The First Record of Eastern Bluebird (*Sialia sialis*) in British Columbia.
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**Introduction and Distribution**
The Eastern Bluebird (*Sialia sialis*) is a beautiful thrush that is found across eastern North America and south into Central America (Gowaty and Plissner 2015). There are 7 subspecies of the Eastern Bluebird of which only 2 are found in North America (Phillips 1991, Clements *et al.* 2017). The nominate subspecies of the Eastern Bluebird is (*Sialia sialis sialis*) is found throughout eastern North America and is the only subspecies that is highly migratory (Phillips 1991, Clements *et al.* 2017).

In Canada the Eastern Bluebird is found breeding from south-central Saskatchewan, primarily eastern parklands, occasionally north to Saskatoon and Greenwater Lake districts (Smith 1996b), southern Manitoba, north to about 52°N (Artuso *et al.* 2014), across central Ontario, (Alderfer 2006), into southern Quebec and occurs in all regions south of about 50°N, more widespread along the Canadian Shield and Appalachians; northernmost records are from Abitibi, Gouin Reservoir, North Shore, Rupert Bay lowlands (Gauthier and Aubry 1996b), and locally occurs in New Brunswick with birds more most abundant in the eastern portion of the province (Alderfer 2006), also found on Prince Edward Island (Dunn and Alderfer 2011), and in central and southwestern Nova Scotia (Godfrey 1986).

In the United States, the Eastern Bluebird breeds throughout the eastern part of the country from New England south to south-central Florida (Sibley 2000, Dunn and Alderfer 2011), but is absent from the extreme southern areas of the State and the Florida Keys; (Stevenson and Anderson 1994b). The Eastern Bluebird is also found along the entire region of the Gulf Coast (Dunn and Alderfer 2011).

This species breeds in the Midwestern States, where it is locally found through the Great Plains states, where its range extends westward is primarily along river valleys, and does occur as a rare, but regular species in south-eastern Montana (MBDC 2012), also is rare and very local in extreme north-eastern and south-eastern Wyoming (Faulkner 2010), also found in eastern Colorado (Andrews and Righter 1992), central and south-western Nebraska (Alderfer 2006), widespread throughout western Oklahoma, but is absent from the panhandle (Carter and Duggan 2004), and found in central Texas (Tweit 2009). The western range boundary of the Eastern Bluebird is in eastern Colorado, west to the base of the foothills (Andrews and Righter 1992).
The second subspecies of the Eastern Bluebird (*Sialia sialis fulva*) which is a mostly non-migratory form and is a resident that is found in the Huachuca, Chiricahua, and other mountain ranges of extreme south-eastern Arizona (Corman 2005) south through the Sierra Madre Occidental, to southern Mexico in Guerrero (Clements *et al.* 2016).

The third subspecies of the Eastern Bluebird is (*Sialia sialis nidificans*) and is found in Mexico from south-western Tamaulipas to central Veracruz (Clements *et al.* 2016).

The fourth subspecies of the Eastern Bluebird is (*Sialia sialis guatemalae*) and is found in southern Mexico from Chiapas into Guatemala (Clements *et al.* 2016).

The fifth subspecies of the Eastern Bluebird is (*Sialia sialis meridionalis*) which is found from northern El Salvador, central and western Honduras, and north central Nicaragua; birds from western Belize probably also this subspecies (Clements *et al.* 2016).

The sixth subspecies of the Eastern Bluebird is (*Sialia sialis caribaea*) and occurs from eastern Honduras to north-eastern Nicaragua (Clements *et al.* 2016).

The seventh subspecies of the Eastern Bluebird is (*Sialia sialis bermudensis*) and is a resident, found only on the island of Bermuda (Clements *et al.* 2016).

Eastern Bluebirds prefer open habitat with no or little understory and with sparse ground cover, such as lowland pine savanna of Nicaragua (Howell 1965). Modern breeding habitats, documented extensively in eastern North America, include orchards, clear-cuts in oak-hickory (*Quercus-Carya*) forests, burned tracts of jack pine (*Pinus banksiana*) plains and longleaf pine-slash pine (*P. palustris*–*P. caribaea*) woods, upland, and swampy habitats near to major urban areas (Gowaty and Plissner 2015).

