

The First Record of Spoon-billed Sandpiper (*Calidris pygmeus*) in British Columbia.

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Introduction and Distribution

The Spoon-billed Sandpiper (*Eurynorhynchus pygmeus*) is a charismatic shorebird species that is listed by BirdLife International as Critically Endangered and is found breeding in a discontinuous narrow strip of 4,500 km of coastal tundra with little vegetation; near lakes and marshes exclusively in the eastern Chukotka and Koryakia region of Siberia (Zöckler *et al.* 2010a, Brazil 2009, BirdLife International 2016). The population over the past couple of decades has seriously declined from a population estimated in the 1970's at 2,000–2,800 breeding pairs (Tomkovich *et al.* 2002), to recent research surveys across most of the Spoon-billed Sandpiper's known range that have found the global breeding population in 2014 was only 210 – 228 breeding pairs (Clark *et al.* 2016). The entire post-breeding population that includes all ages is now believed to number only 661 – 718 individuals (Clark *et al.* 2016). Without serious conservation efforts it is feared that the Spoon-billed Sandpiper will go extinct in the next decade (Clark *et al.* 2016). Fortunately efforts have been launched to bring global awareness to the critical situation of the Spoon-billed Sandpiper and a serious effort is currently underway to try to save the species throughout its vast range, especially on the wintering grounds (Zöckler 2016, Wildfowl and Wetlands Trust 2012). The Spoon-billed Sandpiper is a highly migratory species that prefers to stop and feed on migration at: coastal lagoons, estuaries, and tidal mudflats; often in the company of Red-necked Stint (*Calidris ruficollis*) feeding flocks (Brazil 2009). It migrates to the southwest and passes through key staging sites such as Kamchatka, Korea and Japan to winter across a wide area in South China, Vietnam, Thailand, Myanmar and Bangladesh (Zöckler *et al.* 2010b). It is believed that loss of critical migratory habitat along the migratory route to the wintering grounds is one major contributing factor to the species' overall decline (Clark *et al.* 2016). The Spoon-billed Sandpiper is highly threatened by shorebird hunting and both industrial and agricultural development of mudflats in many critical areas on the wintering grounds (Bird *et al.* 2010, Zöckler *et al.* 2010b). Recent research surveys indicate that only about half of the world's spoon-billed sandpiper's wintering locations have been found and studied so far which is critical in assessing the overall welfare in helping the species survive (Clark *et al.* 2016). If the Spoon-billed Sandpiper is to survive, total protection throughout its range will be paramount and it's now a race against time to save the species from imminent danger of extinction (Zöckler *et al.* 2010a)

In North America, the Spoon-billed Sandpiper is a casual to accidental vagrant species with only a small number of records. The most records for North America come from Alaska where this species is listed as a casual spring and fall migrant in northern Alaska at Barrow and Wainwright, also in the Western Aleutians, on Attu, Buldir, and Shemya Islands, and also on St.

Paul Island (West 2008). The only other confirmed record along the west coast south of Alaska comes from British Columbia where an adult breeding plumaged bird was well photographed and seen by many observers at Iona Island Sewage Ponds, in Richmond from July 30 – August 3, 1978 (Toochin 1978, Sauppe *et al.* 1978, Campbell *et al.* 1990b).

There are 2 well-documented accepted sight records of Spoon-billed Sandpiper for Alberta by the Alberta Bird Records Committee with the first record involving two adults in breeding plumage, seen by multiple observers, near Bruce Lake on May 19, 1984, and a second record of an adult in breeding plumage, seen by multiple observers, also found at Bruce Lake on May 9, 1992 (Slater 1999).

Identification and Similar Species

The identification of the Spoon-billed Sandpiper is covered in most standard North American Field Guides. This is a small, stalky species measuring 14-16 cm in length, and weighing 29.5-34 grams, but is larger in size to the Stints (Brazil 2009). The Red-necked Stint is slight smaller and slimmer looking in overall size, and can look very similar in breeding plumage, but doesn't have streaks on the brick red chest and a thick based straight bill (Message and Taylor 2005, Brazil 2009). The Red-necked Stint measures 13-16 cm in length, and weighs 18-51 grams (Brazil 2009). The only other species that can cause identification issues is the much larger Sanderling, when found in breeding plumage, which measures 20-21 cm in length and weighs 33-110 grams (Sibley 2000, Brazil 2009). The Spoon-billed Sandpiper likes to feed with its unique wedge-shaped, spatulate bill on lagoons, estuaries, and tidal mudflats; favouring the wet sand and mud (Brazil 2009). This species can also be found feeding on beaches where they remain near the crashing waves, foraging in the wet substrate with a short jabbing action, followed by a side to side motion which is a unique feeding technique among waders (Message and Taylor 2005). Other "peep" species probe and pick at the mud for prey (Message and Taylor 2005).

