

Status and Occurrence of Bristle-thighed Curlew (*Numenius tahitiensis*) in British Columbia.

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Introduction and Distribution

The Bristle-thighed Curlew (*Numenius tahitiensis*) is a large, highly migratory, shorebird species that is listed as vulnerable by BirdLife International (2018) with only approximately 7000 individuals in the world. This species only breeds in western Alaska with birds migrating over the open North Pacific Ocean to winter on islands of the central and South Pacific Ocean (Hayman *et al.* 1986). Birds migrating between the southernmost wintering islands and Alaska, a distance greater than 8,500 km, possibly use stopover sites in the Central Pacific Ocean (Marks and Redmond 1994a, Marks and Redmond 1994b). There are few coastal spring records in Alaska that likely indicate a direct flight in most years to the breeding grounds (Gill and Handel 1981a). Young birds typically remain on the wintering grounds until they are 3–4 years old before making their first northward migration (Marks and Redmond 1996).

Breeding areas in Alaska are characterized by rolling hills that range from 50–500 m in elevation with slopes ranging from 3–10% angle and covered with upland tundra (Marks *et al.* 2002). The lower parts have drainages with medium to tall (1.2–2.4 m) shrubs, and the upper elevations (ridges and slopes) have extremely short vegetation or bare ground (Marks *et al.* 2002). The first nests discovered were in dwarf-shrub mat in the Nulato Hills (Kyllingstad 1948), but most recent nests have been found in dwarf-shrub meadows (mostly hummock-ridge tundra, tussock-shrub tundra) interspersed with wet meadows and patches of low-shrub thickets (0.4–1.1 m tall) (Marks *et al.* 2002).

The Bristle-thighed Curlew breeds in 2 main areas in western Alaska between the Yukon River and the northern Seward Peninsula with the 2 populations separated by only about 300 km (Marks *et al.* 2002). The southern population in the southern Nulato Hills numbers about 2,000 pairs on the north Yukon Delta from near Mountain Village to about 125 km north (62°30'N, 163°25'W) (Marks *et al.* 2002). The northern population is on the north-central Seward Peninsula and numbers about 1,200 pairs from Ear Mountain east to the Bering Land Bridge National Park and Preserve and south to Coffee Dome and Grantley Harbor (65°30'N, 164°40'W) (Marks *et al.* 2002). This species is not known to breed elsewhere, although possible breeding north of Kotzebue Sound suggested by sporadic June records of single birds in the Mulgrave Hills and in the western Baird Mountains (Marks *et al.* 2002) and by small flocks of birds in late summer on the shores of Cape Krusenstern (Connors and Connors 1985, (Marks *et al.* 2002). A recent survey of these locations during the peak of the breeding-display period failed to detect curlews (Marks *et al.* 2002). Aerial surveys conducted in the late 1980s revealed the location of the late-summer staging grounds from the southern portion of the Yukon River

delta to the Kuskokwim River and inland to about 20 km (Marks *et al.* 2002). Distribution within region is patchy; generally, more birds found in the south and central portions than in the north (Marks *et al.* 2002).

The Bristle-thighed Curlew migration is largely oceanic, presumably in direct line between wintering islands and breeding grounds, with birds seldom landing in the Americas outside of Alaska (Marks *et al.* 2002). From 1988 to 2002, 7 birds colour-banded on southern breeding grounds in Nulato Hills were seen in Northwestern Hawaiian Islands (Marks *et al.* 2002). Similarly, 7 birds colour-banded in Northwestern Hawaiian Islands were seen in Nulato Hills (Marks *et al.* 2002). Four individuals marked in Alaska were seen in the winter 1992 at Palmyra Atoll, 2,000 km south of Hawaiian Islands (Marks *et al.* 2002); 2 were from Neva Creek on Seward Peninsula, but breeding origin of other 2 was not determined (Marks *et al.* 2002). Thus, birds that winter in Northwestern Hawaiian Islands seem to come from southern breeding population in Nulato Hills, and those that breed on Seward Peninsula apparently winter south of the Hawaiian Islands, suggesting a leapfrog migration (Marks *et al.* 2002). Birds from the 2 breeding populations must overlap in distribution somewhere in the Central Pacific, but data that can prove this hypothesis is currently lacking (Marks *et al.* 2002). There is some movement among the Hawaiian Islands, especially during the southward migration by adults and by nonbreeding 2-yr-olds in the late summer, but such movements are poorly understood (Marks *et al.* 2002).

