sparrow *Zonotrichia albicollis*

Status: *Uncommon to fairly common migrant and summer visitor and occasionally a local but very common autumn migrant; breeds.*

Williams (1933b) found White-throated Sparrow (Figure 113) “common” in the Peace River Block. Cowan (1939) called it a “not uncommon” summer resident. Penner (1976) called it a “common summer resident” in the Peace River valley.



Figure 113. The highest numbers of White-throated Sparrows in summer occur in the Boreal and Taiga plains ecoprovinces of northeastern British Columbia. *Photo by R. Wayne Campbell.*

Habitat: Migration: See *Breeding*. This species also frequents thickets and brushy edges and occasionally suburban gardens and wooded yards. Locations with the largest autumn numbers were in open stands of balsam poplar with an understory of red-osier dogwood. Breeding: Semi-open mixed woodlands with young and mature trembling aspen (Figure 114) and in groves of trembling aspen that grow in copses between the natural grasslands and the “breaks.” It is also fairly common in mixed forest of trembling aspen, birch, balsam poplar, and white spruce.

Distribution: Migration and Breeding: Recorded throughout the entire North Peace River region.

Occurrence: Spring: Eight records of arrival (1976, 1977, 1980, 1981, and 1984 to 1988) ranged from 1 to 15 May, with six records between 1 and 10 May. The peak of migration occurred from 11 to 25 May. The largest single location count was of 11 birds at Charlie Lake Provincial Park on 25 May 1980. Notable arrival records are: 10 birds just east of the lookout on Highway 29 east of Halfway River on 11 May 1985, two at Charlie Lake Provincial Park on 9 May 1981, one with flock of White-crowned Sparrows at Grand Haven on 15 May 1984, and one along 102 Avenue in Fort St. John on 1 May 1987. Summer: See *Breeding*. The peak of the southbound movement occurred between very late August and the first week of September. Five to 10 birds per location became evident 26 August. Notable records are: Five at Alwin Holland Park on 7 July 1998, nine at Bear Flat on 5 July 1997, and two adults feeding a Brown-headed Cowbird fledgling at Beaton Provincial Park on 30 June 1998. Autumn: The single largest count was 60 birds at Peace Island Park Road on 4 September 1987. The latter location and St. John Creek near 101 Road were favoured migration spots and both are wooded with understories of red-osier dogwood and other shrubs. Nine dates of last record (1980 to 1988) ranged from 13 September to 3 October, with five dates between 23 September and

3 October. Notable records are: One at Charlie Lake Provincial Park on 3 October 1982 (latest departure date), one at Fort St. John on 25 September 1988, and six at Cecil Lake 2 September 1984.

Breeding: The first North Peace River region nest was found at Charlie Lake on 12 June 1938. It contained two sparrow eggs and two Brown-headed Cowbird eggs (Cowan 1939). The second nest (this study) was found 0.5 km north of Beaton Provincial Park on 10 June 1988. This nest was on the ground in the overgrown centre of a cutline through a trembling aspen forest. The nest was situated in a cover of *Mertensia*, short willow saplings, and strawberry, and was a cup lined with fine grasses. It contained two sparrow eggs and one Brown-headed Cowbird egg. Four other nests are given in Campbell et al. (2001) with eggs found between 15 June and 12 July as well as a cowbird nestling found with four White-throated Sparrow nestlings 17 July. Phinney (1998) recorded nests with eggs between 9 June and 12 July in the South Peace River region. Recently fledged, but dependent young, were seen on 10 July 1980, 10 July 1988, and 10 July 1997 (e.g., Beaton Provincial Park), and 11 July 1987 (e.g., northeast of Cecil Lake).

Cowbird parasitism on White-throated Sparrow is infrequently reported, but with four of nine Peace River nests parasitized, it may be more significant than was previously recognized.



Figure 114. Mixed-age stands of semi-open trembling aspen are the preferred summer habitat for White-throated Sparrow. *Photo by R. Wayne Campbell.*

Harris's Sparrow
Zonotrichia querula

Status: *Rare to uncommon autumn transient.*

Williams (1933b), Cowan (1939) and Penner (1976) were not in the Peace River region when Harris' Sparrow occurs.

Habitat: Migration: Brushy hedgerows, willow lines, brushy transportation and transmission corridors (Figure 115), woodland edges, and brushy re-generating clear cuts.



Figure 115. The brushy edges of transmission corridors are regular foraging sites for transient Harris's Sparrow each autumn. *Photo by R. Wayne Campbell, south of Hudson's Hope, BC, 1 June 2003.*

Distribution: Migration: Recorded around Fort St. John, St. John Creek, Charlie Lake, Cecil Lake, and Goodlow. It likely occurs locally throughout the North Peace River region during migration.

Occurrence: Autumn: Recorded from 7 September to 16 October. There are 33 records from 1983 to 1988. Twenty-two records, representing the peak autumn movement, occurred between 21 September and 5 October. Twenty-four of the observations were of single birds, seven were of two birds per location, and two were of three birds per location. The three highest counts per day occurred on 22 September 1986 (4 birds), 28 September 1985 (4 birds), and 2 October 1986 (7 birds). The lowest number of birds recorded per season was one in 1988 and the highest number was 14 in 1986. There was an average of five birds per season between 1983 and 1988. In adjacent northwestern Alberta, a similar pattern of autumn migration was seen, with southbound migrants occurring over a long period from early September to early November, with peaks numbers in late September and early October (Pinel et al.1993.) Notable records are: One at the golf course at Charlie Lake on 16 October 1986 (latest record), two immatures along St. John Creek at 101 Road on 7 September 1985 and three immatures on 22 September 1986, one along 103 Road at 248 Road between Cecil Lake and Goodlow on 5 October 1986, and one immature at 9535 - 112th Avenue in Fort St. John on 29 September 1987.

White-crowned Sparrow
Zonotrichia leucophrys

Status: *A fairly common to abundant spring transient and uncommon to occasionally common autumn transient; may have bred.*

Williams (1933b) suggested White-crowned Sparrow (Figure 116) was a “common migrant” through the Peace River Block. He also recorded it along the Halfway River on 2 July 1930. Cowan (1939) called it an “abundant May migrant.” He also reported that a few pairs remained to nest around Tupper in 1938. Penner (1976) designated it a “common migrant” in the valley of the Peace River.



Figure 116. White-crowned Sparrow is primarily a spring transient in the North Peace River region. *Photo by R. Wayne Campbell.*

Habitat: Migration: Grassy roadsides (Figure 117), willow thickets, open weedy spaces including grassy meadows around marshes, thickets near grain elevators, hedgerows, and residential gardens and backyards.

Distribution: Migration: Recorded throughout the North Peace River region.



Figure 117. The grassy and weedy edges of gravel roads criss-crossing the North Peace River region are used in spring and autumn by transient White-crowned Sparrows. *Photo by R. Wayne Campbell.*

Occurrence: Spring: Twelve arrival dates (1977 to 1989) ranged from 20 to 30 April. Flocks of two to 10 birds were common from arrival until about the end of the second week of May when migration terminated fairly abruptly. Often larger flocks occurred when cold rain or snowstorms slowed the birds’ passage. At such times 50 to 100 birds per flock might be found, especially where the ground remained clear of snow such as along roadsides and paths. The peak of migration usually occurred between 30 April and 13 May. In 1985, 1987, and 1988, the peak occurred earlier in this period, whereas in 1982 and 1984 it was closer to the middle of May. Eight dates of last spring record (1981 to 1988) ranged between 14 and 19 May, with only two records of single stragglers into the fourth week of May. Notable records are: Hundreds in Hudson’s Hope on 5 May 1979, 40 at Lynx Creek on 27 April 1980, one at Cache Creek on Highway 29 on 21 April 1984 (arrival date), 500 at Fort St. John on 30 April 1987, 60 at Bear Flat on 4 May 1985, one at Boundary Lake on 17 May 1986 (latest record), and over 100 at Cecil Lake on 2 May 1982. Summer: The first southbound White-crowned Sparrows appeared in the North Peace River region during the fourth week of August. Eight autumn arrivals (1979, 1980, 1982, and 1984 to 1988) ranged from 21 to 28 August. Notable early southbound records are: Two immatures at St. John Creek near 101 Road on 23 August 1985 and one at Fort St. John on 21 August 1987. Autumn: The

autumn peak was less pronounced than the spring peak with much smaller flocks and generally fewer birds. The peak occurred sometime between 31 August and 17 September. After mid-September, White-crowned Sparrows were hard to find. Eight dates of final records (1977, 1980, 1982, and 1984 to 1988) ranged from 26 September to 8 October, with a straggler seen on 27 October 1984. Notable records are: 13 at Fort St. John on 17 September 1988, two at the south sewage lagoons in Fort St. John on 8 October 1986, one adult north of Beatton Provincial Park on 18 September 1986, and one adult straggler at the south end of Charlie Lake on 27 October 1984 (latest date).

Golden-crowned Sparrow
Zonotrichia atricapilla

Status: *Rare spring transient and casual autumn transient.*

Not recorded by Williams (1933b), Cowan (1939), or Penner (1976).

Habitat: Migration: Generally found among large flocks of White-crowned Sparrow that frequent brushy edges such as roadsides adjacent to hedgerows and thickets, weedy fields, and thickets along forests.

Distribution: Migration: Rarely recorded across southern portions of the North Peace River region. Records are from Bear Flat, 281 Road (off Highway 29) about 10 km west of Charlie Lake, Charlie Lake near Beatton Provincial Park, Beatton Provincial Park, Kin Park in Fort St. John, the north and south sewage lagoons in Fort St. John, Peace Island Park Road south of Taylor, and Clearview School at Goodlow.

Occurrence: Spring: Eight spring arrival records ranged from 1 to 31 May, with six records between 1 and 13 May. At least one bird was recorded each spring from 1984 to 1988. The highest count was two on 4 May 1985. Notable records are: An adult along Highway 29 at Bear Flat on 4 May 1985 (Joan Johnston pers. comm.), an adult with 50 White-crowned Sparrows at Beatton Provincial

Park on 1 May 1985, an adult along Peace Island Park Road on 31 May 1986 (latest record), and one at Clearview School, Goodlow on 6 May 1988. Summer: See Autumn: Recorded twice during southbound migration: one at Fort St. John on 7 September 1980 and one immature along 259 Road south of the north sewage lagoons near Fort St. John on 3 October 1986.

Dark-eyed Junco
Junco hyemalis

Status: *Fairly common migrant and summer visitor and accidental in winter; breeds.*

Williams (1933b) listed junco as “common.” Cowan (1939) encountered one of the “Slate-colored” races in the woods of the South Peace River area, reporting two nests. He also found, but less commonly, “Oregon” Juncos (Figure 118) breeding at Tupper Creek and Charlie Lake. Penner (1976) found the Dark-eyed Junco to be a “common migrant and summer breeder” in the valley of the Peace River.



Figure 118. The “Oregon” race of the Dark-eyed Junco (*J. h. oregonus*) is the less common of the two races present in the North Peace River region. Photo by Mark Nyhof.

Habitat: Migration: Woodland and brushy areas. In the height of migration, this species may be found in more open habitats such as weedy edges to fields and thickets along stream courses. Breeding: Edges and interiors of spruce woodlands and mixed woodlands. It also occurs in trembling aspen groves

on south-facing slopes and edges of balsam poplar floodplain forests, and muskeg and willow and woods edges along creeks.

Distribution: Migration and Breeding: Found throughout the North Peace River region.

Occurrence: Spring: Eleven arrival dates (1976, 1977, and 1980 to 1988) ranged from 7 to 22 April, with eight records between 7 and 11 April. By the third week of April flocks of 15 to 30 birds are frequently seen. Distinctive peaks, when small flocks were widespread, were noted 29 April 1981, 27 April 1985, and 12 April 1986. In 1988 two peaks were noted: 21 to 24 April when the first large wave passed through the Fort St. John area and 6 May when a similar wave passed through the same area. Notable records are: 50, mostly “Oregon” types, at Beryl Prairie on 6 May 1979, abundant at Hudson’s Hope (about 70% “Oregon”) on 5 May 1979, two at Cache Creek along Highway 29 on 29 April 1979, two “Oregon” and one “Slate-colored” Junco at Beatton Provincial Park on 17 April 1983 (arrival date), widespread migration through Fort St. John on 11 April 1976, one at North Pine on 7 April 1984 (arrival date), and 50 at Taylor on 13 April 1986. Summer: See *Breeding*. Southbound migrants were first noticed from mid-to-late August. Small flocks occurred in Charlie Lake Provincial Park as early as 21 August 1976. Notable records are: A juvenile at the mouth of Alces Creek on 2 July 1998, a female and a juvenile at Boundary Lake on 11 July 1984, and adults feeding a large fledgling along Peace Island Park Road on 22 June 1985. Autumn: Small flocks of five to 40 birds were frequent from mid-September until the first or second week of October. All records after 11 October were of one to three birds per location. The three largest autumn flocks were 91 at Stoddart Creek in Fort St. John on 5 September 1986, 90 on 6 September 1986, and 42 at St. John Creek near 101 Road on 8 September 1986. Eight dates of last record (1981 to 1988) ranged from 10 October to 21 November. Notable records are: One at a feeder along 102 Avenue in Fort St. John on 21 November 1985 (latest record), one at Beatton Provincial Park on 5 October 1980 (final record), and one at Rose Prairie on 28 October 1984 (final

record). Winter: A female was at a feeder on 244B Road near Stoddart Creek in Fort St. John from 1 to 20 December 1984.

Breeding: Males singing on territory were seen as early as 2 May 1981 at Stoddart Creek in Fort St. John. A nest with four eggs was found along Peace Island Park Road on 24 May 1986. The site was revisited 26 May and contained at least three nestlings. A second nest, also along Peace Island Park Road, was found on 21 June 1988 and contained three just-hatched chicks and two Brown-headed Cowbird eggs.

