Status and Occurrence of Broad-tailed Hummingbird *(Selasphorus platycercus)* in British Columbia. By Rick Toochin and Don Cecile. Submitted: April 15, 2018.

Introduction and Distribution

The Broad-tailed Hummingbird *(Selasphorus platycercus)* is a beautiful hummingbird found at higher elevations from eastern Guatemala where it is rare, north into Mexico where it is found in Chiapas, Distrito Federal, Hidalgo, Michoacan, Nuevo Leon, Tamaulipas, northeastern Sonora (Howell and Webb 2010). The Broad-tailed Hummingbird ranges north into the western United States through eastern-central California in the Sierra Mountains and other eastern mountains of the state: especially eastern slopes of the White Mountains, and the Inyo, Grapevine and Panamint mountains; also in the Kingston Mountain, Clark Mountain; also a few records from northeastern California and the San Bernardino Mountains in the south (Small 1994). This species is also found in Arizona at elevations from about 1580-2900 m in coniferous forests and oak woodlands throughout eastern and northern Arizona (Grossi and Corman 2005). In nearby New Mexico, the Broad-tailed Hummingbird is widespread in central mountain regions (NMBB 2014). The range of this species extends north into Colorado where the Broad-tailed Hummingbird is found west of about 104°W, throughout foothills and mountains up to about 3,200 m (Boyle 1998c). This species does occur in west Texas where it breeds only in the Chisos, Davis, and Guadalupe Mountains (TBBA 2006). In Nevada, the Broad-tailed Hummingbird is common in the eastern and central mountains; scarce or absent to the west (Floyd *et al*. 2007). The Broad-tailed Hummingbird is also found in Utah and Wyoming primarily in the mountains of the northwest in the Tetons, and at Yellowstone, but also in the southeast in Medicine Bow National Forest tracts of Carbon and Albany counties (Faulkner 2010). The Broad-tailed Hummingbird may breed in extreme north-central Idaho, and in the Black Hills of South Dakota/Wyoming, but neither nests nor eggs have been recorded there in recent years (Bent 1940a, Burleigh 1972, Johnsgard 1983c, Banks and Calder 1989, Tallman *et al*. 2002). In Oregon, this species was confirmed nesting in the eastern mountains, especially in Malheur and Harney counties, and the Hells Canyon region (Adamus *et al*. 2001b).

In the mountains of the western United States, the breeding season is characterized by a brief flower season and often chilling nocturnal climate in which selection of appropriate microclimate and the ability to undergo torpor are necessary responses (Camfield *et al*. 2013). Throughout its range, the Broad-tailed Hummingbird is most abundant in open subalpine meadows and shrubby habitats with nearby forests (Camfield *et al*. 2013). This species feeds on nectar, usually avoiding flowers recently visited, and on small insects, caught on the wing or snatched from the vegetation (Camfield *et al*. 2013). The Broad-tailed Hummingbird is a promiscuous breeder; courting male Broad-taileds perform spectacular aerial displays in a series of high climbs, dives, and hovers, accompanied by a loud wing trill that is heard also

during aggressive territorial displays (Camfield *et al*. 2013). This species occurs in the Upper Sonoran, Transition, and Boreal zones. In California, the Broad-tailed Hummingbird is found in the upper Sonoran belt of piñon (*Pinus monophylla*), juniper (*Juniperus californica*), and mountain mahogany (*Cercocarpus* spp.), in vicinity of thickets of willow (*Salix* spp.) and *Garrya*, along wet or dry stream courses (Grinnell and Miller 1944). In Arizona, this species is found in the Transition and Boreal (Canadian and Hudsonian) of higher mountains; found in *Pinus ponderosa*, oaks (*Quercus* spp.), Douglas fir (*Pseudotsuga taxifolia*), spruce (*Picea engelmanni*) and fir (*Abies concolor*, *A. lasiocarpa*) throughout eastern and northern Arizona, some in riparian upper Sonoran (Phillips *et al*. 1964a, Grossi and Corman 2005) and in mixed conifer, pine-oak and oak in the mountains of southeastern Arizona (Block *et al*. 1992). In Texas, the Broad-tailed Hummingbird is found in the Chisos Mountains (Kuban and Neill 1980), in cypress-pine-oak (*Cupressus-Pinus-Quercus*) and pinyon-juniper-oak (*Pinus cembroides-Juniperus deppeana-Quercus*) associations (Camfield *et al*. 2013). In Colorado, the Broad-tailed Hummingbird is found in the foothills and mountains and montane valleys throughout the state in Transition, Canadian and Hudsonian zones (Camfield *et al*. 2013). Males fly over and forage on higher mountains (Camfield *et al*. 2013). This species nests to at least 3,230 m (Camfield *et al*. 2013). In Utah and Wyoming, the Broad-tailed Hummingbird prefers Aspen (*Populus tremuloides*), Ponderosa Pine, Engelmann Spruce, Subalpine Fir (*Abies lasiocarpa*), and Douglas Fir (Camfield *et al*. 2013).