Bristle-thighed Curlew migration peaks April–May on Christmas Island (Gallagher 1960) and at several sites in the Northwestern Hawaiian Islands (Ely and Clapp 1973, Amerson *et al.* 1974, Clapp and Wirtz II 1975), but birds were unmarked. Northward departure of marked birds monitored closely at Laysan Island in 1991 (Marks and Redmond 1994b). The 16 observed departures occurred from May 1-13, with most (75% of departures, 91% of individuals) occurring between the dates May 1-9 (Marks and Redmond 1994b). Observations at French Frigate Shoals, Laysan Island, and Midway Atoll in other years also support the notion that departure of Bristle-thighed Curlews from the Northwestern Hawaiian Islands typically occurs during the first 2 weeks of May (Marks *et al.* 2002).

Most northbound migrant birds overfly the Aleutian Islands to arrive at the breeding areas in first 3 weeks of May (Marks *et al.* 2002). At Mountain Village, Alaska, at the southern edge of the breeding range, the first birds were seen May 9-18 from 1944 to 1947 (Kyllingstad 1987). More recently, first arrivals in Nulato Hills 32 km north of Mountain Village have occurred from May 3-6 between the years 1988–1991 and at Neva Creek from May 8-18 in 1990–1992, suggesting an earlier arrival for the southern population (Marks *et al.* 2002). The first spring birds observed in Nulato Hills are probably passage migrants rather than local breeders (Marks

et al. 2002). Over a 3-year study at 1 site, the first returning marked breeders arrived an average of 4 days after the species was first detected (Marks *et al.* 2002). Arrival of the returning breeders is highly synchronous (Marks *et al.* 2002). The Last returning breeders arrived an average of 9 days after the species was first detected which ranged 5–16 days, but only 5 days with a range 2–8 days after the first known breeders (Marks *et al.* 2002). At Neva Creek, all resident breeders present 12–14 days after first arrival (Marks *et al.* 2002). Records elsewhere in western Alaska generally consistent with arrival dates on breeding grounds, but nowhere reported in large enough numbers to suggest a regular stopover (Marks *et al.* 2002). The Bristle-thighed Curlew is casual with 1–4 individuals on average observed in mid- to late May on the Aleutian Islands, including Attu Island, Amchitka Island, Shemya Island, Buldir Island, and Adak Island (Gibson 1981, Byrd and Day 1986, Tobish and Isleib 1992a, Marks *et al.* 2002). Elsewhere in Alaska, there are small numbers reported almost every year on the Pribilof Islands in mid-May (Marks *et al.* 2002), with the earliest date May 5, 2001 (Marks *et al.* 2002); a few records have occurred between the dates of May 9-18 from Izembek Lagoon on the north side of the Alaska Peninsula (Marks *et al.* 2002). The Bristle-thighed Curlew has been recorded in the Yukon Delta most years, but numbers are irregular with the mean arrival date May 14 plus or minus 7 days with the range May 3-21, from the years 1985–1996 (Marks *et al.* 2002).