Both nests were compact cups set in tiny depressions in north-facing road-cuts at the edge of a mixed forest. In the South Peace River region, Cowan (1939) and Phinney (1998) found eggs from 20 May to 23 June. Adults feeding fledglings in the North Peace River region were seen from 22 June to 11 July (Figure 119). Dark-eyed Juncos feeding juvenile Brown-headed Cowbirds were seen on 10 July 1987 at Beatton Provincial Park, and on 12 June 1988 and 21 June 1988 along the Peace Island Park Road.



Figure 119. Most breeding records for Dark-eyed Junco are of recently fledged young. *Photo by Mark Nyhof.*

Comments: Until 1973, Slate-coloured Junco, Oregon Junco, White winged Junco, Gray-headed Junco, and Guadalupe Junco were considered separate species. These five species were lumped into one species, Dark-eyed Junco (*Junco hyemalis*)

in 1973 (American Ornithologists' Union 1973). British Columbia has breeding populations of four subspecies, three belonging to the "Oregon" group and one "Slate-colored" race (*Junco hyemalis cismontanus*). In the North Peace River region, most juncos appear to belong to the cismontanus race of the "Slate-colored" Junco with a handful of records around Hudson's Hope of "Oregon" Junco.

Lapland Longspur *Calcarius lapponicus*

Status: *Very common to occasionally very abundant transient.*

A flock was recorded by Williams (1933b) on 16 May 1922. It was recorded by Cowan (1939) as an "abundant migrant" in the South Peace River region with migration concluded by 10 May 1938. Lapland Longspur (Figure 120) was not found by Penner (1976) in the Peace River valley.



Figure 120. Lapland Longspur passes through the North Peace River region to and from its Arctic breeding grounds mainly during the first two weeks of April and September each year. *Photo by R. Wayne Campbell.*

Habitat: Migration: Open country including bare agricultural and stubble fields (Figure 121). Following winters with heavy snow, the earliest longspurs were found along roadsides and field edges free of snow. Ponds, dugouts, ditches, and sewage ponds are important watering spots where hundreds of birds flocked to drink.



Figure 121. The largest flocks of migrating Lapland Longspurs in British Columbia have been reported foraging in bare agricultural fields in autumn in the North Peace River region. *Photo by R. Wayne Campbell, North Pine, BC, 24 October 1991.*

Distribution: Migration: Widespread transient in the agricultural areas around Fort St. John, east to Goodlow, Boundary Lake, and the Alberta border. It is also found north to Buick Creek and Nig Creek and west in open areas along Highway 29 to Upper Cache Road.

Occurrence: Spring: Lapland Longspur may appear as singles, or in very small flocks, as early as late March (e.g., 27 March 1982, North Pine) but more regularly during the first three weeks of April. Eleven dates of spring arrival (1976, 1977, and 1980 to 1988) ranged from 27 March to 23 April, with eight records between 4 and 7 April. These dates are about one week later than those given for southern Alberta (Pinel et al. 1993). During the first two weeks of April, flock sizes were generally 100 to 200 birds, although larger flocks were occasionally seen. Flocks of 300 or more birds occurred between 27 April and 15 May with flocks of 1,000 or more birds seen between 1 and 15 May, which was the spring peak. These flocks ranged from 1,000 to 2,500 birds with 13 records in this range for 1981 to 1988. The first large flocks were almost entirely males and the last large flocks were mostly composed of females. Spring departure from the North Peace River region

was abrupt. Eight dates of latest spring record (1982 to 1989) ranged from 12 to 21 May. Notable records are: 2,000 over fields southeast of Beaton Provincial Park on 1 May 1982, two along 252 Road near North Pine on 27 March 1982 (arrival date), and 100 to 500 trying to land at a puddle along the edge of a junior high school playing field at Fort St. John on 10 to 12 May 1981. **Summer:** Southbound Lapland Longspurs were consistent in appearing in late August. Eleven first late summer records (1975 to 1978, 1980, 1982, and 1984 to 1988) ranged from 20 to 31 August. The first flocks usually numbered about 15 birds each. Notable records are: 200 at Rose Prairie on 28 August 1980 and one at Beaton Provincial Park on 20 August 1988 (arrival date). **Autumn:** The peak of southbound movement with flocks of 200 to 12,000 birds occurred between 5 and 16 September. In spite of the huge size of a few flocks, most autumn flocks were generally much smaller than spring flocks. Of 86 autumn flocks, 60 (69.6%) contained 50 or fewer birds. Numbers dwindled through the second half of September. Nine dates of latest autumn record (1975, 1980, and 1982 to 1988) ranged from 26 September to 23 October, with six records between 1 and 23 October. Notable records are: 20 at Buick Creek on 27 September 1980, “huge” flocks around Montney on 12 September 1976, 500 at the north sewage lagoons in Fort St. John on 5 September 1986, and 14 there on 18 October 1986.

Comments: The largest flock of Lapland Longspurs was estimated at 12,000 birds that were wheeling in unison over farm fields at Nig Creek north of the North Peace River region on 15 September 1984. The flock was being watched by at least three Sharp-shinned Hawks and a Merlin during the hour it was observed.

Threats to migrating Lapland Longspurs include vehicle collisions from roadside feeding areas, agricultural chemicals, and communication tower collisions especially during low clouds and poor weather.

Snow Bunting ***Plectrophenax nivalis***

Status: *Common to occasionally abundant migrant and winter visitor.*

Not recorded by Williams (1933a,b), Cowan (1939), or Penner (1976) because their fieldwork occurred primarily in late spring and early summer.

Habitat: Migration and Winter: Open country. Recorded around pebbly lakeshore and gravel dikes (e.g., Charlie Lake), harvested grain fields (e.g., North Pine), bare fields (especially in spring), weedy edges, large clearings, wind-swept ridges, and ice and snow on ponds and lakes. Occasionally, buntings will perch in trembling aspen saplings around a field edge but in general the species avoids woodlands. It feeds on grit on country roads and will forage on old ice and snow on thawing ponds where seeds become available. In early spring, it has been observed foraging among dry *Typha* stands in wetlands.

Distribution: Migration and Winter: Most commonly observed in open country from Fort St. John east to Boundary Lake (Figure 122). In the west, it was seen at Farrell Creek community pasture and along the Upper Cache Road, Bear Flat, Charlie Lake, and north to Buick Creek.



Figure 122. In winter, flocks of Snow Buntings feed on the seeds of plants jutting above the snow layer in open areas. *Photo by R. Wayne Campbell, east of Fort St. John, BC, 10 November 1996.*

Occurrence: Autumn: Arrived from early to mid-October. Ten dates of first arrival (1976 and 1980 to 1988) ranged from 4 to 20 October. Flocks were usually between one and 25 birds although flocks of 100 to 300 birds occurred. The earliest flocks were small but after mid-October larger flocks were encountered. Two notable arrival records are: 70 west of Charlie Lake on 16 October 1988 (Rick Koechl pers. comm.) and three at south end of Charlie Lake on 17 October 1982. Winter: Snow Bunting remained in the North Peace River region throughout the winter. Flocks usually numbered between one to 25 birds although flocks as large as 500 occurred. Notable records are: 400 along 275 Road south of 114 Road west of Montney on 8 December 1985, 450 at km 5 of the Upper Cache Road on 4 December 1988, and 500 along the Old Hudson's Hope Road west of Charlie Lake on 29 December 1987. Spring: It remained common through March and April. In 1982, 1983, and 1986, an increase in the number of northbound flocks was noted in late March. Large flocks of 100 to 300 birds became most common from 16 April to 4 May. After early May, the last buntings were stragglers mixed within large flocks of Lapland Longspurs. Nine dates of last spring departure record (1978 and 1981 to 1988) ranged from 22 April to 16 May, with seven dates between 8 and 16 May. Notable records are: Two with 2,000 Lapland Longspurs just north of Fort St. John on 2 May 1981 and 100 in a farmyard near Boundary Lake on 11 May 1986.

GROSBEAKS, BUNTINGS AND ALLIES

Rose-breasted Grosbeak *Pheucticus ludovicianus*

Status: *Uncommon migrant and summer visitor; breeds.*

Rose-breasted Grosbeak was first recorded in British Columbia by Cowan (1939) who described it as "fairly abundant" south of the Peace River. Cowan also stated that it was occasionally reported north of the Peace River by reliable observers. Penner (1976) felt it was a "fairly rare summer resident" along the Peace River valley.

Habitat: Migration and Breeding: Middle-aged and mature deciduous and mixed forests including upland forested habitats (Figure 123) and older forests where these have been retained in the North Peace River region. The species also utilizes edges and secondary habitats and is relatively tolerant of human disturbance (Wyatt and Francis 2002).



Figure 123. In summer, Rose-breasted Grosbeak breeds in pure and mixed trembling aspen forests. Photo by R. Wayne Campbell, Beatton Park, BC, 23 June 1998.

Distribution: Migration and Breeding: Widely distributed across the southern third of the study area and not detected north of Charlie Lake. It was found most frequently in mature mixed forest along the Peace River and its major tributaries and also in upland situations, particularly around lakes and along creeks where deciduous and mixed forest persist.

Occurrence: Spring: Ten earliest arrival dates (1976 and 1980 to 1988) ranged from 8 to 22 May, with seven dates from between 17 and 22 May. Phinney (1998) gave 11 May as the earliest date for the Dawson Creek area of the South Peace River region. In 1938, Cowan (1939) noted the earliest bird on 25 May at Tupper Creek. No peak spring movement was noted. By late May this species was well established at traditional nesting areas such as along Peace Island Park Road. Notable records are: Six between km 5 and 6 of Johnstone Road south of Taylor, one at Charlie Lake Provincial Park on 28 May 1985, and a male at Beaton Provincial Park on 19 May 1984 (arrival date). Summer: See *Breeding*. Five final departure dates (1980, 1982, and 1986 to 1988) ranged from 14 August to 4 September. Notable records are: A first-year male at Lost Lake (Goodlow) on 24 June 1984, three at Alwin Holland Park east of Hudson's Hope on 28 June 1980, a female attending two juveniles on the south bank of the Peace River 1 km east of the mouth of Farrell Creek on 21 July 1992, one at km 1.2 of the Upper Cache Road on 15 June 1986, an adult male feeding a fledgling at Beaton Provincial Park on 30 June 1998, and two first-autumn males along St. John Creek at 101 Road on 27 August 1986. Autumn: Late departing birds occasionally lingered into early September. A notable record was of one along Peace Island Park Road on 4 September 1987, which was also the latest date.

Breeding: There were two nest records as well as seven observations of fledglings or juveniles accompanied by adults. Nest-building probably commenced in early June. A pair was seen building a nest in a pole-stage trembling aspen forest (Figure 124) near the northwest end of Charlie Lake on 2 June 1985. R. Wayne Campbell (pers. comm.) found several nests in the crowns of mature willows throughout the Peace River area. An old nest from the previous year was found in a trembling aspen sapling near a water seep just north of Johnstone Road in 1980.



Figure 124. Rose-breasted Grosbeak nest (upper right) in tall clump of spindly willows in a trembling aspen forest. Photo by R. Wayne Campbell, Beaton Park, BC, 23 June 1996.

Eggs are probably laid and incubated throughout June and into July. A nest with three eggs was photographed at Beaton Provincial Park on 23 June 1996 (Figure 433 in Campbell et al. 2001). A second nest with three eggs was located on the edge of a trembling aspen grove at Alwin Holland Park east of Hudson's Hope on 6 July 1998. Nests with eggs were found in the South Peace River region on 15 and 29 June (Phinney 1998).

Chicks leave the nests before they are able to sustain flight. Tiny chicks, just out of the nest, were found between 21 June and 17 July. These chicks will perch unattended in the canopy motionless except for uttering a hard to locate loud plaintive "peer" or "jeer" note, which serves as a locator beacon and begging call for food.

BLACKBIRDS, ORIOLES AND ALLIES

Bobolink

Dolichonyx oryzivorus

Status: *Accidental.*

Not previously observed in the North Peace River region.

Occurrence: A male was seen singing in a field beside a marsh along 248A Road, south of North Pine, on 17 June 1979.

Red-winged Blackbird

Agelaius phoeniceus

Status: *Common migrant and summer visitor; breeds.*

Williams (1933b) found this species “occasional” throughout the Peace River Block. Cowan (1939) called Red-winged Blackbird (Figure 125) an “abundant breeding bird” in the South Peace River region and at Charlie Lake. Penner (1976) found it a “common breeding bird” in the Peace River valley.



Figure 125. The earliest date for spring-arriving female Red-winged Blackbirds was 20 April, nearly two weeks later than for males. *Photo by R. Wayne Campbell, south of Fort St. John, BC, 17 June 2004.*

Habitat: Migration: Fields, riparian brushy edges, and cattail stands around wetlands. Migrating flocks were also seen around farm yards and grain

fields. Breeding: Uncommon in dry brushy upland meadows. It favours cattail (Figure 126) and bulrush stands in ponds and also frequents sloughs, beaver ponds, sewage lagoons, lakes with emergent wetland plants, as well as willows and cattails in ditches and dugouts. Although Red-winged Blackbird prefers open, non-forested wetlands, it has a high tolerance for human-altered environments. Occasionally, the species may forage in trembling aspen canopies if close to a wetland where emerging aquatic insects, such as chironomids, become available.



Figure 126. Almost any cattail marsh in the North Peace River region may support nesting Red-winged Blackbirds. An important component of the vegetation is some standing water and a mixture of dead cattails in which nests are built. *Photo by R. Wayne Campbell, north of Taylor, BC, 7 June 2007.*

Distribution: Migration and Breeding: Found throughout the North Peace River region.