In spring, the males first reach southern Arizona in late February or early March (Camfield *et al*. 2013). The distinctive wing trills heard occasionally at low altitude over lower Sonoran zone during migration northward, from March to mid-May (Phillips *et al*. 1964a, Waser 1979, Camfield *et al*. 2013). Birds feed, as if on a trap-line en-route, from flowers on rocky foothills and ridges and in suburban gardens at feeders (Camfield *et al*. 2013). The Broad-tailed Hummingbird reaches northern Arizona in early April, Colorado in late April to late May (Bailey and Niedrach 1965, Calder 1985). The Broad-tailed Hummingbird reaches regions north of Lander, Wyoming May 12 (Camfield *et al*. 2013), and Laramie by May 20. The Broad-tailed Hummingbird reaches its northern limit in Idaho by last week of May (Bent 1940a).

The Broad-tailed Hummingbird migrates south into Mexico to spend the winter (Howell 2003). In Mexico, breeding range overlaps winter range extensively as birds withdraw from the northern portions of range in northern Sonora to Nuevo Leon, wintering mostly in the Central Volcanic Belt south to Oaxaca; also fairly common resident at 2700-3500 m of elevation in southeastern Chiapas and western Guatemala (Howell and Webb 2010). In central Mexico, the Broad-tailed Hummingbird is found in oak forests with interspersed pines and cypresses between 2,300–3,000 m of elevation (Camfield *et al*. 2013). At higher elevations, this species is found in fir (*Abies religiosa*) forests mixed with oaks (Wagner 1948). In Jalisco Mexico, near

Volcán de Colima, the Broad-tailed Hummingbird is found in arid thorn forest through arid and humid pine-oak of Transition zone (Granges 1979). In the tropical highlands of western Mexico, Broad-tailed Hummingbirds are significantly more abundant in non-forested areas (Arizmendi 2001).

The Broad-tailed Hummingbird is accidental anywhere in Canada. There is a record of an adult male from Portage la Prairie area in Manitoba from May 16-17, 2006 (e-bird 2018). This species is a casual fall migrant mainly August through September from the western Great Plains (Howell 2003). The Broad-tailed Hummingbird is casual to rare, and is possibly increasing along the Texas Gulf Coast towards Florida in winter from December-February (Howell 2003, Camfield *et al*. 2013). In the eastern United States this species is accidental in Georgia, North Carolina, New Jersey, and Delaware (e-bird 2018). The Broad-billed Hummingbird is most often seen at hummingbird feeders as a vagrant (Camfield *et al*. 2013).

Along the west coast north of Oregon, the Broad-tailed Hummingbird is an accidental vagrant. In Washington State, there are 4 accepted records by the Washington Bird Records Committee (Wahl *et al*. 2005, WRBC 2017). In British Columbia, the Broad-tailed Hummingbird is also accidental with 4 provincial records (Toochin *et al*. 2014).

Identification and Similar Species

The identification of the Broad-tailed Hummingbird is covered in all standard North American field guides. This is a medium-sized hummingbird. The Broad-tailed Hummingbird measures 10 cm, with a wingspan of 13 cm, and weighs 3.6 grams (Sibley 2000, Dunn and Alderfer 2011). The Broad-tailed Hummingbird is distinctive, but any bird thought to be this species should be well documented as hybrid hummingbirds can occur.

The Broad-tailed Hummingbird is longer in body and wing length than other North American "*Selasphorus"* Hummingbirds (Howell 2003). In Rufous Hummingbird (*Selasphorus rufus*) widespread in British Columbia, has a similar body mass, but distinctly more stubby and rusty in appearance (Sibley 2000). It is important to note that the rose-magenta gorget is round, lacking lateral extensions and limited to the throat area, in contrast to *Calypte* hummingbirds (Camfield *et al*. 2013).