North of Yukon Delta, the Bristle-thighed Curlew has been recorded at St. Michael, on May 24, 1880 (Nelson 1887a), at Golovin, May 13, 1981 (Kessel 1989), and in the Nome area, on May 23, 1905 and May 28, 1922 (Bent 1929). Interesting “shortstop” by migrants in 1992 occurred at various Alaska Peninsula estuaries where this species was previously unrecorded, including the earliest Alaska record, a bird at Port Heiden April 24, 1992 (Tobish and Isleib 1992a), and several groups of 1–6 individuals were seen from May 2-23, 1992 (Marks *et al.* 2002). This occurrence apparently related to a late spring throughout western Alaska and near-record late snow on the northern breeding area that year (Marks *et al.* 2002). Elsewhere in Alaska, small numbers of Bristle-thighed Curlews regularly recorded in early May at the north end of the Gulf of Alaska on both Middleton Island, and Kachemak Bay, some 900–1,100 km east of the species’ normal breeding range (West 1993a, Marks *et al.* 2002).

The Bristle-thighed Curlew stages from June to August along an area of the coastal Yukon Delta (Handel and Dau 1988); small groups occur from July-August along coastal areas of the Seward Peninsula (Kessel 1989). The best information about Bristle-thighed Curlew movements comes from a study conducted from 1975–1979 at the central region of the Yukon Delta (Handel and Dau 1988). Birds typically arrive in 2 or 3 peaks from mid-Jun to early August (Handel and Dau 1988). First arrivals probably early failed breeders or non-breeders followed by late failed breeders and then successful breeders and juveniles; with first juvenile birds seen July 26 (Handel and Dau 1988). At Neva Creek between the years 1988–1992, failed nesters left the

study area in mid-June, successful nesters in late July, and most juveniles during the first week of August (Marks *et al.* 2002). The latest departures from the Yukon Delta are typically found between the dates August 8-31 (Handel and Dau 1988). The latest record on the Yukon Delta was from September 10 (Marks *et al.* 2002); with the latest Alaska record on Middleton Island October 5 (Marks *et al.* 2002).

The use of the Seward Peninsula during the post-breeding period is poorly known; small numbers of Bristle-thighed Curlews recorded along the northern and southern coasts of the peninsula in July and August, including Safety Sound, where 3 birds were found on June 22, 1970; Cape Espenberg where 1 and 3 birds were found on June 30, 1976, and July 3, 1973, respectively; Lopp Lagoon where 1 and 11 birds were found on July 3, 1974, and July 12, 1974, respectively (Kessel 1989). The latest specimen for Alaska is of a juvenile male from Safety Sound on September 1, 1911 (Kessel 1989). Farther north, C. Townsend shot a juvenile bird at the mouth of the Kobuk River near Kotzebue on August 26, 1885 (Ridgway 1919), and R. Beck collected “quite a series” of birds near Nome in August 1911 (Bent 1929). There were nine curlews, ages unknown, but very likely all juveniles, seen near Cape Krusenstern, Alaska on August 19, 1988 (Marks *et al.* 2002).

The lack of records from July–September elsewhere in Alaska with none from the Aleutian Islands; occasionally recorded on the Alaska Peninsula, Pribilof Islands, Kodiak Island, Nunivak Island, and from Kachemak Bay indicates migration to the wintering islands is largely direct from western Alaska (Marks *et al.* 2002).

Based on specimens, Stickney (1943) postulated that southbound birds arrive in Oceania from late July to early August. Presumed migratory influxes have been noted from July–September in Northwestern Hawaiian Islands (Woodward 1972b, Ely and Clapp 1973, Clapp and Wirtz II 1975) and September–October on Line Island (Kirby 1925, Gallagher 1960) and Samoa (Muse and Muse 1982). These and other reports of southbound “arrivals” based on unmarked birds of unknown age. Arrival of migrants on wintering grounds is best known from a study at Laysan Island, in the Northwestern Hawaiian Islands from 1988–1991 (Marks and Redmond 1994b). Adults arrived in 2 peaks, the first occurred between the dates of July 18-24 and the second occurred between the dates of August 16-23 (Marks and Redmond 1994b). All returning marked adults arrived by the first week of September (Marks and Redmond 1994b). Juveniles arrived from mid-August to early September with the earliest on August 19 (Marks *et al.* 2002). Several arriving flocks consisted entirely of juveniles (Marks *et al.* 2002), and arrival dates of adults versus juveniles strongly suggest that juveniles undertake southward migration unaccompanied by adults (Marks and Redmond 1994b, Marks *et al.* 2002).