Occurrence: Spring: Males migrated northward separately and earlier than females. Spring flocks of males were surprisingly scarce. The 10 earliest spring arrival dates (1976, 1977, and 1981 to 1988) ranged from 9 to 26 April, with eight dates between 9 and 20 April. Late first arrival coincided with a late cold and snowy spring (1982) when snow lingered well into April. That year Red-winged Blackbirds did not appear until 26 April. Earliest arrival for females (1976 to 1978, 1980, and 1982 to 1988) ranged from 20 April to 10 May. Phinney (1998) found that females arrived two weeks after the first males in the Dawson Creek area. Cowan (1939) recorded a flock of 20 to 30 females at Tupper Creek

on 18 May 1938. Two notable spring arrival records are: Two males at North Pine on 20 April 1981 and a male at Cecil Lake on 19 April 1986. Summer: See *Breeding*. In mid-July, the first flocks were formed. For example, on 9 July 1986, foraging flocks were found around the marshes along 248A Road in North Pine. By late July, this species became scarce even in its favourite wetlands and, in fact, for several years none were found after July. Most August records were of female or juvenile birds. Whether males molt in the North Peace River region before they migrate is not known. The last birds, almost always in female-type plumage, were recorded in late summer in small numbers, usually fewer than 10 birds. Five dates of last departure record (1984 to 1988) ranged from 18 August to 9 September. Notable records are: Three large chicks in a nest at Cache Creek on 15 June 1986, a nest with six eggs at the south sewage lagoons near Fort St. John on 8 June 1986, and 70 juveniles and females at Cecil Lake on 30 June 1998. Autumn: Most blackbirds departed by the end of the first week of September. Notable latest departure records are: One at the south end of Charlie Lake on 1 September 1984, one at the south sewage lagoons in Fort St. John on 6 September 1986, and two at the north sewage lagoons in Fort St. John on 9 September 1984.

Breeding: Nests were bulky constructions, often built in last year's dead cattails, and were easily spotted, although sometimes quite difficult to look into because of deep surrounding water. Nests, which only the females build, were constructed largely in mid-to-late May. The earliest construction was seen on 8 May and the latest on 5 June. Three finished, but empty, nests belonging to different females were seen at Cecil Lake on 27 May 1976. Egg records ranged from 17 May to 20 June. Some of the later records may have represented re-nesting attempts. In the South Peace River region, Phinney (1998) found eggs between 21 May and 4 July. The asynchronous nature of nesting was well illustrated by birds that nested in ditches and dugouts along a stretch of 277 Road northeast of Charlie Lake. On 20 June 1985, three nests held eggs while young were fledging from a fourth nest. Young were found in nests from 8 to 23 June (Figure 127). Newly fledged

young were found from the second and third weeks of June throughout mid-to late July; the latter dates were probably second nestings.



Figure 127. Fledged Red-winged Blackbird young, clinging to cattail stems and leaves, can be found in early June. *Photo by R. Wayne Campbell, Grand Haven, BC, 9 June 2007.*

The most commonly used habitat for nesting was in stands of emergent dead *Typha* around the edges of ditches, sewage lagoons, beaver ponds, swamps, sloughs, ponds, lakes, and lake outlets. Nests were less commonly built in riparian willows. The pond and the extent of *Typha* could be remarkably small to support nesting birds. A nest with five eggs was found at a pond only 4 m in diameter with only a few cattails growing around it at the edge of a trembling aspen forest near km 4 of the Johnstone Road south of Taylor on 11 June 1980. Another pair frequented a dry willow upland meadow, a rare nesting site in the North Peace River region.

Phinney (1998) found a nest containing two blackbird eggs and two Brown-headed Cowbird eggs. There were no records of cowbird parasitism for the North Peace River region.

Western Meadowlark
Sturnella neglecta

Status: *Rare migrant and summer visitor; breeds.*

Not recorded by Williams (1933b). Cowan (1939) did not record the species himself but local residents reported a single bird was seen near Fort St. John in 1937. Penner (1976) did not list it for the Peace River valley. Soper (1949) found Western Meadowlark (Figure 128) locally common around Grande Prairie north to Dunvegan in the adjacent Alberta Peace River area. Pinel et al. (1993) reported a northwestern expansion of the species' range in Alberta from 1892 to the mid-1990s. The species' appearances in the North Peace River region are probably part of the range expansion.



Figure 128. Western Meadowlark is a recent arrival in the North Peace River region, probably as part of expansion in northwestern Alberta. *Photo by R. Wayne Campbell.*

Habitat: Grasslands “breaks” on south-facing slopes and fields on the north side of the Peace River (e.g., at Two Rivers and the south sewage lagoons in Fort St. John), and the edges of agricultural fields and grassy highway margins (e.g., at Bear Flat; Figure 129 and Taylor).



Figure 129. Western Meadowlark probably breeds in the agricultural fields near Bear Flat, BC, where it frequently has been seen singing from fence posts. *Photo by R. Wayne Campbell, 18 June 1996.*

Distribution: Migration and Breeding: Locally distributed. The species is found almost exclusively on the north bank of the Peace River. It was recorded in various open areas such as along the Upper Cache Road at km 6.7, Bear Flat, the north and south sewage lagoons in Fort St. John, Taylor, Taylor landfill, and Two Rivers.

Occurrence: There are at least 23 records. Spring: Three first arrival dates (1985 to 1987) ranged from 13 to 26 April. In southern Alberta, meadowlarks arrive at the end of March and early April (Semenchuk 1992). Of the 23 records, 17 were in April and May, the period when the species is most vocal. Two records are of two birds each, at Bear Flat on 11 May 1985 and males singing at Taylor on 19 May 1986. Summer: Two records: One was seen at Bear Flat on 15 June 1986 and seven, possibly a family, were present at Taylor on 24 July 1982. Autumn: Three records: One at the south sewage lagoons in Fort St. John on 6 September 1986, one at the north sewage lagoons in Fort St. John on 9 September 1984, and one at Taylor on 2 September 1984.

Breeding: The only breeding record was a nest with four eggs at Fort St. John on 25 June 1978 (Campbell et al. 2001).

Yellow-headed Blackbird
Xanthocephalus xanthocephalus

Status: *Uncommon local migrant and summer visitor; breeds.*

Not recorded by Williams (1933b), Cowan (1939), or Penner (1976), and not listed by Munro and Cowan (1947) or Godfrey (1966), indicating Yellow-headed Blackbird (Figure 130) recently expanded its range into the Peace River area. See Campbell et al. (2001) for further comments about its range expansion into the Peace Lowland.



Figure 130. Yellow-headed Blackbird expanded its range into the North Peace River region starting in the late 1970s. A decade later it was a common, but local, breeding species. *Photo by R. Wayne Campbell.*

Habitat: Migration: Recorded in flocks of other blackbirds in marshes, open lakeshores, farmyards, lawns, sewage lagoons, beaches and shorelines. Breeding: Colonies form in *Typha latifolia* and *Scirpus* spp. beds at marshy lakes and ponds (Figure 131). Birds feed in the marshes and in nearby fields and farms.



Figure 131. Yellow-headed Blackbird is a local breeding species that requires wetlands with dead cattail growth for nest attachment. *Photo by R. Wayne Campbell, south of Fort St. John, BC, 22 June 2008.*

Distribution: Migration: Local. This species is present as a breeder or non-breeding visitor in most suitable wetlands in the southeast portion of the North Peace River region. It has also been recorded in fields near marshes and lakes. Breeding: Two large breeding colonies were found at Boundary Lake and Cecil Lake. Wandering individuals were occasionally seen at Watson Slough, north and south sewage lagoons in Fort St. John, southern Charlie Lake, the 248A Road marshes near North Pine and along 251 Road Pond southwest of Cecil Lake.

Occurrence: Spring: Ten arrival dates (1980 to 1989) ranged from 17 April to 12 May. Some of these migrants appeared at locations where they did not breed, such as the north sewage lagoons in Fort

St. John and the south end of Charlie Lake. All early arrival records were of single males except for three males that arrived on 2 May 1982 at the northwest corner of Cecil Lake, and three males observed at Boundary Lake on 4 May 1986. Phinney (1998) gave 13 April as the earliest arrival for the South Peace River region. By mid-May, the colonies at Boundary Lake and Cecil Lake were occupied. Notable spring arrival records are: A male at the north sewage lagoons in Fort St. John on 17 April 1988 and 22 April 1989, a male at the south end of Charlie Lake on 12 May 1984, and a male at the 248A Road marshes on 21 April 1981. Ten to 15 pairs were at the north end of Boundary Lake on 16 May 1982. Summer: Recently fledged young were recorded annually in and around colonies from late June to mid-July. No large summer or early autumn flocks were observed. Most of the local population departed in late July or August. Notable records are: An adult male at the 248A Road marshes on 18 June 1978, 50 birds at Cecil Lake on 25 June 1988, a female with fledged chicks at Boundary Lake on 30 June 1980, and two broods of large fledged chicks at Boundary Lake on 16 July 1983. Autumn: Six departure dates (1980, 1982 to 1984 and 1986 to 1987) ranged from 24 August to 11 September. Most of these observations were of singles except for one sighting of nine birds at the north sewage lagoons in Fort St. John on 9 September 1984. Notable late departure records are: One at the north sewage lagoons in Fort St. John on 11 September 1982 and a winter male at Taylor with 20 Brewer's Blackbirds on 29 August 1982.

Breeding: Two nesting colonies, the number of nests undetermined, were located at Cecil Lake and Boundary Lake. Based upon casual observations in the 1980s, it is apparent that sub-colonies exist, of which each is probably fewer than 15 pairs. Only one colony was found at Cecil Lake, although a few more could have been present as the lake was not thoroughly explored. Boundary Lake appeared to have a colony of about 10 to 15 pairs near the north end of the lake and isolated pairs around the southern end. At both lakes, Yellow-headed Blackbirds nested in stands of bulrush growing in shallow water. In the South Peace River region, Phinney

(1998) found nests with eggs between 8 and 18 June. In the North Peace River region, newly fledged young were encountered annually around colonies from late June to mid-July. Backdating suggests that nest construction (Figure 132) and egg-laying began around the middle of May, incubation probably during the first half of June, and young were present in the nest during the last two weeks of June.



Figure 132. Full clutches of Yellow-headed Blackbird eggs may be found as early as mid-May in the North Peace River region. *Photo by R. Wayne Campbell.*

Comments: Yellow-head Blackbird nesting colonies in the North Peace River region are the most northerly in British Columbia.

Rusty Blackbird *Euphagus carolinus*

Status: *Uncommon to fairly common spring and autumn migrant and uncommon summer visitor; breeds.*

Williams (1933b) called the Rusty Blackbird the common white-eyed blackbird of the Peace Block but felt that confusion with Brewer's Blackbird may have occurred. Cowan (1939) designated the Rusty Blackbird a "common summer resident" in the Swan Lake and Charlie Lake areas. Penner (1976) gave one spring record for the valley of the Peace River.

Habitat: Migration: Around ditches and ponds at woodland edges, farmyards (especially in wooded country), marshes and sloughs, lakeshores, muskegs, and wooded swamps in spring migration. In autumn, it is also observed around lakeshores and sewage lagoons. Breeding: Isolated wooded wetlands (Figure 133).



Figure 133. Remote woodlands, often with dead standing trees and tall shrubs, are breeding sites for Rusty Blackbird. *Photo by R. Wayne Campbell, near Boundary Lake, BC, 24 June 1996.*

Distribution: Migration: Observed in spring at Hudson's Hope in a swamp around km 8 of the Upper Cache Road, Watson Slough, in the marsh and swamp near the British Columbia Rail depot at Fort St. John, the 248A Road marshes near North Pine, around Cecil Lake, and in a farmyard near Boundary Lake. In autumn, small flocks were found at the north and south ends of Charlie Lake as well as some of the sites listed above. Breeding: Generally in wooded wetlands including swamps and around beaver ponds along Highway 29 south of the Peace River at Hudson's Hope, around Farrell Creek community pasture, km 8 of the Upper Cache Road, Watson Slough, German Lake, and Boundary Lake.

Occurrence: Spring: Nine arrival dates (1980 to 1988) ranged from 14 to 25 April. The largest spring flock contained 110 birds (60 males and 50 females) at a farmyard near Boundary Lake on 25

April 1987. Males dominated early spring flocks. Some flocks also contained Red-winged Blackbirds and Common Grackles. Spring arrivals occurred directly on the breeding grounds in swamps or muskegs or in brushy, wet areas such as the margins of farmland where breeding does not occur. One such location, favoured from year to year, was the willow and trembling aspen thickets around the British Columbia Rail tracks on the east side of Fort St. John. By early May almost all Rusty Blackbirds were found only in isolated swampland where they presumably bred. Notable records are: Four in fields west of Hudson's Hope on 30 April 1983, 25 near Szoo's ranch at km 6 of the Upper Cache Road on 14 April 1984 (arrival date) eight at a swamp at km 8 of the Upper Cache Road on 23 April 1983 (arrival date), a male at Cache Creek along Highway 29 on 25 April 1982 (arrival date), a pair at Watson Slough on 7 May 1977, 90 at 248A Road marshes, near North Pine, on 25 April 1981, and 50 east of the north sewage lagoons in Fort St. John on 24 April 1987 (arrival date). Summer: See *Breeding*. Notable records are: An adult feeding two fledglings north of Cameron Lakes along Highway 29 on 29 June 1998, a male at Cache Creek, Highway 29 on 8 July 1982, a male with four juveniles along Highway 29 near Watson Slough on 5 July 1997, a pair carrying food in a muskeg at 248A Road marshes on 1 July 1977, four at German Lake on 21 June 1986, a pair carrying food at German Lake on 27 June 1987, an agitated pair at Boundary Lake on 10 June 1984, and seven at the south end of Charlie Lake on 24 August 1986. Autumn: Flock size was small with most records of single birds or flocks of 15 or fewer birds. Autumn birds were commonly associated with wetlands such as lakeshores, cattail marshes, wooded swamps, and cattle paddocks in woodlands. Eight autumn departure records (1981 to 1988) ranged from 27 September to 23 October. Notable records are: A male at Rose Prairie on 20 October 1984 (departure date), 15 at the north end of Charlie Lake on 2 October 1988 (departure date), three males and a female at a rain pond at Mile 50 on the Alaska Highway on 21 September 1985, a male at the north sewage lagoons in Fort St. John on 23 October 1982 (latest departure date) and 60 at a dump site at Boundary Lake on 5 October 1986.

