

The First Record of Curve-billed Thrasher (*Toxostoma curvirostre*) in British Columbia.

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Introduction and Distribution

The Curve-billed Thrasher (*Toxostoma curvirostre*) is a large passerine found as a resident from southern Arizona, east through most of New Mexico, southern Colorado, southwestern Kansas, parts of Oklahoma, southwestern Texas, and south into southern Mexico (Tweit 1996, Dunn and Alderfer 2011). This species is a ground forager that pokes and probes in plant litter and digs holes in the soil with its long, decurved bill, searching for insects or seeds (Tweit 1996). It also eats berries from bushes and fruit from cacti when these are available (Tweit 1996). Its nest is a deep cup of twigs, lined with grasses or other fine materials, placed in a Cholla Cactus (*Opuntia spp.*) or Spiny Shrubs (Ambrose 1963).

There are two visually distinguishable groups of subspecies of Curve-billed Thrasher that in the past were considered 2 separate species (Bent 1948). The first subspecies group of Curve-billed Thrasher is called (*Toxostoma curvirostre palmeri*) which is found in the Sonoran Desert of Arizona and northwestern Mexico (Tweit 1996, Leukering and Pieplow 2014). The habitat this subspecies group prefers in northern Arizona is in Creosote Bush (*Larrea tridentata*), in Saguaro (*Carnegia gigantea*)-palo verde (*Cercidium microphyllum*) community, in grassland where Cholla Cacti are present, and in thorn scrub and towns (Brown 1892, Phillips *et al.* 1964a). The Curve-billed Thrasher is found nesting in Creosote-bush habitat, only when Cholla Cacti are present in the area (Tweit 1996). Data from Emlen (1974) indicates that densities in Creosote-bush habitat are lower since Cholla Cacti are not common.

The second subspecies group of the Curve-billed Thrasher is called (*Toxostoma curvirostre curvirostre*) which is found in the Chihuahuan Desert and the central Mexican plateau (Tweit 1996, Leukering and Pieplow 2014). This subspecies prefers to forage in habitat that has been recently cleared; nesting along woodland edges or in shrubs, such as the Yucca (*Yucca spp.*), or in exposed locations (Fischer 1980). This subspecies is also found in thorn scrub and thickets at the edge of woodlands among Prickly Pear Cactus (*Opuntia spp.*), Yucca, and Mesquite (*Prosopis spp.*) (Oberholser 1974c). In southeastern Colorado and the adjacent states, this subspecies occurs in grasslands with Cholla Cactus (Andrews and Righter 1992). In New Mexico, the subspecies of Curve-billed Thrasher (*Toxostoma curvirostre curvirostre*) is found in various vegetative communities, including Pinyon (*Pinus spp.*) and Oak (*Quercus spp.*) at 1,900 m at Silver City (Tweit 1996). In Mexico, this subspecies uses open and semi open dry habitats with shrubs and cacti (Howell and Webb 2010).

The two subspecies of Curve-billed Thrasher have similar life histories, but have nearly allopatric ranges that might be considered in the future as 2 distinct species (Tweit 1996). In the subspecies of Curve-billed Thrasher (*T. c. palmeri*) there is no evidence of migration in this population (Tweit 1996, Leukering and Pieplow 2014). Tweit (1996) states that all 115 Arizona recoveries in the Bird Banding Lab file are from same or adjacent 10-minute block. In Sonora young birds disperse from their natal sites as shown by their presence in areas a considerable distance from nearest breeding area and unsuitable for nesting (Russell and Monson 1998).

In the subspecies of Curve-billed Thrasher (*T. c. curvirostre*), the northern populations are described as "partly migratory at least locally," based on a bird banded in Silver City, New Mexico, and recovered somewhere in Chihuahua, Mexico which is the nearest Mexican state (Phillips 1986a), and by Wauer (1973) who gives the arrival and departure dates at lower elevations in Big Bend National Park, Texas. However, populations farther north in Colorado (Andrews and Righter 1992) and in the Oklahoma panhandle (Baumgartner and Baumgartner 1992) are reported to be permanent residents, and the species has been reported on Christmas Bird Counts in the Oklahoma panhandle in 15 of 19 years (Tweit 1996). Thus statements that this population is partly migratory may be premature (Tweit 1996).

The Curve-billed Thrasher, despite not being a migratory species, has a slight propensity for long-distance vagrancy, with records scattered from various parts of North America (Leukering and Pieplow 2014). It is hard to distinguish if birds carry out a true migration from juvenile dispersal (Tweit 1996, Leukering and Pieplow 2014). Further study is needed to provide an understanding of the role of dispersal in the life cycle of Curve-billed Thrashers and to resolve questions about migration (Tweit 1996).