The partial moult to breeding plumage apparently takes place between early April and early May (O'Brien *et al.* 2006). This is a bit later than the other Stint species with which the Spoon-billed Sandpiper migrates (O'Brien *et al.* 2006). In early April, when Red-necked Stints are showing a high degree of breeding plumage, the Spoon-billed Sandpiper still retains extensive nonbreeding feathers (O'Brien *et al.* 2006). Breeding plumage is retained to about mid-August, when birds are reaching their staging areas (O'Brien *et al.* 2006). Since fall migrating birds are in mostly nonbreeding plumage, it is likely that these birds moult quickly after reaching staging areas (O'Brien *et al.* 2006). Adults in breeding plumage have a brick red to orange, head and neck, lacking any bold white supercilium (Message and Taylor 2005). Where the bill meets the face is white and it extends into the chin (Hayman *et al.* 1986). The bill is black and spatulate in shape (Brazil 2009). The upperparts are fringed in bright rufous and have dark centered

feathers with rusty edges and white tips that extend from the mantle down to the upper scapulars (Message and Taylor 2005, Brazil 2009). The lesser, median, greater coverts and tertials are brownish-gray (Message and Taylor 2005, Brazil 2009). On the under-parts there are black streaks that extend both down on the sides of the upper breast and across the lower breast with the rest of the breast white (Message and Taylor 2005, Paulson 2005). The white extends to the under-tail coverts (Hayman *et al.* 1986). The black legs are short and the feet are black (Message and Taylor 2005, Brazil 2009). In flight has a distinct white wing line (Message and Taylor 2005, Brazil 2009). The under-wings are white with a darker secondary edge and primaries (Message and Taylor 2005, Brazil 2009).

Winter plumage adult is plain gray above, white below; with a prominent split white supercilium (Paulson 2005, Brazil 2009).

Juvenile plumage is held at least through October, but the timing of moult is un-described (O'Brien *et al.* 2006). Juvenile birds have a dark brown crown, with rich-buff streaks (Message and Taylor 2005, Brazil 2009). There is white extending from where the bill meets the face, extending as broad supercilium over the dark eye (Hayman *et al.* 1986, Brazil 2009). As in all ages the bill is uniquely spatulated in shape (Message and Taylor 2005, Brazil 2009). The nape is gray separating the colour found on the mantle (Brazil 2009). On the side of the neck is a slight buffy collar (Brazil 2009). There is a dark patch that covers the eye and extends to the cheek (Message and Taylor 2005, Brazil 2009). The upper-part feathers are dark brown, fringed warm buff and white creating indistinct V's on the edges of the mantle and upper scapulars (Message and Taylor 2005, Brazil 2009). Some juveniles lack warm-buff tones (Message and Taylor 2005). The legs and feet are black (Hayman *et al.* 1986).

The Spoon-billed Sandpiper makes a shrill “*wheet*” call and a quiet rolling “*preep*” call (Message and Taylor 2005, Paulson 2005).

Occurrence and Documentation

The Spoon-billed Sandpiper is one of rarest birds to have ever been found in British Columbia. This charismatic species is an accidental vagrant with a single record of an adult that was photographed at the Iona Island Sewage Ponds in Richmond from July 30-August 3, 1978 (Toochin 1978, Sauppe *et al.* 1978, Campbell *et al.* 1990b). Diagnostic photographs were taken by the late Ervio Sian and were published in Volume 2 of the Birds of British Columbia (Campbell *et al.* 1990b). This bird occurred during an era when the Iona Sewage Ponds would attract, at high tide, thousands of Western Sandpipers (*Calidris mauri*) on migration (J. Toochin Pers. Obs.). As a result, during the era of the Spoon-billed Sandpiper, many amazing Asian shorebirds were found and photographed (Toochin *et al.* 2014). Two weeks before the Spoon-

billed Sandpiper was found at Iona Island, a full adult breeding plumage Red-necked Stint had been found in the Sewage ponds July 13-15, 1978 (Campbell *et al.* 1990b). The Spoon-billed Sandpiper was present for 5 days and would come into the sewage ponds on the high tide when all the sandpipers were displaced off the mudflats. It was called the “Bird of the Century” by then leader of the Vancouver Birding Club, John Toochn, and was featured in Newspapers and even on the National News Broadcast (J. Toochn Pers. Comm.).

Fall migration takes place between July and October (O’Brien *et al.* 2006). Due to the lack of adult female’s participation in parental duties, some females may depart the breeding grounds as early as mid-July after the young hatch (O’Brien *et al.* 2006). Most adult birds leave the breeding grounds by early August and migrate through Japan, Korea, and China from September to mid-October (O’Brien *et al.* 2006). The exact arrival time on the wintering grounds is currently not well known, but is believed to occur from late August through October (O’Brien *et al.* 2006). The timing of the Iona Island record fits perfectly with when the Spoon-billed Sandpiper is heading south from its breeding grounds in Siberia to its wintering grounds in Southeast Asia.

It should be noted that Spoon-billed Sandpipers migrate in the spring between April and late June (O’Brien *et al.* 2006). Adults depart the wintering grounds in April and arrive at breeding sites by mid-June (O’Brien *et al.* 2006).

With more awareness and international groups lobbying International Governments in Asia to protect migration corridors it is possible to reverse the downward population spiral that the Spoon-billed Sandpiper is currently taking (Wildfowl and Wetlands Trust 2012, Zöckler 2016, Choi 2017). Unfortunately given the global crash in the species population it seems unlikely another Spoon-billed Sandpiper will be found in British Columbia again.

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