Breeding: Poorly known. On 7 May 1977, the female of a pair near Watson Slough was observed carrying nesting material. In the South Peace River region, Phinney (1998) found a new, nearly complete nest on 17 May 1992 near Dawson Creek. A nest with five downy nestlings, their eyes half open, was found in the Del Rio area about 25 km southwest of Fort St. John on 27 May 1999 (M. Phinney pers. comm.). Finally, an adult with four juveniles foraged around a beaver pond near Watson Slough on 5 July 1997.

Nests are often built in small to medium-sized conifer and deciduous trees and shrubs usually located over standing water (Campbell et al. 2001).

Comments: See Greenberg et al. (2010) and Matsuoka et al. (2010) for a synopsis of the decline and nesting biology of Rusty Blackbird in North America.

Brewer's Blackbird *Euphagus cyanocephalus*

Status: *Fairly common migrant and summer visitor and occasionally a very common migrant locally in early autumn, breeds.*

Williams (1933b) did not find Brewer's Blackbirds in the Peace River Block. However, Racey (1930) stated that the species was "common" there in June 1930. It is possible that Racey mistook Rusty Blackbirds for Brewer's Blackbird (Figure 134) because Cowan (1939) found no Brewer's Blackbirds in May and June 1938. By 1966, W. Earl Godfrey mapped the species as breeding in the Peace River area of British Columbia. The species was found by Thormin (1973) to be "quite common" around farmlands and along the Peace River in the early 1970s. Brewer's Blackbird probably spread from Alberta into British Columbia during the 1940s to 1960s.

Habitat: Migration: Agricultural fields, roadsides, and occasionally lakeshores. Breeding: Territorial birds forage in fields, around farms, and sometimes large yards, and often nest in trees and thick shrubs in overgrown meadows.



Figure 134. Brewer's Blackbird arrived in the Peace River region of British Columbia, probably from northwestern Alberta, during the 1950s. *Photo by R. Wayne Campbell.*

Distribution: Migration and Breeding: Brewer's Blackbird is widely distributed along most highways throughout open rural areas but not in heavily wooded areas. It occurs from Hudson's Hope and Farrell Creek in the west and east along transportation corridors and agricultural fields to the Alberta border. In the south, it occurs along the agricultural parts of Johnstone Road south of Taylor, north through farming country around Fort St. John, and locally north along the Alaska Highway.

Occurrence: Spring: Ten spring arrival dates (1977, 1978 and 1980 to 1989) ranged from 24 April to 1 May. First arrivals generally occurred as single birds or in flocks of 40 or so. Towards the end of April, most flocks had dispersed and formed small nesting colonies. In migrant flocks, males predominated by as much as 90%. Migrants were found around ponds, or in dry locations, especially along roadsides in open farming country. Courtship, nest construction and egg-laying occurred in May. Notable records are: Seven nests with three to six eggs each counted at the colony on 117th Avenue in Fort St. John on 26 May 1984, eight males and two females at Two Rivers on 24 April 1980 (arrival date), and 30 males and two females at Boundary Lake on 27 April 1986 (arrival date). Summer: Young hatched in early to mid-June and fledglings were noted into July. Fledglings and adults began to flock together in fields from July onwards. Flock size appeared to

stay below 100 birds until about late August when up to 300 birds were seen. Notable records are: Three of eight nests at 117th Avenue colony with chicks hatching on 2 June 1984 and 500 birds (largest flock) on a newly ploughed field at Mile 41 of the Alaska Highway on 29 August 1982. Autumn: Eight final departure dates (1979 and 1982 to 1988) ranged from 17 September to 23 October. Records after 1 October were usually of individual stragglers. Notable records are: 300 roosting in willows and trembling aspens at the British Columbia Rail depot in Fort St. John on 20 September 1985 and a male at Cecil Lake on 23 October 1983 (latest record).

Breeding: Regularly bred in small colonies of fewer than 10 pairs, usually building their nests in shrubs and saplings that border open country. Pairs were also seen in breeding season in receding black spruce muskegs close to fields around Goodlow. Both Phinney (1998) and Campbell et al. (2001) reported Brewer's Blackbirds nesting on the ground (Figure 135). In the Fort St. John area, nests in trees were commonly situated next to the trunks of white spruce or in the centre of willows.



Figure 135. Small numbers of Brewer's Blackbirds build their nest on the ground at scattered locations throughout the North Peace River region, mainly along roadsides. *Photo by R. Wayne Campbell, south of Hudson's Hope, BC, 28 May 2004.*

Brewer's Blackbirds appeared at their traditional colonies early in May. Following pair formation, nest construction generally began about the second or the third week of May, although a female carrying nest material was seen as early as 4 May 1985 at Bear Flat. Full clutches of five to six eggs were found in nests in the 117th Avenue colony in late May. Around Dawson Creek, Phinney (1998) found nests with eggs from 20 May to 5 July.

Nests at the 117th Avenue colony were as close as seven metres apart. Nests with young were recorded from 2 to 14 July. Adults with dependent juveniles have been seen through the second half of June into July. Second nesting attempts were sometimes suspected as a pair at the 115th Avenue colony was agitated on 31 July 1982, probably too late for a first nesting.

Family groups gradually gathered into flocks away from nesting colonies during July and August with the largest flocks found in late August and September.

Common Grackle *Quiscalus quiscula*

Status: *Uncommon migrant, uncommon local summer visitor, and accidental in winter; breeds.*

Common Grackle (Figure 136) was first recorded in the Peace River District by Cowan (1939) who collected at least four birds in the South Peace River region (Campbell et al. 2001). The species was not mentioned by Penner (1976) for the Peace River valley.

Habitat: Migration: Marshes and farmyards. Breeding: Frequents open, wet habitats (Figure 137) such as those around Boundary Lake and Cecil Lake. In North Pine area, several pairs nested in densely tangled willows, living and dead, around gas-well water ponds surrounded by a stand of young trembling aspen and in agricultural fields where two large marshy ponds were within 0.5 km of the nesting site. At Boundary Lake a pair nested in *Typha* growing along a raised roadbed at the north end of a very shallow lake. Adults also nested for years at a beaver pond beside the Alaska Highway just north of the settlement of Charlie Lake.



Figure 136. Over the past five decades, Common Grackle has become well established as a breeding species in northeastern British Columbia. Highest numbers occur in the Boreal Plains ecoprovince. *Photo by R. Wayne Campbell.*

Distribution: Migration and Breeding: Recorded locally from the Halfway River eastward to the Alberta border and no farther north than Cecil Lake.

Occurrence: Spring: Eleven earliest spring arrival dates (1976, 1977, and 1980 to 1988) ranged from 14 to 30 April, with nine dates between 14 and 23 April. In the South Peace region, 21 April was given as the earliest arrival date (Phinney 1998). Earliest arriving birds were usually found at traditional breeding locations in flocks of up to 15 birds. The largest spring flock was 30 grackles at a newly seeded field at the south end of Charlie Lake on 24 April 1984. Notable records are: One at Watson Slough on 4 May 1980, two at the south end of Charlie Lake on 16 April 1976 (arrival date), seven at the British Columbia Rail depot in Fort St. John on 22 April 1988, and nine in farmyard along 248A Road near North Pine on 18 April 1988. Summer: Breeding activities commenced in late spring and continued into July. Grackles seemed to disappear sometime in late July, leaving a few stragglers into August. Late summer records, although few in number, were still consistent with final southbound movement from mid- to late August. Six final departure records (1975, 1979, and 1984 to 1987) ranged from 16 to



Figure 137. Small cattail wetlands, with the previous year's dead growth, are often used as breeding sites for Common Grackle. *Photo by R. Wayne Campbell, Grand Haven, BC, 22 June 1996.*

29 August. Notable records are: An adult with three fledglings at km 10.5 of the Upper Cache Road on 7 July 1997, a female carrying food into cattails along 277 Road northeast Charlie Lake on 2 June 1987, six adults and 10 fledglings in a wetland in east Fort St. John on 24 June 1987, and a flock of 40 adults and juveniles at Boundary Lake on 2 July 1997. Autumn: No records. Winter: A single record of one Common Grackle that flew over Kin Park in Fort St. John on 8 January 1987.

Breeding: Recorded nesting as single pairs or more commonly in small colonies of up to five pairs. The only nest seen was a compact deep cup in a dead *Typha* clump in Boundary Lake about 5m from a dike. Water depth at the nest site was one metre. This was an unusually exposed nest. At other colonies, such as the 248A Road marshes and the Fort St. John grain elevators, adults were observed carrying food into dense tangles of living and dead willows bordering standing water. In the South Peace River region, nests were also located in abandoned buildings and cavities in trees (Campbell et al. 2001).

The breeding phenology suggests that nests were built and eggs were laid and incubated in May through June, adults fed nestlings through early to late June, and fledglings appeared from the second week of June through July (Figure 138).



Figure 138. Fledgling Common Grackles, perching and climbing among cattail stems, can be found as early as 14 June. Most young, however, leave their nest a week later. *Photo by R. Wayne Campbell, Grand Haven, BC, 22 June 1996.*

Brown-headed Cowbird *Molothrus ater*

Status: *Fairly common migrant and summer visitor; breeds.*

Williams (1933b) called Brown-headed Cowbird (Figure 139) “common” from Fort St. John to the Blueberry River between 12 and 18 May 1922. Cowan (1939) called it “abundant” throughout the Peace District. Penner (1976) termed it a “fairly common migrant and summer resident” on islands and the flood plain along the valley of the Peace River from Hudson’s Hope to the Alberta border.



Figure 139. Brown-headed Cowbird breeds in the North Peace River region but is also a fairly common spring and autumn migrant. *Photo by Mark Nyhof.*

Habitat: Migration and Breeding: Horse pastures, cattle paddocks, agricultural fields, open trembling aspen and mixed woodland groves, and edges of woodlands including riparian woodlands. In migration, it appeared with Brewer’s Blackbirds on river shores and gravel bars of the Peace River (Penner 1976). Juveniles may also appear in urban and residential habitats.

Distribution: Migration and Breeding: Widely distributed across the southern two thirds of the North Peace River region.

Occurrence: Spring: Thirteen arrival dates (1977 to 1979 and 1980 to 1989) ranged from 30 April to 9 May, with 10 dates between 3 and 8 May. In

the South Peace River region, Cowan (1939) gave an arrival date of 6 May at Tupper Creek. Phinney (1998) gave 4 May as the earliest arrival for the Dawson Creek area. Early arriving birds in the North Peace River region were mostly single males or males and females together. Cowan (1939) found flocks of Brown-headed Cowbirds at Tupper Creek of 40 males and four females and 55 males and one female. By 14 May 1938, he found “flocks up to fifty birds were common.” Generally flocks in the North Peace River region were much smaller, typically between five and 15 birds, with males predominating. There were two records of larger flocks; 60 males and 10 females at Bear Flat on 20 May 1982 and at least 60 males at a cattle paddock at km 6 of the Upper Cache Road on 9 June 1985. By the third week of May, cowbirds were generally well distributed throughout the North Peace River region. Notable spring arrival records are: A male at Hudson’s Hope on 5 May 1979, one at the south end of Charlie Lake on 4 May 1985, a male at Beatton Provincial Park on 2 May 1987, and a male at the north sewage lagoon in Fort St. John on 30 April 1989. Summer: See *Breeding*. Departure dates are unknown for the North Peace River region. Adults remained relatively common until the second week of July and thereafter disappeared. There were only four August observations from 1975 to 1992, all of which were juveniles except for one adult (sex not recorded) with four juveniles at the junction of 101 and 244B Roads on the north edge of Fort St. John on 17 August 1986. The latest observation was a juvenile at Mile 41 on the Alaska Highway on 29 August 1982. North Peace River region data concerning early departures is generally supported by similar data from Alberta. Pinel et al. (1993) stated “most Brown-headed Cowbirds had left the province by the end of August or early September. Maximum numbers seemed to occur in early August.” These numbers were supplemented by northern birds departing their breeding areas in July. Notable records are: One cowbird egg with four Yellow Warbler eggs in a nest at Beatton Provincial Park on 8 June 1983, a female Cape May Warbler feeding a fledgling Brown-headed Cowbird at Beatton Provincial Park on 18 July 1983, two eggs in a nest with three newly hatched Dark-eyed Juncos

along Peace Island Park Road on 21 June 1988, and a Lincoln’s Sparrow feeding a fledgling cowbird along Peace Island Park Road on 12 July 1987.

Breeding: Fifteen species of birds in the North Peace River region were parasitized by Brown-headed Cowbird. Cowbird eggs were found in the nests of Spotted Sandpiper (1 nest; Siddle 2009), Yellow Warbler (2 nests), White-throated Sparrow (1), and Dark-eyed Junco (2). Cowbird fledglings were observed being fed by American Robin, Orange-crowned Warbler, Cape May Warbler, Yellow-rumped Warbler, Black-throated Green Warbler, American Redstart, Mourning Warbler, Canada Warbler, and Western Tanager (Campbell et al. 2001). Cowan (1939) found Hermit Thrush and Dark-eyed Junco to be the main hosts in May 1938 in both the North and South Peace River regions. Phinney (1998) found 16 host species near Dawson Creek of which Least Flycatcher, Hermit Thrush, Yellow-rumped Warbler, Yellow Warbler, Chipping Sparrow (Figure 140), Clay-colored Sparrow, Savannah Sparrow, Lincoln’s Sparrow, White-throated Sparrow, Dark-eyed Junco, Red-winged Blackbird, and Purple Finch were the most common hosts.



Figure 140. Chipping Sparrow is a common host for Brown-headed Cowbird and occasionally a nest is found with only Brown-headed Cowbird eggs, perhaps suggesting they were laid in the host nest after fledging. *Photo by Mark Nyhof.*

Comments: Cowbirds do not build a nest. Generally, the species lays one egg per nest in its host species. In some cases, the host female may remove a cowbird egg. Each cowbird egg requires about 11 to 12 days incubation and the nestling cowbird may co-exist with the hosts' nestlings, although feeding rates for the cowbird chick are always higher. The cowbird chick leaves the nest between eight and 13 days depending on the species parasitized. Often it is very noisy and active, constantly seeking to be fed, especially when 12 to 23 days out of the nest. It becomes independent at about 16 to 28 days. Independent young often appear among flocks of other blackbird species (Lowther 1993).