There are many vagrant records of this species from northern and eastern states and provinces in North America. Birds have been recorded in Eastern Canada from Manitoba, Saskatchewan, and Alberta (Hamilton *et al.* 2010). In the United States, there are scattered records from the mid-west with records extending as far east as Wisconsin, and north as Minnesota, and as north as Idaho (Tweit 1999, Hamilton *et al.* 2010). There are scattered records well south-east of range from Texas, Louisiana, and the Panhandle of Florida (Tweit 1999, Hamilton *et al.* 2010). There are also less-far-flung records from Nevada, Utah, northwestern New Mexico and northeastern Texas with some having been reported to subspecies (Leukering and Pieplow 2014).

Along the west coast of North America, the Curve-billed Thrasher is an accidental vagrant. In California, there are 19 accepted state records by the California Bird Records Committee, despite the fact that this species nests as close 14 km east of the California-Arizona Border in

the foothills of the Black Mountains near Oatman, Arizona (Corman and Wise-Gervais 2005, Hamilton *et al.* 2010). There is 1 accepted record for Oregon by the Oregon Bird Records Committee found at Toketee Lake, in Douglas County from July 12-August 1, 1995 (OFO 2016). There are no accepted records of the Curved-billed Thrasher by the Washington Bird Records Committee for Washington State (Wahl *et al.* 2005, WRBC 2016). This species is an accidental vagrant in British Columbia with a recently photographed bird in the northern part of the Province (K. Walker Pers. Comm.).

Identification and Similar Species

The identification of the Curve-billed Thrasher is covered in all standard North American field guides. This is a large thrasher species measuring 28 cm in length, with a wingspan measuring 34.29 cm, and weighing 79 grams (Sibley 2000, Dunn and Alderfer 2011). In British Columbia, the only nesting thrasher species is the Sage Thrasher (*Oreoscoptes montanus*) which is smaller and considerably different looking at all ages to the Curve-billed Thrasher (Cannings *et al.* 1987, Sibley 2000, Dunn and Alderfer 2011). A potential vagrant to British Columbia is the Bendire's Thrasher (*Toxostoma bendirei*) but it is smaller than the Curve-billed and measures 25 cm in length, with a wingspan of 33.02 cm, and weighs 62 grams (Sibley 2000, Dunn and Alderfer 2011).

Overall, the Curve-billed Thrasher has a large thick curved bill that is smaller in juvenile birds (Dunn and Alderfer 2011). The eye colour varies in the subspecies (*T. c. palmeri*) from (Colours from orange- yellow at about 3 months after fledging, to yellow as an adult (Walters and Lamm 1986). In the subspecies (*T. c. curvirostre.*) the eye colour varies from Bright red or yellow next to the pupil with an orange outer ring (Oberholser 1974c).

In all plumages the sexes look similar. For further information on sexing criteria, it is suggested to read Pyle (1997c). There are enough differences between the two groups of Curve-billed Thrasher that in the following descriptions the plumage distinctions have been elaborated. Plumage descriptions adapted from Brewster (1882a), Ridgway (1907), Oberholser (1974c), Phillips (1986a), Pyle (1997c), Tweit (1999), and Howell and Webb (2010), unless otherwise noted.

Pre-juvenile molt occurs in nest and is finished after the time of fledging.

Juvenile plumage of the Curve-billed Thrasher subspecies (*T. c. palmeri*) have rusty-brown upperparts with a chestnut tinge which deepens on the rump and the outer webs of secondaries to decided chestnut brown. The underparts are pale fulvous with a strong tinge of rusty chestnut across the breast, along the sides, and over anal region and crissum. The breast

is vaguely spotted. There is considerable variation in the spotting and the extent of the rusty tinge. It is important to note that some juveniles are indistinguishable in plumage from juvenile Bendire's Thrasher.

Juvenile plumage of the Curve-billed Thrasher subspecies (*T. c. curvirostre*) is similar to birds in Definitive Basic, but the upperparts are decidedly more brownish, the uppertail-coverts are much more rufescent, and much more contrasted with back. The tips of wing coverts are a deep buff instead of white feathers. The underparts are lighter. The spots on the underparts are brownish, smaller, and found as longitudinal streaks. The tail spots are confined to the inner web and are grayish-white. The rectrix tips are tapered.

Prebasic I body in molt of the subspecies (*T. c. palmeri*) occurs approximately from June 20–September 20; with the remainder of molt appearing similar to Definitive Prebasic plumage.

Prebasic I body molt of the subspecies (*T. c. curvirostre*) is partial and may include some rectrix feathers; and occurs from July–September (Pyle 1997c).

In both subspecies groups, the overall plumage resembles Definitive Basic with some retained Juvenile wing and tail feathers.