The Eastern Bluebird is a secondary cavity-nesting species, and is often characterized as nest-site limited (Gowaty and Plissner 2015). The chances of attracting this species as a breeder is greatly increased by placing nest boxes in an open-canopy area, including low grass verges of railroad tracts in rural towns (Gowaty and Plissner 2015). Common habitats for breeding Eastern Bluebirds now include golf courses with nesting boxes (Gowaty and Plissner 2015). The species appears to tolerate and sometimes even thrive in disturbed habitats (Cornell *et al.* 2011). Numbers sometimes increase in response to increases in snag densities after controlled burns (Greenberg *et al.* 2007). Most Eastern Bluebirds prefer to use open forests, forest edges, pastures, orchards, and parklands during migration (Gowaty and Plissner 2015).
The migration of the Eastern Bluebird is associated with weather or food availability (Gowaty and Plissner 2015). This species is known to do a partial migration because there are some individuals within populations that actually migrate, but some individuals will take up winter residency near or on breeding sites (Gowaty and Plissner 2015). The maximum distance known between breeding and wintering areas is from birds breeding in western Manitoba and wintering in central Texas, which is a distance of over 2,100 km (Gowaty and Plissner 2015). Anecdotal information suggests that migration versus year-round residency is a matter of degree, with a greater proportion of individuals from harsher winter climates migrating than from milder winter locations (Gowaty and Plissner 2015).

The Eastern Bluebird is a diurnal migrant (Bent 1949, Graber et al. 1971); and may travel in flocks of up to several hundred birds, although most migratory groups are much smaller (Gowaty and Plissner 2015). Juvenile flocks may migrate independently of adult birds, and these birds often remain together throughout winter and heading north as a flock the following spring (Gowaty and Plissner 2015). Males frequently arrive at northern breeding grounds before females (Pinkowski 1971a), although pairs often arrive at nest sites together (Krieg 1971, Pinkowski 1974a). Occasionally, females occupy nesting cavities before a male returns to the territory (Gowaty and Plissner 2015).

The beginning of the spring migration is poorly defined in some portions of the Eastern Bluebird’s range because of the difficulty of distinguishing residents from migrants (Gowaty and Plissner 2015). Migration periods for various locations where migrants are distinguishable from residents are as follows. In Missouri, the Eastern Bluebirds arrive in late February and the numbers of new birds peak from mid-March to early April (Robbins and Easterla 1992). In Ohio, this species arrives during the last half of February into early May, with numbers peaking between the dates of March 10 to April 5 (Peterjohn 1989b). In Minnesota, migrant Eastern Bluebirds arrive during early March into mid-May, with peak numbers moving through the region in early April (Janssen 1987). In Cape May, New Jersey, the number of Eastern Bluebirds is greatest in the month of March (Sibley 1997); in Massachusetts, greatest numbers of Eastern Bluebirds occur in late February or March (Veit and Petersen 1993); in southern Quebec, the number of Eastern Bluebirds is greatest from mid-March to early April (Gauthier and Aubry 1996b).

The tendency to migrate and spring arrival dates are unrelated to age (Pinkowski 1971a, Pinkowski 1977b). Age and sexual differences in migration distances remain unknown, but fewer adult birds than those in their first year, compared to juvenile birds, are among band recoveries at longer distances from breeding and natal areas (Gowaty and Plissner 2015). Migratory behaviour may impose constraints on the breeding biology of birds (Gowaty and
Eastern Bluebird populations in the northern part of their range are migratory and birds in the more southern part of their range are year-round residents or sometimes so-called partial migrants, the clutch sizes of southern populations peak in mid-season, while for northern migrant populations clutch sizes peak early in the season (Dhondt et al. 2002).