Baltimore Oriole
Icterus galbula

Status: *Uncommon to fairly common migrant and summer visitor; breeds.*

A recent arrival to the Peace River country of northeastern British Columbia, Baltimore Oriole was not mentioned in any references until Weber (1976) published the first record in 1960. Thormin (1973) reported seeing two males 19 km (14 mi) below the W.A.C. Bennett Dam on 31 May 1973. Penner (1976) described the species as “uncommon in summer” along the Peace River.

Habitat: Migration and Breeding: Mainly along the edges of trembling aspen and balsam poplar groves and occasionally frequents open mixed woodland. It has also been recorded in balsam poplar flood plain forests along Peace Island Park Road (Figure 141) as well as around farms along Johnstone Road. The species was fairly common around young and middle-aged trembling aspen forests on the shores of Charlie Lake and in the rows of shade trees on the Charlie Lake golf course and around farmyards. There was one record of a male in mixed spruce-tamarack-balsam poplar-willow-trembling aspen at a wooded swamp along the Upper Cache Road. Baltimore Orioles were also seen in trembling aspen and mixed woodlands around beaver ponds at Bear Flat and near Watson Slough. This species appeared to favour woodlands that had been opened up by selective cutting.



Figure 141. Baltimore Oriole breeds in mixed woodlands of open balsam poplar and trembling aspen. *Photo by R. Wayne Campbell, south of Taylor (Peace Island Park), BC, 23 June 1996.*

Distribution: Migration and Breeding: Widely distributed across the southern third of the North Peace River region. It was not recorded north of km 75 of the Alaska Highway. As of the late 1990s, the species appeared to range between Charlie Lake and Wonowon. It also ranges west to Hudson's Hope and has been seen from the Upper Cache Road east through Fort St. John and Taylor to Boundary Lake and Clayhurst.

Occurrence: Spring: Ten arrival dates (1980 to 1989) ranged 13 to 27 May, with all records but one being single males. The first few birds, generally lone males, appeared up to two weeks before the main population arrived. Several first spring records were from sheltered locations such as trembling aspen groves at the foot of south-facing slopes or sheltered farmyards where the micro-climate may possibly have been warmer than the surrounding countryside. Such locations included the Old Fort, Beatton Recreational Area, and a farm near Baldonnel. In most years, orioles were widespread between 20 and 24 May. Notable records are: A male singing at Watson Slough on 18 May 1980 (arrival

date), an adult male flying across Alaska Highway at south end of Charlie Lake struck by car and killed on 27 May 1982, a male at Beatton Provincial Park on 19 May 1984 (arrival date), a male at Old Fort (Fort St. John) on 14 May 1988 (arrival date; Ricki Davies pers. comm.), and eight males heard along 4 km of Johnstone Road on 27 May 1984. Summer: Chicks fledged during the first half of July. Oriole numbers declined during July, becoming scarce by early August. There were only 18 August records for the period 1984 to 1988 with a maximum of three birds at any one location per date. Four dates of last record (1984 and 1986 to 1988) ranged from 22 to 28 August. Notable records are: A male with a fledgling at Bear Flat on 6 July 1998, a nest with noisy nestlings at Beatton Provincial Park on 28 June 1987 and 6 July 1992, a male feeding three juveniles on 7 July 1989, a female-type at Beatton Provincial Park on 21 August 1987, and a female-type at Beatton River near 103 Road on 22 August 1984 (latest departure date). Autumn: No observations.

Breeding: Only two active nests were found. The first nest, found on 28 June 1987, was built in a 6.5 m trembling aspen at the edge of a young to middle-aged trembling aspen/balsam poplar forest. The nest was in slender branches one metre from the top of the tree. The second nest, located on 6 July 1992, was in similar habitat but 8 m into the young aspen forest in a young, straight aspen 14 m tall. The nest was located in branches 0.5 m from the main trunk in the top 3 m of the crown. Both nests were within 100 m of the lakeshore in a well-wooded provincial park.

Newly fledged young were found attended by adults on nine occasions between 1 and 14 July (see *Breeding* above). There was no evidence of two broods per season.

Comments: Bullock's and Baltimore oriole were originally considered separate species until 1983 when they were "lumped" as Northern Oriole (*Icterus glabula*) after studies revealed some hybridization where the two types meet in the Great Plains (American Ornithologists' Union 1983). However, after further studies the two forms were restored to Bullock's Oriole (*Icterus bullockii*) and Baltimore Oriole (*Icterus glabula*) (Monroe et al. 1995).

CARDUELINE FINCHES AND ALLIES

Gray-crowned Rosy-Finch *Leucosticte tephrocotis*

Status: *Casual transient.*

Not recorded by Williams (1933b) or Penner (1976). Cowan (1939) reported that a tame bird was kept in semi-confinement at the Hart Hotel in Pouce Coupe during field time at Swan Lake and Tupper.

Occurrence: Spring: Two individuals of *L. tephrocotis tephrocotis* types were observed at a waste grain pile near grain elevators on east side of Fort St. John on 1 and 2 May 1987. Fifteen were seen along 103 Road at the Fort St. John airport on 22 April 1988. Autumn: One typical *L. t. tephrocotis* was foraging at a feeder along 102 Avenue in Fort St. John on 22 November 1986 (Joan Johnston pers. comm.).

Comments: *L.t. tephrocotis* is the subspecies found breeding in the alpine of mountains in the central Yukon and south-central British Columbia.

Pine Grosbeak *Pinicola enucleator*

Status: *Uncommon migrant and winter visitor.*

Williams (1933b) reported a sighting on 26 July 1929 but did not give a location, although it was probably just outside the North Peace River region at Moberly Lake. Cowan (1939) did not encounter the species in May and June 1938 around Swan Lake and Charlie Lake but reported that Ted Morton, a Charlie Lake resident, said that this species was regular in winter along the Halfway River.

Habitat: Migration and Winter: Trembling aspen groves and brushy openings in mixed and coniferous forests, as well as more open brushy edges such as lines of willows, in gullies, around muskegs, and in thickets next to wetlands. Occasionally it visits bird feeders (Figure 142) and in severe weather may move into settlements to eat berries from garden shrubs and trees.



Figure 142. Pine Grosbeak, on occasion, may visit bird feeding stations in Fort St. John during bouts of severe weather. *Photo by R. Wayne Campbell.*

Distribution: Migration and Winter: Widely distributed across the North Peace River region.

Occurrence: Spring: Nine dates of latest spring departure (1976 and 1982 to 1989) ranged from 14 February to 31 March, with seven records between 3 and 16 March. There was a single very late occurrence of two in a trembling aspen grove at the north sewage lagoons in Fort St. John on 14 May 1981. Notable late spring records are: Six along the Upper Cache Road on 4 March 1989 and one at Cecil Lake on 31 March 1984. Summer: A single record of two males and an unaged bird at “Fish Creek” in Fort St. John on 6 July 1975. Autumn: Arrival was variable from year to year. In 1980 and 1985 Pine Grosbeaks were seen in September, but in 1983 and 1984 the species did not appear until late October. Eight dates of first arrival (1980, 1982, and 1983 to 1988) ranged from 19 September to 30 October. Numbers increased through November. Notable records are: Five at Beryl Prairie on 12 November 1978, four at Beatton Provincial Park on 28 September 1980 (arrival date), two at Fort St. John on 19 September 1985 (very early arrival date), 30 at North Pine on 10 November 1985, and three flocks totaling 11 birds at Boundary Lake on 11 November 1981. Winter: December and January are months when this species was most frequently recorded. A typical flock was small, from one to five birds. The largest flock seen was 35 birds. Winter numbers fluctuated moderately from year to year. Numbers of observations declined through February

and March. Notable records include two near the Fort St. John hospital at -35C on 17 December 1977; about 35 (an unusually large flock) around a grain elevator in Fort St. John on 16 January 1982, and 26 at km 13 of the Upper Cache Road feeding in a weedy field on 16 January 1983.

Comments: Pine Grosbeaks were observed feeding on willow buds (October, November, and January), Manitoba maple (*Acer negundo*) seeds (November and January), rose (*Rosa* spp.) hips (January), and other weed seeds (October).

Pine Grosbeak may be resident in boreal and subalpine forests in the northern and western-most parts of the North Peace River region.

Purple Finch *Carpodacus purpureus*

Status: *Uncommon to locally, fairly common migrant and uncommon summer visitor; probably breeds.*

Williams (1933b) found this species “common” and singing at Rolla (South Peace River region) and Fort St. John on 12 and 13 May 1922. Cowan (1939) stated that it was “not abundant but widespread” in the Peace River District and cited Charlie Lake as a North Peace River region location. Penner (1976) described it as a “common migrant” in open mixed and tall shrub communities on islands in the Peace River valley.

Habitat: Migration: In earliest spring this species commonly appeared in deciduous woodlands, yards with bird feeders, and once in a weedy field. Breeding: Mixed forests. At Beatton Provincial Park, it favoured edge habitat between the white spruce stand and the surrounding balsam poplar-trembling aspen forest. At Watson Slough, it was found in open white spruce-tamarack-trembling aspen-birch forests around ponds and beaver dams (Figure 143). Phinney (1998) noted a seasonal habitat shift from trembling aspen forests when the species first arrives, to mixed forests during the breeding season.



Figure 143. Purple Finches can regularly be heard in summer singing from the edges of mixed coniferous and deciduous forests surrounding wetlands created by Beavers. *Photo by R. Wayne Campbell, near Bear Flat (Watson Slough), BC, 28 June 2002.*

Distribution: Migration and Breeding: Widely distributed across the forested parts of the North Peace River region.

Occurrence: Spring: Ten first arrival dates (1980 to 1989) ranged from 17 April to 1 May, with six dates between 17 and 24 April. Phinney (1998) gave 17 April as an early date for the Dawson Creek area of the South Peace River region. In central Alberta, Purple Finch arrived from 8 April to 12 May during the 1970s (Pinel et al. 1993). Purple Finch was often recorded first for the season at bird feeders, sometimes in groups as large as 15 birds. In some springs, this species was more numerous than others. Males were first to arrive and females appeared in numbers during the first half of May. Males were noted in song flights from 4 May to 14 June. Notable

records are: Two males and seven female-plumaged birds at a grain elevator in Fort St. John on 2 May 1986, three male and 12 female-plumaged birds at the same site 12 May 1986, a male displaying to a female at the Beaton River bridge on 103 Road on 19 May 1984, and a male in song flight along Peace Island Park Road on 19 May 1987. Summer: See *Breeding*. Purple Finch became scarcer after mid-to late July and most departed in August. Notable records are: 15 along 271 Road south of Beaton Provincial Park on 10 July 1987, two at Watson Slough on 16 June 1990, and one along Peace Island Park Road on 25 August 1988. Autumn: Small numbers remained through the first two or three weeks of September. Seven last departure dates (1977, 1979, and 1984 to 1988) ranged from 21 August to 22 September, with four dates between 7 and 22 September. Notable records are: Two at St. John Creek at 101 Road on 7 September 1985, one at St. John Creek at 101 Road on 22 September 1986 (latest date), one singing at Stoddart “Fish” Creek on 17 September 1986, and one at Centennial Park in Montney at the north end of Charlie Lake on 7 September 1987.

Breeding: Probably breeds although the only evidence was a male feeding two well-grown juveniles on 5 July 1997 in an open forest at Watson Slough. In the Dawson Creek area, Phinney (1998) found a nest with one egg and one newly hatched chick on 7 July 1994.

Red Crossbill *Loxia curvirostra*

Status: *Accidental*.

Occurrence: The only record is of two birds seen along the Alaska Highway just north of Charlie Lake on 4 June 1984 (Tony Greenfield, pers. comm.). Phinney (1998) found Red Crossbill to be an uncommon migrant and summer visitor in the South Peace River region where it probably breeds. The species is known to occur in the Tumbler Ridge area (Helm 2006) and the Chetwynd area (Campbell et al. 2007a).

White-winged Crossbill
Loxia leucoptera

Status: *An erratic and usually uncommon resident, occasionally locally common, but may be absent for some seasons; breeds.*

Williams (1933b) encountered a flock in the Pine River valley on 27 July 1929. The species was encountered twice in June 1938 by Cowan (1939) in the South Peace River region. It was not listed by Penner (1976).

Habitat: Migration and Breeding: Mainly in the vicinity of spruce and tamarack forests where it feeds on seeds. It was also recorded in pure stands of white spruce and in mixed coniferous forests, including riparian forests along the south bank of the Peace River at Taylor. It was also found in black spruce in muskegs at Boundary Lake.

Distribution: Migration and Breeding: In some years this species can be fairly widely distributed. It has been recorded from Dinosaur Lake, Hudson's Hope, and Dunlevy Inlet east along the Peace River to the Alberta border. It has also been found along the Upper Cache Road, north along the Alaska Highway to beyond Mile 73, north of Cecil Lake, Goodlow, German Lake, and Boundary Lake.

Occurrence: Spring: Notable records are: Two at Mile 64 of the Alaska Highway on 7 April 1982, nine at Stoddart "Fish" Creek on 19 March 1984, and "a few" at the mouth of the Halfway River on 18 May 1980. Summer: Notable records are: 25 along Johnstone Road south of Taylor on 23 July 1981 and three at Beaton Provincial Park on 10 July 1980. Autumn: The only notable record was many around Hudson's Hope on 22 November 1975. Winter: Notable records are: One at Cecil Lake on 3 December 1983, two at Goodlow on 25 February 1984, and nine at Cache Creek at Highway 29 on 20 January 1980.

Anecdotal summary notes from annual observations of this erratic species from 1980 to 1988 are as follows:

1980 – Fairly common locally from January through September.

1981 - White-winged Crossbill was unrecorded until 17 June and very uncommon through the summer. There were no autumn or winter records.

1982 - Uncommon 17 April to 29 July. Absent thereafter.