The Bristle-thighed Curlew winters on islands in the Pacific Ocean from the Northwestern Hawaiian Islands, south to Marshall, Gilbert, Phoenix, Line, Tuvalu, Tokelau, Cook, Society, Tuamotu, Gambier, Marquesas, and Pitcairn archipelagos (Stickney 1943, Marks and Redmond 1994a, Blanvillain *et al.* 2002). This species is less common on Fiji, Tonga, Samoa, Niue Island, Austral Island, Caroline Island, Guam, and Mariana Island (Baker 1951, Thibault and Thibault 1973, Petitot and Petitot 1975, Child 1979, Jenkins 1981, Kinsky and Yaldwyn 1981, Pratt and Bruner 1981, Watling 1982, Buden 1996, Stinson *et al.* 1997). The highest numbers of Bristle-thighed Curlews have been reported in the Northwestern Hawaiian Islands of Laysan Island, Lisianski Island, Midway Atoll (Marks and Redmond 1994a), Line Island on Palmyra Atoll, and Caroline Atoll (Kepler *et al.* 1994, Marks and Redmond 1994a), Marshall Islands on Erikub Atoll (Amerson 1969), Cook Islands on Palmerston Atoll, Takutea Island (Burland 1964, Holyoak 1976), Tuamotu Archipelago on Rangiroa Atoll (Gill and Redmond 1992), and Pitcairn Islands on Oeno Island (Brooke 1995). Small numbers of Bristle-thighed Curlews visit the main Hawaiian Islands of Hawai'i, O'ahu, and Kauai'i, and sometimes overwinter (Marks *et al.* 2002). This species is rare on Nihoa and Necker in the Northwestern Hawaiian Islands (Clapp and Kridler 1977, Clapp *et al.* 1977). Sub-adults likely over-summer on all major wintering islands (Kirby 1925, Stickney 1943, Gallagher 1960, Clapp and Sibley 1971a, Johnson 1973b, Holyoak and Thibault 1984, Marks and Redmond 1996).

Along the west coast of North America south of Alaska, the Bristle-thighed Curlew is an accidental vagrant with only a handful of records. Before 1998, there was only one verified record for the entire west coast of North America; a bird collected on the north tip of Vancouver Island, British Columbia (Richardson 1970, Richardson 1971). In the spring of 1998 there was an unprecedented "fallout" of 13 birds (perhaps up to 25) that occurred along the Pacific Coasts of northern California and northern Washington and coincided with extreme weather patterns over the North Pacific that were strongly influenced by both the large 1997/1998 El Nino event and an equally influential positive phase of the West Pacific Oscillation that presumably pushed birds far east of their normal migration path (Patterson 1998, Mlodinow *et al.* 1999). In California, there are 2 accepted records of the Bristle-thighed Curlew by the California Bird Records Committee (Hamilton *et al.* 2007). Both occurred in the spring of 1998. The first was found and photographed at Crescent City in Del Norte County from May 14-18, 1998, and the second was found and photographed at Kehoe Beach at Pt. Reyes in Marin County from May 16-25, 1998 (Hamilton *et al.* 2007). In Oregon, there are 8 accepted records of the Bristle-thighed Curlew by the Oregon Bird Records Committee (with 6 in spring of 1998) including a mid-September record (OFO 2016). In Washington State, there are 6 accepted records of the Bristle-thighed Curlew (with 5 in spring in 1998) by the Washington Bird Records Committee (Wahl *et al.* 2005, WBRC 2016).