The following detailed descriptions pertain to all ages of Broad-tailed Hummingbird and are taken from Camfield *et al*. (2013) unless otherwise stated.

Broad-tailed Hummingbirds have 10 full-length primaries, 6 secondaries, and 10 rectrices. In North American population of Broad-tailed Hummingbirds, there is no geographic or sex-

specific variation in molt strategies reported, although additional variation in timing and extent is likely in temperate vs. subtropical breeding populations due to variable environmental constraints, migration strategies, day-length regimes, and breeding seasonality.

The following based primarily on detailed plumage descriptions of Ridgway (1911), Oberholser (1974c), Williamson (2001), and Howell (2003).

Juvenile (First Basic) Plumage is present primarily from May–July.
Males are similar to Definitive Basic female, but upperparts are a duller green washed with grayish colour, each feather with thin whitish-buff to cinnamon fringing, forming a scaly appearance. The throat is whitish-gray with moderate to heavy dark green markings in vertical rows; the central rectrix usually without blackish tips and margined thinly with rufous at the base. The white tips to the outer rectrices average smaller.
Females are similar to juvenile males, but markings on the throat average duller and smaller. The central rectrices usually have blackish feather tips and are usually not margined with rufous at the base. The basal cinnamon fringing and white tips found on the outer rectrices is wider. In both sexes the juvenile outer primaries and outer rectrices average broader than in definitive basic feathers, these feathers averaging narrower in juvenile males than females (Pyle 1997c). It is important to note that P10 is not modified as in definitive basic male.

"Supplemental Plumage" according to Thompson and Leu (1994) and Pyle (1997c); see revision by Howell et al. (2003). Similar to Juvenile Plumage, but some throat feathers are replaced, reddish and are partially iridescent in the male. These feathers are whitish, with less distinct or no dark green markings in female.

Formative plumage, or "First Basic" or "Basic I" plumage of Humphrey and Parkes (1959) and later authors; see revision by Howell et al. (2003) essentially present October-November, but plumage in transitional state between juvenile and formative plumages during much or all of November-April due to protracted preformative molt. Following completion of molt, formative plumages of the male and female are essentially identical to definitive basic plumages and are inseparable in most birds. Some formative males may retain juvenile rectrices with white tips; formative rectrices in males may also show indistinct white spots near the tips whereas definitive basic male rectrices are more often largely to entirely blackish; and formative males may show duller and/or less-complete gorget (Pyle 1997, Pyle *et al*. 1997a). Formative females may average less red to center of the throat, perhaps usually without red (Pyle 1997c); females also occasionally retain rectrices, but separation of retained juvenile vs. basic rectrices can be difficult.

Definitive basic plumage is present primarily January-February.
On the males, the upperparts are metallic bronze-green or greenish-bronze. The central rectrices (r1) sometimes more bluish-green; rest of tail dull purplish or bronzy-black, r2 variably glossed bronzy-green, the outer web edged basally with cinnamon-rufous, r3 sometimes also narrowly edged with the same. The remiges and upperwing coverts are dark brownish-slate or dusky, and are faintly glossed purplish; P10 with outwardly curved tip which produces the whistling or ringing sound in flight. The chin and throat are bright irridescent reddish-purple, the feathers crossed by a broad sub-terminal (concealed) bar of dull white, their basal portion dusky-gray. The breast is grayish-white, passing into very pale gray ventrally to the abdomen. The sides and flanks are darker grayish, tinged (especially on the flanks) with pale cinnamon. The sides of the breast are overlaid by metallic bronze-green; femoral tufts white; undertail converts white with a central area of pale cinnamon, cinnamon-buff, or partly bronze-green. Similar to male in formative plumage, but males without white spots on rectrices and full and bright reddish gorget probably more-often definitive basic (Pyle 1997c).

Females are similar to definitive basic male, but central rectrices sometimes blackish or dusky terminally; r2 metallic bronze-green with terminal portion more or less extensively dusky; r3-r5 broadly tipped white, variably cinnamon-rufous basally, and purplish or bronzy black with metallic bronze-green medially; P10 not modified. The chin and throat are dull white, the feathers with small dusky or dusky bronze medial streaks or spots and sometimes with male-like reddish to magenta feathers medially. The breast and underparts are duller and with a light cinnamon rather than bronze-green on the sides.

Males make a loud wing trill in flight due to the tapered forward tip of the wing on (P10) which emits 6,000 Hz carrier, pulsed into trill by wingbeat frequency (38 hz forward flight, up to 52 hz hovering), associated with aggressiveness of territory owner (Camfield *et al*. 2013). Trill is naturally muted by wear, often inaudible by midwinter (Camfield *et al*. 2013).