1983- One record for 30 January and absent until 17 June. Thereafter, it was uncommon to the end of the year. The largest flock was 26 birds at Peace Island Park on 20 November. Singing was noted among a flock on 11 December at the same site.

1984 - Present from November 1983 onward with many observations of song flights in January through 20 March. Pair fed two juveniles in May (see *Breeding*). The species was common and widespread until late August with only one record for September and two for October.

1985 – Absent until 22 June when a flock of 70 was seen along the Peace Island Park Road. It remained local and uncommon with a final record on 20 October.

1986 – Absent until 8 March, then uncommon to June when the species became more widespread but still uncommon to the end of the year.

1987 – Present into January then absent until seen on 9 May and 7 June. Thereafter, it remained uncommon to the end of the year.

1988 – Absent until 16 April after which it remained uncommon and local to the end of the year.

Breeding: There is a single record. A pair was observed feeding two begging fledglings in a forest along Highway 29 near Watson Slough on 20 May 1984. However, males singing and courting at this same site and at a few others including Stoddart "Fish" Creek in Fort St. John suggest that nesting may be more widespread than is known.

Comments: Forest practices in the Peace River area harvest spruce trees before they reach cone-producing stands at 60 years old (Campbell et al. 2001). This short "rotation" adversely affects primary food resources for White-winged Crossbill.

Common Redpoll
Carduelis flammea

Status: *A fairly common to very common local migrant and uncommon to fairly common local winter visitor.*

The species was not recorded by Williams (1933b), Cowan (1939), and Penner (1976) because of the seasonality of their fieldwork.

Habitat: Migration and Winter: Deciduous and mixed forests favouring birches and alders for seeds (Figure 144). It was also recorded in ornamental and shade birches in suburban yards and along roadways in Fort St. John. In the autumn and winter, Common Redpoll was also found in weedy patches at field edges, especially at Cecil Lake, and in stubble and un-harvested grain fields. It was sometimes encountered in early spring around spilled grain at grain elevators, sheds and farmyards at Montney. At all seasons it fed on grit and spilled grain on roadways through grain farming country. Occasionally it appeared at bird feeders.



Figure 144. Small flocks of Common Redpolls are most often seen while feeding on seeds of alders and birches. *Photo by R. Wayne Campbell.*

Distribution: Migration and Winter: Found in agricultural areas around Fort St. John, Cecil Lake, Goodlow, and Boundary Lake. It also occurred north along shrubby edges of the Alaska Highway and in the farming areas of Buick Creek and Prespatou. In the west, it was recorded around the Farrell Creek Community Pasture northeast of Hudson's Hope, along Upper Cache Road, and also at Bear Flat as well as along the Johnstone Road and Peace Island Park Road south of Taylor, north through Baldonnel and Fort St. John to Rose Prairie.

Occurrence: Common Redpoll is more common in some years than in others. Autumn: Eight autumn arrival dates (1981 to 1988) ranged from 2 October to 9 November, with six dates between 2 and 25 October. In some years, autumn migration is obvious, such as on 21 October 1986 when 16 flocks of redpolls ranging from four to 40 birds each were recorded flying south at various locations between Fort St. John and Boundary Lake. Common Redpoll sightings peaked in November and declined from December to February. The single largest autumn flock was of 200 birds feeding along 184 and 254 roads north of Cecil Lake on 3 November 1985. Notable records are: 15 at Beryl Prairie on 11 November 1987, six at Montney on 8 October 1984 (arrival date), five at Fort St. John on 6 November 1982 (arrival date; Joan Johnston pers. comm.), and four at Rose Prairie on 27 November 1983. Winter: Common Redpolls appeared to be less common in winter than in autumn and spring and were concentrated around reliable food sources such as unharvested grain fields or open grain sheds, where flocks ranged from two to 40 birds. Notable records are: Ten at Farrell Creek Community Pasture on 17 December 1988, six at km 13 of the Upper Cache Road on 16 January 1983, and 30 at Fort St. John on 3 December 1983. Spring: Common Redpolls reached their highest numbers in April when flocks of over 100 birds were observed, but numbers dwindled quickly into May. For example, a marked migration was noted throughout April and early May 1986 with flocks of 15 to 200 birds generally distributed in farming areas around Fort St. John, North Pine, and Montney. Departure dates vary greatly between years. In 1985, most redpolls were gone by the third

week of April, but in 1986 flocks could still be found into early May. In 1988, most birds had departed by mid-April. Seven dates of spring departure (1982 to 1988) ranged from 11 March to 28 May, a span of 10 weeks. Notable records are: 350 in a flock at Flatrock on 11 April 1982, 225 at the grain elevators in Fort St. John on 9 April 1988, 30 along 252 Road between North Pine and Montney on 18 April 1982 (final spring record), two at Bear Flat 4 May 1985, and one at Beatton Provincial Park 13 May 1978 (latest record).

Comments: In 1987, unidentified redpolls were heard or seen flying over various locations in and around Fort St. John on 17 July, 23 July, 15 August, 17 August and 16 September. The largest number was four birds on 15 August; all other observations were of single birds. It is noteworthy that Semenchuk (1992) mentions that Common Redpoll occasionally breeds in central Alberta.

Hoary Redpoll *Carduelis hornemanni*

Status: *Uncommon to fairly common winter visitor most years.*

Hoary Redpoll (Figure 145) was not recorded by Williams (1933b), Cowan (1939), or Penner (1976) who researched the area only in spring and summer.



Figure 145. Hoary Redpoll is present most winters and sometimes in flocks of hundreds of individuals. *Photo by Chris Siddle, Fort St. John, BC, 27 March 1982.*

Habitat: Migration and Winter: Winter fields, weedy edges and willows in gulleys, mixed woodlands such as trembling aspen, willow thickets, birches, and alders as well as stubble and unharvested grain fields. The species was frequently attracted to spilled or waste grain on roadways and near granaries and grain elevators. For example, in March 1982, a large flock perched in farmyard trees and roadside bushes along 252 Road south of Montney and entered an open grain shed a few birds at a time to eat grain. Occasionally small flocks appeared in alders and birches in mixed woodland at Boundary Lake and Beatton Provincial Park to feed on seeds in catkins.

Distribution: Migration and Winter: Recorded most often in farming country around Fort St. John, along the Upper Cache Road, Montney, and Cecil Lake but likely occurred throughout the North Peace River region.

Occurrence: Of irregular occurrence but found most winters in small flocks and less frequently in flocks of 100 to 400 birds. Occasionally it was seen in flocks of Common Redpolls.

Spring: In good “redpoll seasons” Hoary Redpoll remained fairly common throughout March (except in 1984) but became scarce by mid-April. Six dates of latest departure (1982 and 1984 to 1988) ranged from 19 March to 27 April. Notable records are: 25 with 75 Common Redpolls at Fort St. John on 9 March 1986, 60 with 140 Common Redpolls at grain elevators at Fort St. John on 13 April 1986 (departure date), one at Montney on 19 April 1987 (latest departure date), and 200 at 250 Road and 101 Road near North Pine on 2 March 1985. Summer: No records. Autumn: First arrivals occurred from the second week of October to early December. Seven dates of first autumn arrival (1981 and 1983 to 1988) ranged from 12 October to 3 December. Five of these dates fell between 20 October and 11 November. In the North Peace River region, Common Redpoll arrived two to four weeks before Hoary Redpoll. Notable records are: One at Cache Creek on Highway 29 on 23 November 1975, two at Beatton Provincial Park on 12 October 1985 (fall arrival), forty at North Pine 28 October 1984, two at Beatton Provincial Park 6 November 1988

(arrival date), and two at Cecil Lake 11 November 1987 (arrival date). Winter: Found most commonly in flocks of two to 30 birds, or less frequently as a few individuals among flocks of Common Redpolls. In a “redpoll winter” much larger flocks occurred. Twelve flocks of 60 to 400 birds were recorded with seven flocks occurring from December 1984 to April 1985, a winter of large numbers. Notable records are: 20 along the Farrell Creek Road on 17 December 1988, 25 in downtown Fort St. John on 27 December 1987, 60 at North Pine on 23 December 1984, 400 with 100 unidentified redpolls at North Pine on 27 January 1985, and 35 *C. h. exilpes* subspecies at North Pine on 8 February 1986.

Comment: There are currently two recognized subspecies of the Hoary Redpoll in North America, *C. h. hornemanni*, which breeds in the extreme northern parts of the eastern arctic, and *C. h. exilpes*, which breeds across northern Canada and Alaska. *C.h. hornemanni* is larger than *C. h. exilpes*, and is much paler with very little streaking. The winter range of *C. h. hornemanni* is poorly known.

Pine Siskin *Carduelis pinus*

Status: *Uncommon to occasionally common migrant and summer visitor and accidental in winter; breeds.*

Williams (1933b) described Pine Siskin (Figure 146) as “common” at Moberly Lake. Cowan (1939) found it in small numbers in June 1938 at Tupper Creek in the South Peace River region. Penner (1976) called it a “fairly commonly permanent resident” throughout the valley of the Peace River.

Habitat: Migration and Breeding: Most forest types including trembling aspen groves, black spruce muskeg, mature balsam poplar floodplain forests, mixed woodlands, and pure stands of mature white spruce. It has been recorded feeding on birches from August to October, alders in September, dandelion seeds in June, balsam poplar seeds in July, and willow seeds in late May.



Figure 146. Pine Siskin, an irruptive species, occurs throughout the region each year from spring to autumn but in unpredictable numbers. *Photo by R. Wayne Campbell.*

Distribution: Migration and Breeding: Recorded throughout the North Peace River region.

Occurrence: Pine Siskin is rarely abundant. Spring: This species has one of the most variable arrival patterns of any bird in the North Peace River region, arriving anytime between late February and late May. Thirteen dates of arrival (1976, 1977, and 1979 to 1989) ranged from 26 February to 28 May, with 10 of 13 dates between 16 April and 15 May. In 1984, the species arrived on 26 February, becoming more widespread through March. An instance of courtship was seen 1 April and fledged juveniles with an adult were detected 4 May. Conversely, in 1983 and 1989, siskins were seen late in the season, on 28 May, and remained scarce during both springs. Phinney (1998) gave 1 May as the earliest arrival date for the Dawson Creek area. Notable records are: Five at the mouth of Farrell Creek on 27 April 1980, one at Cache Creek along Highway 29 on 26 April 1986 (arrival date), and one at Charlie Lake on 17

April 1980 (arrival date). Summer: Numbers peaked in August in all years with flocks of 30 or more birds recorded. Notable records are: 25 at km 11 of the Upper Cache Road on 9 June 1985 and two flocks along Johnstone Road on 17 July 1983. Autumn: Numbers slowly declined through September. Nine dates of autumn departure (1980 to 1988) ranged from 19 September to 29 October. Notable records are: 20 at the south end of Charlie Lake on 9 August 1977, four at Hudson's Hope on 27 August 1976, 30 at Beatton Provincial Park on 21 August 1980, two at Stoddart Creek on 18 October 1986 (latest date), and one at Cecil Lake on 27 September 1981 (latest date). Winter: One record of five, including three in song flights, at Stoddart Creek in Fort St. John on 26 February 1984 which was also the arrival date.

Breeding: Pine Siskin probably breeds throughout the North Peace River region but no nests were found. Timing of nesting may depend upon the variable availability of food such as coniferous seeds.

Observations clearly suggest that siskins bred earlier some years than others. In 1984, birds arrived in February, and courtship song flights were noted immediately and continued through March and April. On 20 April an adult was seen collecting nesting materials at Stoddart Creek. Adults accompanied by begging fledglings were at Peace Island Park Road on 4 and 12 May. However, in 1987 courtship song flights were not seen until 31 May and fledglings were not encountered until 27 July. Similarly, in 1988, an adult was seen feeding a fledgling in Fort St. John on 13 July. The year of latest breeding was 1985 when Pine Siskins did not arrive until mid-May and were not seen feeding fledglings until 22 August.

American Goldfinch *Carduelis tristis*

Status: *Accidental*.

Williams (1933b) reported a singing bird at Nig Creek on 27 May 1922.

Occurrence: Not recorded in the North Peace River region from 1975 to 1999.

Evening Grosbeak *Coccothraustes vespertinus*

Status: *Uncommon resident; probably breeds in some years.*

Not listed by Williams (1933b). Cowan (1939) recorded only two birds, on 20 May 1938 at Tupper Creek. Penner (1976), however, listed Evening Grosbeak (Figure 147) as an "uncommon resident" in the valley of the Peace River.



Figure 147. Often Evening Grosbeaks are encountered along gravel roads where small flocks can be watched picking up minute granules of sand or stone where they are vulnerable to traffic collisions. *Photo by R. Wayne Campbell.*

Habitat: Spring to Autumn: Uncommon in a variety of mixed woodlands including mature balsam poplar riparian forests with red-osier dogwood understory, trembling aspen-balsam-poplar-birch-tamarack-white spruce forests, mature white spruce stands surrounded by mature trembling aspen, and city parks with Manitoba maples and/or white spruce. Winter: Woodlands near bird feeders or gardens containing sunflower seeds.

Distribution: Local but occurred regularly along Johnstone Road and Peace Island Park Road, Baldonnel, Grand Haven, Fort St. John, St. John Creek, and Montney. In the west, it was recorded from Hudson's Hope, Lynx Creek, Dry Creek, Farrell Creek, Farrell Creek Community Pasture, the mouth of the Halfway River, along the Upper Cache Road, Watson Slough, Bear Flat, and Beatton Provincial Park. East of Fort St. John, there were a few records for Beatton Recreational Area, Cecil Lake, and Boundary Lake. In winter, the species

was never far from bird feeders, whether in Fort St. John or at farms.