The Bristle-thighed Curlew is a rare vagrant in Japan from the months of March-May and July-September (Brazil 2009) and on the Chukotka Peninsula in Russia (Konyukhov and McCaffery 1993).

Identification and Similar Species

The identification of Bristle-thighed Curlew is covered in all standard North American field guides. This is a medium-sized shorebird species measuring 43 cm in length, with a wingspan of 81 cm, long decurved bill measuring 7-10 cm, and weighs 490 grams (Sibley 2000, Marks *et al.* 2002, Dunn and Alderfer 2011). This species is only likely to be confused with the much more regular occurring Whimbrel (*Numenius phaeopus*) (Sibley 2000, Marks *et al.* 2002, Dunn and Alderfer 2011). Given good looks in flight at the rump and tail or hearing vocalizations, it should be possible to distinguish any potential Bristle-thighed Curlew found in British Columbia.

The following description of an adult in breeding, also called Definitive Alternate plumage, is taken from Marks *et al.* (2002) and is based on Hayman *et al.* 1986, Paulson 1993, Higgins and Davies 1996) unless otherwise stated.

Adult birds are overall a variable buffy-ground colour. The underparts are cream or buff to occasionally a rich cinnamon colour. The upperparts are dark brown to occasionally gray-brown. The Head is strongly marked, with buff median crown stripes and supercilium contrasting with wider dark-brown lateral crown stripes, a narrower dark-brown eye-line, and a strongly decurved bill. The buff stripes are mostly finely striped dark brown (McCaffery and Gill 1992). The cheeks, auriculars, and neck are buff with fine brown streaks. The chin and the upper throat are white and mostly unmarked. The upperparts are usually dark brown with cinnamon-buff spots, notches, and fringes with the center of the back and upper rump brown; the lower rump and uppertail coverts cinnamon-buff, visible as a conspicuous rump-patch in flight. The tail is pale to bright cinnamon with the rectrices having dark-brown bars and buff tips. The secondary-coverts are tipped buff to white and spotted with cinnamon-buff; the primary coverts are darker black-brown with narrow buff to whitish tips; remiges are dark brown with buff lateral notches or spots on the secondaries and inner primaries with only medial notching on the outer primaries, and pale tips on the primaries that wear quickly from outermost feathers (Marks *et al.* 2002). The fore-neck and upper breast dull buff to whitish, sometimes tinged light to deep cinnamon, with heavy brown streaks, usually ending abruptly across the breast, but sometimes extending to the flanks; the lower breast and belly mostly unmarked dull buff to whitish, but occasionally cinnamon. The feathers of the upper legs have elongated shafts forming unique shiny bristles (McCaffery and Gill 1992). There is variable barring on the flanks. The axillaries and underwing coverts are deep cinnamon; secondary

coverts barred dark brown, primary coverts notched dark brown; undersides of remiges whitish with gray-black bars.

Juvenile plumage is held from August to January (Sibley 2000). Birds at this age are generally similar to breeding and nonbreeding adults, but are much warmer and more brightly patterned, especially 1–2 months after fledging. The inner secondaries, scapulars, and wing coverts have large, cinnamon-buff spots (Paulson 1993). Juvenile birds arrive on the wintering grounds in the fall in bright plumage.