Arrival and departure dates for various locations where migrants are distinguishable from residents are as follows. In Minnesota, departure dates are from early September to late November or December, with peak numbers occurring in late September to late October (Janssen 1987). In Ohio, departure dates are from mid-September to early November or December, with peak departures occurring in October (Peterjohn 1989b); in Missouri, birds arrive in mid-September, with peak numbers occurring in mid-October to mid-November (Robbins and Easterla 1992); in Arkansas, birds arrive from mid-September through November (James and Neal 1986); in Massachusetts, the time frame for arrival is from October and November (Veit and Petersen 1993); in Cape May, New Jersey, the Eastern Bluebirds arrive from late September through December, peaking in numbers between late October to mid-November (Sibley 1997); in Florida, birds arrive from late October into November, increasing local populations by over 100% (Stevenson and Anderson 1994b). In north-eastern Mexico winter visitors can occur as early as November (Howell and Webb 2010).

During mild winters, the Eastern Bluebird may remain sporadically in the northern areas of its range in places such as South Dakota, Minnesota, southern Ontario, Quebec, and New England states (Gowaty and Plissner 2015). This species does regularly winter in westernmost Oklahoma, southern New Mexico, West Texas, and north-eastern Mexico, generally at lower altitudes (Gowaty and Plissner 2015). There are records of the nominate subspecies of the Eastern Bluebird occasionally reaching western Cuba (Garrido and Kirkconnell 2000) and Bermuda during the winter (Gowaty and Plissner 2015).

Populations of the Eastern Bluebird have expanded in the northwest portion of the species’ range during the past century because of human modifications of habitat, including increases in fenced grazing lands suitable for foraging and provisioning of nesting boxes (Gowaty and Plissner 2015). Eastern Bluebirds first appeared in Manitoba in the latter decades of the 1800s (Artuso et al. 2014, Gowaty and Plissner 2015), in Saskatchewan by the 1920s where they breed as far west as Cypress Hills (Godfrey 1986, Smith 1996b), and in Alberta where this species is a casual vagrant that has bred a couple of times since 1974, mostly in the south-eastern corner of the Province (Semenchuk 1992). The Eastern Bluebird has been added to the Idaho State Bird List with a single accepted record by the Idaho Bird Records Committee from Albion in Cassia County on November 17, 2015 (IBRC 2017). There is also a single accepted record in Utah by the Utah Bird Records Committee of one-two males found in Moab, Grand County from
December 16-23, 1989 (Sorensen et al. 1993). In the south-western United States during the 1960s, the Eastern Bluebird expanded its range into the Chiricahua Mountains of Arizona (Ligon 1969a). The breeding range in Florida has also contracted north since 1960 from Dade County to Palm Beach County (Robertson and Woolfenden 1992a).

There are no records for Alaska (Gibson et al. 2016). There are no accepted records for Washington State, Oregon or California by any of their Bird Records Committees (Hamilton et al. 2007, Tietz and McCaskie 2017, OFO 2016, Wahl et al. 2005, WBRC 2016). This species is an accidental vagrant in British Columbia with an adult male found and photographed in the Peace River Region (Toochin et al. 2014).

Identification and Similar Species
The identification of the Eastern Bluebird is covered in all standard North American field guides. This is a small thrush measuring 18 cm in length, with a wingspan of 33 cm, and weighing 31 grams (Sibley 2000, Dunn and Alderfer 2011). For the purposes of this article only the nominate subspecies is described. This information is taken from Gowaty and Plissner (2015) unless otherwise stated.

The adult male has rich blue upperparts, contrasting with red orange throat, breast, and flanks and white lower belly and under-tail coverts. The chin can be white or red-orange. The eyes are black. The outer rectrices have a narrow white border. The legs and feet are black or slate black. The adult female has blue gray upperparts, with a gray brown wash across the back; there is a suggestion of a white eye-ring on some individuals. The eyes are black. The wings and tail washed with dull blue. The underparts are paler orange in colouration than on the adult males. The white border of the outermost rectrix is broader than on the adult male (Dunn 1981). The legs and feet are black or slate black. Both sexes have a short, stout black bill, with a slightly notched tip with a yellow gape. Birds in Basic I plumage are generally duller and more grayish. The outermost primary-covert lacks any blue colouration, and is tapered in shape and not pointed, and has broad buff or whitish border (Pitts 1985a). Birds in juvenile plumage are browner, with white streaking above and dusky spotting below, and white eye-ring. Young males have blue in the wing and tail, and on the wing coverts, and a narrower buff border on outermost rectrix (Pinkowski 1974d). The bill of juvenile birds is black with an ochre-yellow gape and mouth. The eye colour of juveniles is dark brown to black. The legs and feet are black.