Occurrence: Evening Grosbeak may be a migrant through the area and may be absent some summers. There are records for every month, although it is recorded more frequently in some years. Between 1980 and 1988, there was an average of 36 records per year with a high of 48 sightings in 1982 and a low of 25 observations in 1984. **Spring:** More common and widespread than in any other season. Most records were in April and May. Notable records are: Seven at Hudson's Hope on 13 April 1979, one at Bear Flat on 20 April 1985, and four at Stoddart Creek in Fort St. John on 8 March 1987. **Summer:** There were no June records for 1986 to 1988 and no July records for 1986 and 1988. During an extensive search in early July 1997, only one was recorded, a bird flying along the Peace Island Park Road on 9 July. In most years, the species re-appeared in August. Notable records are: Two at the south end of Charlie Lake on 17 June 1981, three at km 6.4 of the Johnstone Road on 2 July 1980, and one at Cecil Lake on 30 June 1998. **Autumn:** In September and October, Evening Grosbeak was almost as common as in spring. Notable records are: Two at Kin Park in Fort St. John on 5 September 1981, 14 feeding on red-osier dogwood berries along Peace Island Park Road on 23 September 1984, five at a Manitoba maple in Fort St. John between 21 and 23 September 1977, and a male feeding on the few remaining seeds on the same tree on 19 November 1977. **Winter:** Throughout the 1980s, Bob and Ruth Ann Darnall (pers. comm.) of Stoddart "Fish" Creek north of Fort St. John maintained a feeding station frequented by 40 to 60 Evening Grosbeaks, with over 100 during at least one winter (1988). At the same time another resident maintained a feeder on the south side of Stoddart Creek and grosbeaks commonly visited both feeders during the course of a winter's day. A third feeder was active in Montney. Visits to all three feeders on 27 December 1986 resulted in a count of 154 Evening Grosbeaks, the single highest count in the North Peace River region.

Breeding: There was only indirect evidence of breeding. A pair of Evening Grosbeaks copulated at a feeder at Old Fort on 5 May 1984 (Ricki Davies pers. comm.). Pairs of territorial adults were seen 9 May 1976 and 26 May 1984 in Peace Island Park and 30 May 1981 at Beaton Provincial Park. Finally, a juvenile was seen on 14 August 1988 at a feeder along 112th Avenue in Fort St. John.

Comments: Evening Grosbeak is a difficult species to assess due to its erratic nature and population fluctuations. It can be an important predator at times of the western spruce budworm, eastern spruce budworm, and large aspen tortrix (Campbell et al. 2001).

OLD WORLD SPARROWS

House Sparrow *Passer domesticus*

Status: *Fairly common, but local, resident; breeds.*

House Sparrow (Figure 148) was seen by Williams (1933b) at East Pine, Dawson Creek, and Fort St. John in 1929 and at Taylor Flat and Moberly Lake in 1930. Cowan (1939) called it "abundant" in towns and villages throughout the Peace District in 1938. Penner (1976) found it "rare" in undisturbed habitats along the Peace River valley.



Figure 148. Humans and House Sparrows are synonymous and the North Peace River region is no exception, where the species is present year-round. Photo by R. Wayne Campbell.

Habitat: Year-round: Found year-round in human settlements including urban streets, alleys, residential areas, and some parks in Fort St. John and Taylor, as well as active farms at Beryl Prairie and Cecil Lake. In spring, some spread to wooded edges and along lakeshores contiguous with settlement where they breed. Infrequently it was seen foraging in marshes and along the shores of Charlie Lake next to farms and houses, and it occasionally occupied bridges near farms.

Distribution: Locally distributed in towns, cross-road communities such as Montney and at some farms throughout the southern parts of the North Peace River region north to at least Buick Creek.

Occurrence: Spring: Notable records are: A pair building a nest at Beryl Prairie on 6 May 1979, a female at a hole in a trembling n aspen at Fort St. John on 27 March 1984, and a small flock at a farm near Goodlow on 29 May 1982. Summer: Flocking occurred throughout the summer months as fledglings appeared. Notable records are: Six at a farmyard at Baldonnel on 23 June 1980 and a male at the south end of Charlie Lake on 8 July 1976. Autumn: Notable records are: 15 at a farm at Beryl Prairie on 11 November 1978, 100 at a bird feeder along 102 Avenue in Fort St. John on 12 November 1983 (Joan Johnston pers. comm.), and 30 at North Pine on 27 November 1983. Winter: In very cold winters, where the temperature may reach -30°C to -40°C , House Sparrows utilize urban structures. This may include large stores where access is possible through electric activated doors, and underneath newly parked warm vehicles, directly beneath the warm engines left running by the drivers, or inside sheltered grain elevators where spilled grain was also available. Notable records are: A pair at Buick Creek on 25 January 1981, 40 at the grain elevators in Fort St. John on 5 December 1982, and 45 at Overwaita grocery store in Fort St. John on 5 February 1983.

Breeding: Four nest sites were found, three in Fort St John and one in Baldonnel. These included a ventilation shaft in an apartment building, an attic in an office building, a nest box in a wooded garden,

and a large mass of sticks and twigs beneath eaves of a barn. These data were supplemented with observations of courtship, nest material gathering, copulations and fledged young (Figure 149). The nesting phenology is as follows: During mild late February or early March birds investigated cavities and initiated courtship activities. Earliest copulation was recorded was 2 March 1986 in Fort St. John. Nest-building occurred as early as late March. Eggs were laid during the first half of April. Hatching occurred from late April into early May, with young heard in nests from 26 April to 4 May. Earliest fledgling was on 14 May 1987. A brood of four fledglings was seen at the same site on 17 May 1987. One nest box in a Fort St. John backyard was cleaned out by a female on 18 March 1988. The male was seen courting the female on 12 April. The pair mated repeatedly on 17 April and young were first heard in the nest box on 4 May.



Figure 149. This juvenile male House Sparrow (note gape) is molting into its familiar adult plumage. *Photo by R. Wayne Campbell.*

Second broods may be raised. A site with nestlings on 26 April 1977 had noisy young in it again between 1 and 9 June. Another nest with noisy young in the School Board office was watched on 23 June 1980. In the South Peace River region, Phinney (1998) reported eggs in two nests on 17 May and 5 June.

Comments: House Sparrow was introduced into the United States in 1851 to 1852 and spread across southern Canada from 1886 to 1910 (Lowther and Cink 1992). †

Literature Cited – Passerines

Altman, B. and R. Sallabanks. 2000. Olive-sided Flycatcher (*Contopus cooperi*). In *The Birds of North America*, No. 502 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA. 28 pp.

American Ornithologists' Union. 1973. Thirty-second supplement to the American Ornithologists' Union *Check-list of North American birds*. Auk 90:411-419.

_____. 1983. *Check-list of North American birds* (6th edition). Allen Press, Lawrence, KS. 877 pp.

_____. 1989. Thirty-seventh supplement to the American Ornithologists' Union *Check-list of North American birds*. Auk 106:532-538.

_____. 2010. Fifty-first supplement to the American Ornithologists' Union *Check-list of North American birds*. Auk 127:726-744.

Ammon, E.M. 1995. Lincoln's Sparrow (*Melospiza lincolnii*). In *The Birds of North America*, No. 191. (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC. 20 pp.

Baicich, P. J. and C.J.O. Harrison. 1997. A guide to the nests, eggs, and nestlings of North American birds. Academic Press, NY. 347 pp.

Banks, R.C., R.T. Chesser, C. Cicero, J.L. Dunn, A.W. Kratter, I.J. Lovette, P.C. Rasmussen, J.V. Remsen, J.D. Rising and D.F. Stotz. 2007. Forty-eighth supplement to the American Ornithologists' Union *Check-list of North American birds*. Auk 124:1109-1115

Banks, R.C., R.T. Chesser, C. Cicero, J.L. Dunn, A.W. Kratter, I.J. Lovette, P.C. Rasmussen, J.V. Remsen, J.D. Rising, D.F. Stotz, and K. Winker. 2008. Forty-ninth supplement to the American Ornithologists' Union *Check-list of North American birds*. Auk 125:758-768.

Banks, R.C., C. Cicero, J.L. Dunn, A.W. Kratter, H. Ouellet, P.C. Rasmussen, J.V. Remsen, J.D. Rising and D.F. Stotz. 2000. Forty-second supplement to the American Ornithologists' Union *Check-list of North American birds*. Auk 117:847-858.

Banks, R.C., C. Cicero, J.L. Dunn, A.W. Kratter, P.C. Rasmussen, J.V. Remsen, J.D. Rising and D.F. Stotz. 2002. Forty-third supplement to the American Ornithologists' Union *Check-list of North American birds*. Auk 119:897-906.

_____, _____, _____, _____, _____, _____, and _____. 2003. Forty-fourth supplement to the American Ornithologists' Union *Check-list of North American birds*. Auk 120:923-931.

_____, _____, _____, _____, _____, _____, and _____. 2004. Forty-fifth supplement to the American Ornithologists' Union *Check-list of North American birds*. Auk 121:985-995.

_____, _____, _____, _____, _____, _____, and _____. 2005. Forty-sixth supplement to the American Ornithologists' Union *Check-list of North American birds*. Auk 122:1026-1031.

_____, _____, _____, _____, _____, _____, and _____. 2006. Forty-seventh supplement to the American Ornithologists' Union *Check-list of North American birds*. Auk 123:926-936.

Banks, R.C., J.W. Fitzpatrick, T.R. Howell, N.K. Johnson, B.L. Monroe, H. Ouellet, J.V. Remsen, and R.W. Storer. 1998. *Check-list of North American birds: the species of birds of North America from the Arctic through Panama, including the West Indies and Hawaiian Islands*. American Ornithologists' Union, Washington, DC. 829 pp.

Beadle, D. and J. Rising. 2002. *Sparrows of the United States and Canada: the photographic guide*. Academic Press, London, United Kingdom. 328 pp.

Bent, A.C. 1942. *Life histories of North American flycatchers, larks, swallows, and their allies*. United States National Museum Bulletin 179, Washington, DC. 555 pp.

_____. 1949. *Life histories of North American thrushes, kinglets, and their allies*. United States National Museum Bulletin 196, Washington, DC. 452 pp.

- Briske, J.V.** 1994. Least Flycatcher (*Empidonax minimus*). In The Birds of North America, No. 99 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC. 24 pp.
- Campbell, R.W.** 1978. Assessment of Boundary Lake as a provincial ecological reserve for breeding marsh birds. Report for British Columbia Ministry of Lands, Parks and Housing, Ecological Reserves Unit, Victoria, BC. 5 pp.
- Campbell, R.W. and B.J. Petrar.** 1986. Birds observed in the vicinity of Fort St. John, British Columbia, 15-17 July 1986. Report for British Columbia Provincial Museum, Vertebrate Zoology Division, Victoria, BC. 7 pp.
- Campbell, R.W. and C. Siddle.** 2006. Melanistic Tree Swallow in British Columbia. *Wildlife Afield* 3: 138-139.
- Campbell, R.W. and D. Stirling.** 1971. A photoduplicate file for British Columbia vertebrate records. *Syesis* 4(1/2):217-222.
- Campbell, R.W., N.K. Dawe, I. McTaggart-Cowan, J. Cooper, G. Kaiser, M.C.E. McNall and G.E. J. Smith.** 1997. The birds of British Columbia. Volume 3 - passerines: (flycatchers through vireos). University of British Columbia Press, Vancouver, BC. 693 pp.
- Campbell, R.W., N.K. Dawe, I. McTaggart-Cowan, J. Cooper, G. Kaiser, A.C. Stewart, and M.C.E. McNall.** 2001. The birds of British Columbia. Volume 4 - passerines (wood-warblers through Old World sparrows). University of British Columbia Press, Vancouver, BC. 741 pp.
- Campbell, R.W., M. Preston, M. Phinney, C. Siddle, and J. Deal.** 2007. Featured Species - Canada Warbler, *Wildlife Afield* 4:95-160.
- Campbell, R.W., M.I. Preston, S. Kinsey, and L. Law.** 2007. The birds of Chetwynd. *Wildlife Checklists of British Columbia*. Biodiversity Centre for Wildlife Studies. Victoria, BC. 16 pp.
- Cannings, R.A., R.J. Cannings, and S.G. Cannings.** 1987. Birds of the Okanagan Valley, British Columbia. Royal British Columbia Museum, Victoria, BC. 420 pp.
- Charlesworth, C.** 2002. Apparent Lincoln's x Song Sparrow at Boundary Lake. *British Columbia Birds* 13:10.
- Chesser, R.T., R.C. Banks, F.K. Barker, C. Cicero, J.L. Dunn, A.W. Kratter, I.J. Lovette, P.C. Rasmussen, J.V. Remsen, J.D. Rising, D.F. Stotz, and K. Winker.** 2009. Fiftieth supplement to the American Ornithologists' Union *Check-list of North American birds*. *Auk* 126:705-714.
- Cooper, J.M., K.A. Enns, and M.G. Shepard.** 1995. Status of the Philadelphia Vireo (*Vireo philadelphicus*) in British Columbia. British Columbia Ministry of Environment, Lands and Parks Wildlife Branch. Unpublished Report, Victoria, BC. 24 pp.
- Cowan, I. McTaggart.** 1939. The vertebrate fauna of the Peace River district of British Columbia. British Columbia Provincial Museum, Occasional Paper No. 1, Victoria, BC. 102 pp.
- Curzon, J., D.Quinn, and D. Beadle.** 1994. Warblers of the Americas. Houghton Mifflin, New York, NY. 252 pp.
- Enns, K. and C. Siddle.** 1996. The distribution, abundance and habitat requirements of selected passerine birds of the Boreal and Taiga Plains of British Columbia. British Columbia Ministry of Environment, Lands and Parks, Wildlife Branch, Wildlife Working Report No. WR-76, Victoria, BC. 44 pp.
- Feare, C.J.** 1984. The Starling. Oxford University Press, United Kingdom. 315 pp.
- Ficken, M.S., M.A. McLaren, and J.P. Hailman.** 1996. Boreal Chickadee (*Parus hudsonicus*). In The Birds of North America, No. 254 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC. 24 pp.
- Francis, J. and K. Lumbis.** 1979. Habitat relationships and management of terrestrial birds in northeastern Alberta. Canadian Wildlife Service, AOSERP Report 78, Edmonton, AB. 365 pp.
- Friedmann, F.** 1963. Host relations of the parasitic cowbirds. *United States National Museum Bulletin* No. 233:1- 276.
- Friedmann, H., L.F. Kiff, and S.I. Rothstein.** 1977. A further contribution to knowledge of the host relations of the parasitic cowbirds. *Smithsonian Contributions in Zoology* No. 235, Washington, DC. 75 pp.