In overall appearance, the Bristle-thighed Curlew is similar to the much more common Whimbrel, which breeds sympatrically with Bristle-thighed Curlew. Vocalizations of both species are diagnostic with a whistled “*chiueet*” for Bristle-thighed Curlew versus a loud series of “*bibibibibibi*” notes for Whimbrel. In flight, Bristle-thighed Curlew has an orange to buff rump and uppertail coverts and alternating cinnamon and dark-brown bars on the tail that contrast markedly with rest of the upperparts. Whimbrel has uniform brown upperparts, and the tail is barred with two shades of brown with little contrast. The cinnamon underwing linings and axillaries of the Bristle-thighed Curlew are useful for separating it from the Whimbrel subspecies (*N. p. variegatus*) of eastern Siberia and Oceania, but not from the North American subspecies (*N. p. hudsonicus*) (Paulson 1993, Mlodinow *et al.* 1999). The Bristle-thighed Curlew has strong buff tones and bright cinnamon-buff notches and edges on the back- and scapular-feathers that are lighter than the wing coverts contrasting sharply with the darker portions of the same feathers. This is very apparent on standing birds. Whimbrel is plain brown overall, feathers of the upperparts with much smaller, less contrasting gray-brown markings and edges. At close range, the undertail coverts of the Bristle-thighed Curlew are unmarked versus barred in Whimbrel (Paulson 1993). The bristles on thighs of the Bristle-thighed Curlew are diagnostic, but are only visible through binoculars at 50 m (Marks *et al.* 2002). Confusion in separating Bristle-thighed Curlew from Whimbrel is more appropriately restricted to fresh juveniles (July–Sep), both having warm ground colour and prominent spotted dorsum, but Bristle-thighed Curlew is cinnamon-buff with much larger pale markings, especially on the wing coverts, scapulars, and inner secondaries (Marks *et al.* 2002). In British Columbia, the Long-billed Curlew (*N. americanus*) could cause confusion, but this species has a much longer bill, is a larger species, and lacks crown-stripping on the head. This species is also easily identified by its rising “*coolI*” calls (Sibley 2000).

Occurrence and Documentation

The Bristle-thighed Curlew is an accidental vagrant in British Columbia with only 2 records. The first record was an adult male that was found and collected by Frank Richardson at Grant Bay on the northwestern end of Vancouver Island, 40 km southeast of Cape Scott, on May 31, 1969

(Richardson 1970, Richardson 1971). The specimen is in the Royal B.C. Museum collection under the tag number 11610 (RBCM 2018). The second record was an adult bird found by Daryl Johnson, and subsequently photographed by other observers at Green Point, at Long Beach, in Pacific Rim National Park from June 24-27, 2010 (Charlesworth 2010c). This bird was in the company of at least 4 Whimbrel (A. Dorst Pers. Comm.). With the precedent set in 1998, the weather pattern that brought Bristle-thighed Curlews to the shores of North America should be watched for again in the future (Mlodinow *et al.* 1999). The Bristle-thighed Curlew should be looked for along the west coast of British Columbia from Port Renfrew north to Haida Gwaii from the second and third weeks of May (Marks *et al.* 2002). The direct flight of birds from the breeding grounds and wintering grounds makes the Bristle-thighed Curlew far less likely to wander off course unless pushed by extreme weather, as in 1998, such wandering is far more likely in the spring than in the fall (Mlodinow *et al.* 1999).



Figure 1: Record #2: Bristle-thighed Curlew in flight (on right) and Whimbrel in flight (on left) at Green Point, at Long Beach, in Pacific Rim National Park on June 25, 2010.

Photo © Adrian Dorst.



Figure 2: Record #2: Bristle-thighed Curlew (on left) and Whimbrel (on right) at Green Point, at Long Beach, in Pacific Rim National Park on June 25, 2010. Photo © Adrian Dorst.



Figure 3: Record #2: Bristle-thighed Curlew in flight at Green Point, at Long Beach, in Pacific Rim National Park on June 25, 2010. Photo © Adrian Dorst.



Figure 4: Record #2: Bristle-thighed Curlew at Green Point, at Long Beach, in Pacific Rim National Park on June 25, 2010. Photo © Adrian Dorst.

Table 1: Records of Bristle-thighed Curlew for British Columbia:

- 1.(1) adult male May 31, 1969: Frank Richardson (specimen: RBCM 11610) Grant Bay
(Richardson 1970, Richardson 1971)
- 2.(1) adult June 24-27, 2010: Daryl Johnson, and other observers (photo) Green Point, Long Beach, PRNP (Charlesworth 2010c)

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