Adult male Eastern Bluebirds are relatively easily distinguished from other bluebirds, but female birds are trickier to distinguish (Dunn 1981). The Western Bluebird (Sialia mexicana) which breeds in the dry interior of British Columbia (Dunn and Alderfer 2011) is the most similar species in shape and behaviour to the Eastern Bluebird, but Mountain Bluebird (Sialia
currucoïdes) is more often encountered in the range of the Eastern Bluebird (Dunn and Alderfer 2011). It should be noted that Eastern and Mountain Bluebirds have been found to rarely hybridize in the northern Great Plains, creating identification issues (Gowaty and Plissner 2015). The Eastern Bluebird has the shortest primary extension of any of these species (this is the difference between longest primary and longest secondary), which is 24–34 mm (Pyle 1997c). The Western Bluebird, and especially the Mountain Bluebird, has a longer primary extension on folded wing, with the primaries of the Mountain Bluebird extending nearly to tip of tail at rest (Sibley 2000). The Western Bluebird is a darker blue above; the throat is blue or gray; the nape often contrasts with the brown of the back (Dunn and Alderfer 2011). The chestnut patch on the back of Western Bluebirds varies in size and some individuals lack a patch altogether (Dunn 1981). The underparts of the Eastern Bluebird are crisper, usually with a distinct contrast between the white of the lower belly and the redder colour of the breast (Sibley 2000). Western Bluebirds are grayish on the lower belly, under-tail coverts, and the throat (Sibley 2000). On female Eastern Bluebirds, throat colour usually extends to the side of the neck, unlike on Western and Mountain bluebirds (Dunn 1981). In addition to having proportionately longer wings, Mountain Bluebirds also have longer bills and legs; in fresh plumage in the fall, they have more prominent whitish edgings on the wing feathers, but also more reddish colouration on the breast, although this species is still grayer than Eastern Bluebirds (Dunn 1981, Zimmer 1985, and Kaufman 1992c).

**Occurrence and Documentation**

The Eastern Bluebird is an accidental vagrant in British Columbia and was only very recently added to the avifauna list for the province (Toochin et al. 2014). The first record for British Columbia was an adult male that was found and photographed by Penny Hall at Mountainview Drive by G. W. Carlson School in Fort Nelson on May 28, 2009 (Toochin et al. 2014). The Peace River region is the most likely place in British Columbia for this species to occur (D. Cecile Pers. Comm.). The Eastern Bluebird found at Fort Nelson was a spring overshoot that likely originated from southeastern Saskatchewan, the nearest breeding range (Godfrey 1986). This species has been found in the past breeding in Southeastern Alberta in 1974, and records have slowly increased over the decades (Semenchuk 1992). However, the Eastern Bluebird is still classified as a vagrant species with 15-25 accepted Provincial records by the Alberta Bird Records Committee (ABRC 2018). Outside of the Cypress Hills region of southeastern Alberta, records in that province have been widely scattered with birds found in Botha, Vermillion Lakes, Millarville, Calgary, Edmonton, and a recent breeding record from the Battle River area, northeast of Wainwright (Semenchuk 1992). So even though this individual passed through Alberta to get to Fort Nelson, it is more likely it was driven by a severe weather event out of southeastern Saskatchewan to end up in northeastern British Columbia. It is highly likely since there are no natural barriers, and since this region is found on the east site of the formidable
Northern Rocky Mountains that another Eastern Bluebird might occur in the Peace River region again in the future. All future records, especially birds that are not adult males, should be carefully scrutinized and extensively photographed.

Figures #1 & 2: Record #1: Eastern Bluebird adult male found at Mountainview Drive by G. W. Carlson School in Fort Nelson on May 28, 2009. Photos © Penny Hall.

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