- Godfrey, W.E.** 1986. The Birds of Canada. National Museums of Canada, Ottawa, ON. 595 pp.
- Greenberg, R. and S.M. Matsuoka.** 2010. Rangeland ecology of the declining Rusty Blackbird. *Condor* 112:770-777.
- Grunberg, H.** 1983. The autumn migration – northwest Canada region. *American Birds* 37:201-202.
- Hall, G.A.** 1994. Magnolia Warbler (*Dendroica magnolia*). In *The Birds of North America*, No. 136. (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC. 16 pp.
- Harrison, H.H.** 1979. A field guide to western birds' nests. Houghton Mifflin, Boston, MA. 279 pp.
- Helm, C.** 2006. The birds of Tumbler Ridge. Wildlife checklists of British Columbia, Biodiversity Centre for Wildlife Studies. Special Publication No.1, Victoria, BC. Leaflet.
- James, R.D.** 1998. Blue-headed Vireo (*Vireo solitarius*). In *The Birds of North America*, No. 379 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA. 24 pp.
- Jobin, L.** 1955. Interesting records of birds collected in the Peace River parkland, British Columbia. *Canadian Field-Naturalist* 69:65-66.
- Lea, E.C. and L.E.H. Lacelle.** 1989. Biophysical habitat units of the lower Halfway study area: expanded legend. British Columbia Ministry of Environment, Wildlife Branch, Wildlife Working Report No. WR-43, Victoria, BC. 29 pp.
- Lebbin, D.J., M.J. Parr, and G.H. Fenwick.** 2010. The American Bird Conservancy guide to bird conservation. University of Chicago Press, Chicago, IL. 446 pp.
- Lowther, P.E.** 1993. Brown-headed Cowbird (*Molothrus ater*). In *The Birds of North America*, No. 47. (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC. 24 pp.
- _____ 1996. Le Conte's Sparrow (*Ammodramus leconteii*). In *The Birds of North America*, No. 224. (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC. 16 pp.
- Lowther, P.E. and C.L. Cink.** 1992. House Sparrow (*Passer domesticus*). In *The Birds of North America*, No. 12. (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC.
- Lowther, P.E.** 2000. Pacific-slope Flycatcher (*Empidonax difficilis*) and Cordilleran Flycatcher (*Empidonax occidentalis*). In *The Birds of North America*, No. 556 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA. 24 pp.
- Matsuoka, S.M., D. Shaw, P.H. Sinclair, J.A. Johnson, R.M. Corcoran, N.C. Dau, P.M. Meyers, and N.A. Rojek.** 2010. Nesting ecology of the Rusty Blackbird in Alaska and Canada. *Condor* 112:810-824.
- Monroe, B.L. Jr., R.C. Banks, J.W. Fitzpatrick, T.R. Howell, N.K. Johnson, et al.** 1995. Fortieth supplement to the American Ornithologists' Union Check-list of North American birds. *Auk* 112: 819-830.
- Moskoff, W. and S.K. Robinson.** 1996. Philadelphia Vireo (*Vireo philadelphicus*). In *The Birds of North America*, No. 214. (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC. 12 pp.
- Mowbray, T.B.** 1997. Swamp Sparrow (*Melospiza georgiana*). In *The Birds of North America*, No. 279. (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC. 24 pp.
- Munro, J.A. and I. McTaggart-Cowan.** 1947. A review of the bird fauna of British Columbia. British Columbia Provincial Museum Special Publication No. 2, Victoria, BC. 285 pp.
- Murphy, M.T.** 1996. Eastern Kingbird (*Tyrannus tyrannus*). In *The Birds of North America*, No. 253. (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC. 24 pp.
- Penner, D.F.** 1976. Peace River sites C and E environmental impact studies: wildlife resources. Renewable Resources Consulting Services Report, Edmonton, AB. 307 pp.

- Peterson, R.T.** 1990. A field guide to western birds. Houghton Mifflin Co. Boston, MA. 432 pp.
- Phinney, M.** 1998. Spring and summer birds of Dawson Creek 1991-1995. WBT Wild Bird Trust of British Columbia Wildlife Report No. 4, West Vancouver, BC. 60 pp.
- _____. 2003. Do Black-throated Green Warblers in Northeast B.C. require riparian forest? *British Columbia Birds* 13: 2-5.
- Pinel, H.W., W.W. Smith, and C.R. Wershler.** 1993. Alberta birds, 1971-1980. Volume 2: Passerines. Provincial Museum of Alberta Natural History Occasional Paper No. 20, Edmonton, AB. 238 pp.
- Racey, K.** 1930. Peace River notes. *Murrelet* 11:70-71.
- Rand, A.L.** 1944. Birds of the Alaska Highway in British Columbia. *Canadian Field-Naturalist* 68: 111-125.
- Rising, J.D.** 1996. A Guide to the Identification and Natural History of the Sparrows of the United States and Canada. Academic Press, London, UK. 365 pp.
- Rothstein, S.I.** 1975. Evolutionary rates and host defenses against avian brood parasitism. *American Naturalist* 109:161-176.
- Rush, A.C., R.J. Cannings, and D.E. Irwin.** 2009. Analysis of multilocus DNA reveals hybridization in a contact zone between *Empidonax* flycatchers. *Journal of Avian Biology* 40: 614-624.
- Sadler, T.S. and M.T. Myres.** 1976. Alberta birds 1961-1970. Provincial Museum of Alberta Natural History Section Occasional Paper No. 1, Edmonton, AB. 314 pp.
- Salt, W.R.** 1973. Alberta vireos and wood warblers. Provincial Museum and Archives of Alberta Publication No. 3, Edmonton, AB. 141 pp.
- Salt, W.R. and J.R. Salt.** 1976. The Birds of Alberta. Hurtig Publishers, Edmonton, AB. 498 pp.
- Salt, W.R. and A.L. Wilk.** 1958. The Birds of Alberta. Queens Printer, Edmonton, AB. 511 pp.
- Sealy, S.G. and G.C. Biermann.** 1983. Timing of breeding and migrations in a population of Least Flycatchers in Manitoba. *Journal of Field Ornithology* 54:113-122.
- Semenchuk, G.P. (ed.)** 1992. The atlas of breeding birds of Alberta. Federation of Alberta Naturalists, Edmonton, AB. 391 pp.
- Siddle, C.** 1988. The spring season – Northwestern Canada region. *American Birds* 42: 1316-1317.
- _____. 2008. British Columbia record of a Brown-headed Cowbird egg in a Spotted Sandpiper nest. *Wildlife Afield* 5: 215.
- _____. 2010. Birds of North Peace River (Fort St. John and Vicinity), British Columbia, 1975-1999: Part 1 (Introduction and Nonpasserines: Waterfowl through Woodpeckers). *Wildlife Afield* 7:12-123.
- Soper, J. Dewey.** 1949. Birds observed in the Grande Prairie – Peace River region of northwestern Alberta, Canada. *Auk* 66: 233-257.
- Sterry, P. and B. Small.** 2009. Birds of Western North America: a photographic guide. Princeton University Press, Princeton, NJ. 416 pp.
- Thormin, T.W.** 1973. Recent status of birds in the Peace River region of British Columbia. Renewable Resources Consulting Services Ltd. Unpublished Report, Edmonton, AB. 13 pp.
- Toews, D.P.L. and D.E. Irwin.** 2008. Cryptic speciation in a Holarctic passerine revealed by genetic and bioacoustic analysis. *Molecular Ecology* 17: 2691-2705.
- Voelker, G. and S. Rohwer.** 1994. Contrasts in scheduling of molt and migration in Eastern and Western Warbling-Vireos. *Auk* 115:142-155.
- Weber, W.C.** 1976. Mourning Warbler and Northern Oriole in northeastern British Columbia. *Murrelet* 57:68-69.
- Weeks, H.P.** 1994. Eastern Phoebe (*Sayornis phoebe*). In. The Birds of North America, No. 24. (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC. 20 pp.
- Wetmore, S.P., R.A. Keller, and G.E.J. Smith.** 1985. Effects of logging on bird populations as determined by a modified point-count method. *Canadian Field-Naturalist* 99: 224-233.
- Williams, M.Y.** 1933a. Biological notes, covering parts of the Peace, Mackenzie and Great Bear River basins. *Canadian Field-Naturalist* 47:23-31.

_____. 1933b. Fauna of the former Dominion Peace River block, British Columbia. Pages 14-22 in Provincial Museum of Natural History and Anthropology for the year 1932, Victoria, BC.

Wilson, W.H., Jr. 1996. Palm Warbler (*Dendroica palmarum*). In The Birds of North America, No. 238 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, DC. 20 pp.

Wyatt, V.E. and C.M. Francis. 2002. Rose-breasted Grosbeak (*Phœucticus ludovicianus*). In The Birds of North America, No. 692 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA. 24 pp.

Yunick, R.P. 1984. As assessment of the irruptive status of the Boreal Chickadee in New York State. Journal of Field Ornithology 55:31-37.

Acknowledgements

Birds of the North Peace River (Fort St. John and Vicinity), British Columbia, 1975-1999 would have not been possible without the mentorship of R. Wayne Campbell who remained a steadfast friend throughout my time in the North Peace River region and later through the manuscript's many stages to production. My wife, Sonja, and daughters, Elizabeth and Katherine, constantly supported my field work and writing in spite of my long and frequent absences from home.

Many friends in the North Peace River region aided this treatise by contributing their knowledge and bird records. These included the Johnston family (Winifred, Bill, and their children Gene, Joe, Gerry, and particularly Joan), the Thompson family (Neil, Lynn, Sam, Russ, and Heather), and the Anderson family of the Chowade River (especially Rhonda). Other individuals were Herb Bennett, Ken Best, Brian Churchill, David Constable, Bruce Cummings, Brad and Darren Culling, Carla Cunningham, Dr. John Elliot, Ruth Ann Darnall, Bruce DeForrest, Finola Findlay, Brian and Chloe Fox, Wayne Friesen, Mark Gardiner, Laurence Greef, Bruce Harrison, David Joslin, Rick and Linda Koechl, the late Frank Koop, Brian Low, Neva Low and Shannon Low, John Manley, Ruby

MacBeth, Jim Norris, Vivian Norris, Gerry Paille, Rich Peterson, Ernie Reimer, Greg Saxon, Bill and Jill Sutton, Larry Thompson, Barb Tootell, Dennis Troutd, Mary-Lee Webster, Dave Whiting, Steven Watkins, Troy, Shirley and Andy Wiens, and Al Wilson.

Visiting birders who contributed sightings included Gerry Ansell, Michael Bentley, Jack Bowling, Colin Butt, R. Wayne Campbell, Richard J. Cannings, the late Steve R. Cannings, Chris Charlesworth, the late Mary Collins, Don Cecile, Gary S. Davidson, Michael Force, Bryan R. Gates, Tony Greenfield, Richard R. Howie, Dale Jensen, Peter Kennedy, Linda Koch, Bruce MacDonald, Gerry Maisal, Alison and Tom Mickel, Tom Plath, the late Syd Roberts, Michael G. Shepherd, Mike and Sharon Toochin, Linda M. Van Damme, Peter Ward, Wayne C. Weber, and Stefan Zaremba. Thank you all.

The final format for species descriptions was developed from discussions with Wayne Campbell and Mark Phinney.

Also, I am very grateful to R. Wayne Campbell, Patricia Huet, and Spencer G. Sealy who patiently and thoroughly reviewed many copies of the entire manuscript during the long editorial process.

Additional thanks are due to Mark Nyhof who provided personal custom reproduction of the photographs, most of which had to be scanned from colour 35 mm slides. Mark also prepared the map of the North Peace River region and laid out the entire manuscript for publication in *Wildlife Afield* including the two covers.

The hundreds of images from the following photographers greatly enhanced the content and appeal of the text: R. Wayne Campbell, Mark Nyhof, Glenn R. Ryder, Ervio Sian, Chris Siddle, Linda M. Van Damme and Alan Wilson.

Thank you.

About the Author

Chris was born and raised in the central Fraser River valley on the southwest mainland coast of British Columbia. He became interested in nature at a very early age as his family lived on an acreage surrounded by forest. Chris had a childhood not dissimilar to that of Yan, the young protagonist of Ernest Thompson Seton's classic *Two Little Savages*. While playing "Indian" and building wiki-ups, stockades, and log huts in the bush, Chris and his friends developed an affectionate respect for the forest. With the aid of the 1961 edition of Roger Tory Peterson's *Field Guide to Western Birds* which he purchased with winnings from a Grade 7 book report contest, Chris taught himself to recognize birds in the Mission area. His natural interests expanded to include amphibians, reptiles, and mammals, and at age 15 he began to correspond with Charles J. Guiguet, curator of birds and mammals, at the British Columbia Provincial Museum [now Royal British Columbia Museum]. In 1979, he started corresponding regularly with Wayne Campbell and contributed information for the four-volume set *The Birds of British Columbia*.

Chris graduated from the University of British Columbia in 1973 with a degree in English, and two years later accepted a high school teaching position in Fort St. John. Chris and his wife Sonja lived in the Peace River country of northeastern British Columbia for 14 years, raising two daughters, Elizabeth and Katherine. In 1989, the family re-located to Vernon where Chris continued his teaching until he retired in 2005.

Since then, Chris has frequently surveyed wild bird populations throughout British Columbia. He is a past director of the Lydia Bishop Bird Sanctuary in Coldstream, and is a long-time member of the British Columbia Waterfowl Society and British Columbia Field Ornithologists. He is presently a director of the Biodiversity Centre for Wildlife Studies and frequently publishes articles in their journal *Wildlife Afield*.

Other interests include history (particularly of Australia), Shakespeare, and carnivore behaviour.