The male Broad-tailed Hummingbird makes a chipping or "*chitter-chitter- chitter*" sound when intruders pass over the bird's territory. This sound is also made by females in contests over nesting and feeding sites (Camfield *et al*. 2013). This species has no song, unlike *Calypte* hummingbirds (Camfield *et al*. 2013). Flying from nest or feeding solitarily in flower patches, females emit faint chirps intermediate between dry "*chik's*" (Camfield *et al*. 2013).

Adult male Broad-tailed Hummingbird is easily identified by combination of a green-crown and rose-red gorget. Females and immature distinguished from other "*Selasphorus*" Hummingbird species with caution. Females told from other *"Selasphorus"* Hummingbird species by longer retrices, making the tail appear noticeably longer and broader when spread. The face is usually

a colder gray and has a white eye-ring. The flanks are usually a paler rufous on the Broad-tailed Hummingbird. Beware of confusion with female or sub-adult male Anna's Hummingbirds (*Calypte anna*), with extensive red on throat and crown.

Occurrence and Documentation

The Broad-tailed Hummingbird is an accidental vagrant in British Columbia. The first record for the province was an adult male found by Michael Shepard at a backyard hummingbird feeder near Cranbrook on June 25, 1995 and the bird was present until July 8, 1995 (Campbell *et al*. 2001, D. Brown Pers. Comm.). The second record for British Columbia was an adult male found by R. J. Herzig coming to his backyard hummingbird feeders along Old Hedley Road, 11 km east of Princeton from July 10-11, 1997 (Bowling 1997c, Campbell *et al*. 2001). The third record for British Columbia was an adult male found by Lucile Campbell coming to her backyard hummingbird feeder in Invermere from May 18-19, 2008 (Toochin *et al*. 2014). The fourth record for the province was an adult female found by Doug Leighton in Blaeberry, outside Golden on May 30, 2012 (Toochin *et al*. 2014). Another record reported with a photograph as an adult Broad-tailed Hummingbird by Alan Barnard along the Ha Ha Creek Road, southeast of Cranbrook from June 22-26, 2012, was later identified as a hybrid by hummingbird expert Sherri Williamson (Toochin *et al*. 2014, S. Williamson Pers. Comm.).

The timing of the 2 May records fit perfectly with the timing of birds migrating north in the spring and reaching Idaho by last week of May (Bent 1940a, Camfield *et al*. 2013). These records come from the eastern part of British Columbia where birds overshooting from Idaho or further south would most likely turn up (J. Fenneman Pers. Comm.). The June and July records are likely birds that overshot in the spring and ended up in these areas during the summer period when they were noted at hummingbird feeders (J. Fenneman Pers. Comm.).

It is likely that there will be future records of Broad-tailed Hummingbird in British Columbia due to the relatively close populations south of the border. In recent years, hybrid hummingbirds have become more commonly known to observers and birds believed to be this species should be photographed from every angle.

Table 1: Records of Broad-tailed Hummingbird for British Columbia:

1.(1) adult male June 25- July 8, 1995: Michael Shepard, mobs (photo) near Cranbrook (Campbell *et al*. 2001, D. Brown Pers. Comm.)
2.(1) adult male July 10-11, 1997: R. J. Herzig: along Old Hedley Road, 11 km east of Princeton (Bowling 1997c, Campbell *et al*. 2001)
3.(1) adult male May 18-19, 2008: Lucile Campbell: Invermere (Toochin *et al*. 2014)

4.(1) adult female May 30, 2012: Doug Leighton: Blaeberry, outside Golden (Toochin *et al*. 2014)

Hypothetical Records:

1.(1) adult June 22-26, 2012: Alan Barnard (photo) along the Ha Ha Creek Road, SE of Cranbrook [was identified as a hybrid by Sherri Williamson](Toochin *et al*. 2014)

Acknowledgements

We wish to thank Barb McKee for editing the original manuscript. We wish to Sherri Williamson for bring to our attention the bird at Ha Ha Creek Road, southeast of Cranbrook was in fact a hybrid hummingbird. We would like to thank Doug Brown for giving us extra information on the 1992 record from the Cranbrook area. We also want to thank Jamie Fenneman for giving us insights on the east Kootenay migration since he has done extensive fieldwork in the region and has first-hand experience.

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