Definitive Prebasic molt of the subspecies (*T. c. palmeri*) is completed through a body molt that occurs from July to early October. Primary 1 (P1) is replaced in late June to early August; with two-thirds of birds replacing P–9 in September, and the remainder of birds split between August and October. Molt of the other remiges occurs in August–September. The tail is molted from mid-July to September (Tweit 1999). Definitive Basic plumage is similar to the subspecies (*T. c. curvirostre*), but duller, with wing bars and breast spotting less distinct. The head and upperparts are grayish-brown; the underparts are whitish to pale-buff with a dusky malar. The chest and flanks have markings below that are similar to those of the subspecies (*T. c. curvirostre*), but paler and less distinct against the grayer background. The breast spots fade with time, sometimes disappearing in some June specimens. The lower abdomen and crissum is a rich rusty-fulvous. All colours fade with time and adults in breeding plumage are often very faded and worn.

Definitive Prebasic molt of the subspecies (*T. c. curvirostre*) occurs between July–August (Pyle 1997c). Definitive Basic plumage of spring and summer birds is described as follows. Head and back is light grayish-brown. The tail is long and slightly rounded with blunt tips, all except middle pair that are light clove-brown with broad white or buffy-white tips measuring 8–13 mm on inner and outer webs of outer rectrices. The middle pair of rectrices is completely clove brown. The wing is brown and the lesser-coverts are similar to the back. The median-coverts

and greater-coverts are tipped with white, forming 2 rather inconspicuous wing bars. The sides of the neck and head are like the crown and cheeks that are more or less mixed with white or buffy-white. The chin and middle of the throat are white or buffy-white, bordered by an indistinct grayish-brown sub-malar stripe. The flanks and crissum are cinnamon buff, with the rest of underparts a dull buffy-white. The chest, breast, and less commonly the sides and flanks, have large, roundish, sometimes confluent spots of light hair brown. The sides of the body are brown. The underwing coverts are buffy-white spotted with brown, and the axillaries are dull brown. Freshly molted birds are darker and browner.

The Curve-billed Thrasher is distinguished vocally from other *Toxostoma* thrashers whose ranges it overlaps by its conspicuous “*whit-wheet*” call (Kaufman 1990a). This is three notes in the subspecies (*T. c. palmeri*) or in the subspecies (*T. c. curvirostre*) an even pitched “*whit-whit*” (Dunn and Alderfer 2011). The song of the Curve-billed Thrasher is elaborate and melodic, and includes low trills and warbles (Dunn and Alderfer 2011).

Occurrence and Documentation

The Curve-billed Thrasher is an accidental vagrant in British Columbia with a recent record of a bird found by Keith Walker on his property west of Francois Lake, south west of Burns Lake on July 7, 2017 (K. Walker Pers. Comm.). The fact that this record was found this far north is extraordinary, but not unprecedented as a bird spent the fall and winter coming to a feeder in Barrhead, northern Alberta, from August 1998-April 1999 (Slater 2001). Other records from Canada showing that the Curve-billed Thrasher can move exceptionally far north of their home range is of a bird that came to a backyard feeder in Dalmeny, Saskatchewan that stayed from mid-November to mid-December 2006 (Koes and Taylor 2007a, Koes and Taylor 2007b). Another similar record was of a bird coming to a feeder from Portage la Prairie from November 1998 – April 4, 1999 (Koes and Taylor 1999, Dr. C. Artuso Pers. Comm.). There is also a recent record of a Curve-billed Thrasher at Whiteshell Provincial Park in Manitoba from September 26 until at least November 14, 2010 (Dr. C. Artuso Pers. Comm.). The most likely explanation of this species wandering north of its mostly sedentary range is likely due to fall dispersal of juvenile birds (Tweit 1999). There still remains much confusion about the role that migration plays in these vagrancy records (Tweit 1999). Further study is needed to provide an understanding of the role of dispersal in the life cycle of Curve-billed Thrashers and to resolve questions about migration (Tweit 1999). The difficulty in trying to separate juvenile Curve-billed Thrasher subspecies makes many vagrancy records hard to know for certain which subspecies is involved without excellent photographs (Tweit 1999). This species could turn up almost anywhere in British Columbia. The records suggest that July through till December is the best time period to be on the lookout for this species (Tweit 1999). It is highly likely given previous Canadian records were all at backyard bird feeders, that a feeder bird could provide the best

opportunity for keen observers to see this species the province. Since there is a vagrancy pattern of Curve-billed Thrashers moving well north of their core range, it is not unreasonable to expect another bird to occur in British Columbia at some point in the future.



Figure 1: Record # 1: Curve-billed Thrasher found on July 7, 2017 west of Francois Lake, south west of Burns Lake. Photo © Keith Walker.



Figure 2: Record # 1: Curve-billed Thrasher found on July 7, 2017 west of Francois Lake, south west of Burns Lake. Photo © Keith Walker.



Figure 3: Record # 1: Curve-billed Thrasher found on July 7, 2017 west of Francois Lake, south west of Burns Lake. Photo © Keith Walker.

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