FIRST NORTH AMERICAN NESTS AND EGGS OF THE LITTLE STINT

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The Little Stint (Calidris minuta) commonly breeds in the high Arctic tundra of Eurasia from northern Scandinavia east to central Siberia; it is an uncommon and irregular breeder east of the Indigirka River (150° E) to the Bering Strait (Tomkovich 1996, Lappo et al. 2012). In Alaska, Gibson and Withrow (2015) described the species as a casual visitant (documented in <30% of years) to the north, west, and southwest regions of the state. Of the Little Stints recorded from Alaska, 11 have occurred from 15 June to 15 July (Gibson and Kessel 1992, Iliff and Sullivan 2004; checklists #S40242942, #S17187097, #S30264527, #S30595446, #S37636130, #S46578403 at www.eBird.org), the period when Little Stints typically breed (Haviland 1915, Hilden 1983, Underhill et al. 1993). Eight of these records are from the Arctic Coastal Plain of northern Alaska (Table 1). Although the observation of a displaying bird suggests that the species has attempted to breed there in the past, breeding in Alaska and in North America has never been confirmed (Iliff and Sullivan 2004; Table 1).

Here, we detail the first record of nests and eggs of the Little Stint in North America. In discussing this record as "nests and eggs" instead of "breeding," we refer to previous Alaska records of the behavior we observed—extralimital, apparently unaccompanied females constructing nests and laying eggs. Examples are of the Ruff (Calidris pugnax) at Point Lay in 1976 (Gibson 1977) and of the White Wagtail (Motacilla alba) at Talkeetna in 1999 (Tobish 1999) and Cordova in 2003 (Tobish 2004). This behavior by lone females can be more difficult to document than, e.g., the well-known occurrence of unaccompanied, extralimital singing males.

While searching for shorebird nests on 17 June 2019, Baerwald observed a Little

Table 1 Records of the Little Stint from the Arctic Coastal Plain, Alaska (15 June–15 July)

Date	Number of birds; evidence for breeding	Location	Reference
28 June 1976 23 June 1980 19 June 1991 16 June 2001 10-23 June 2002 26-27 June 2005 16 June 2016 15-18 June 2018 17 June-14 July 2019	1; none 1; none 1; none 1; none 1; display flights 1; none 1; none 1; none 1; none	Utqiağvik Utqiağvik Prudhoe Bay Utqiağvik Utqiağvik Utqiağvik Utqiağvik Utqiağvik Utqiağvik	Myers and Greenberg 1978 Gibson and Kessel 1992 Iliff and Sullivan 2004 Iliff and Sullivan 2004 Iliff and Sullivan 2004 eBird #S17187097 eBird #S30264527 eBird #S46578403 This note; eBirda

 $^{^{}a}$ Multiple sightings of a Little Stint >5 km from where the first nest was found, and on the same day (20 June), suggest more than one bird may have been present (eBird checklists #S57890862, #S57544891, #S57571390).

Stint performing display flights and chasing nearby Western (*C. mauri*) and Semipalmated (*C. pusilla*) sandpipers (a behavior of both male and female Little Stints; Cramp and Simmons 1983) on the Arctic Coastal Plain of northern Alaska near Elson Lagoon, approximately 7 km east of Utqiagʻvik (formerly Barrow, 71.29° N, 156.79° N). On 20 June 2019, Lagassé visited the same area and flushed a Little Stint from a 3-egg nest. Upon finding the nest, Lagassé immediately captured the bird with a bownet (Priklonsky 1960) and measured it to infer sex. This Little Stint was a female on the basis of its extended cloaca (typical of a bird having recently laid an egg) and the presence of an egg in its reproductive tract (located by gentle pressure on its venter). Lagassé returned to the nest on 22 June at which point there were 4 eggs, but no bird was on the nest. He then returned to the nest approximately every other day until 28 June and on each visit noted that the eggs were cold and that no adult was present. On 28 June, Lagassé concluded that the nest had been abandoned and collected the 4 eggs (University of Alaska Museum; UAM 42884).

On 1 July 2019, Lagassé found a second Little Stint nest, containing 4 eggs, approximately 340 m from the first (Figure 1; this issue's back cover). He immediately floated the eggs in a container of water to estimate their age (Liebezeit et al. 2007) and captured the incubating adult to infer its sex (Niemc et al. 2018). The bird's measurements and plumage suggested that it was the same female that had been captured previously. The eggs' buoyancy suggested that the nest was approximately 4 days into incubation. If we assume 1 egg was laid per day, the female laid the first egg on approximately 24 June, about 3 days after laying the fourth egg in the first nest. Incubation began on approximately 27 June, and, under the assumption of a 20-day incubation period (Hildén 1983) the eggs, if fertile, should have hatched on 17 July. A Little Stint was subsequently observed on the nest on 14 July, at which point the eggs had not begun hatching. The nest was checked again on 16 July, at which point it was empty. No Little Stints (adults or chicks) were observed in the area, and there were no signs indicating that the eggs had hatched or had been depredated.

Both nests were located among frost boils in dry dwarf shrub–graminoid tundra dominated by Least Willow (Salix rotundifolia) and Arctic Woodrush (Luzula arctica) (Walker et al. 1980, Cunningham et al. 2016; Figure 2). Both nests were highly exposed with <16% of each nest cup concealed by nearby vegetation (Figure 1). In descending order of importance, the nests' linings comprised willow leaves, graminoids, and lichens. The 8 eggs' average width and length were 19.8 mm and 27.0 mm, respectively, and the average weight of those in the first nest was 5.3 g. These values are typical of the Little Stint in its normal breeding range, where it nests in drier tundra near willows, with the nest cup typically highly exposed (Haviland 1915, Hildén 1983).

The Little Stint's mating system typically consists of a female laying a clutch of eggs for a male to incubate before laying a clutch of eggs that she incubates herself (Hildén 1983, Chylarecki and Kania 1992). The first nest, typically intended for the male, is also frequently abandoned (Chylarecki and Kania 1992). This double-clutch mating system coincides with the rapid renesting and nest abandonment that we observed. Our observations also confirm the ability of a female to lay approximately $42.4~{\rm grams}$ of eggs over $10~{\rm days}$ —a mass approximately $1.5\times$ her own.

Little Stints maintain almost no fidelity to their previous breeding sites, and in successive years the density of breeding birds in an area can vary by a factor of 18 (Hildén 1983, Underhill et al. 1993, Tomkovich and Soloviev 1994). Therefore, it is unlikely that the Little Stint we observed will return to Utqiagivik to breed in a future year. However, given (1) the apparent suitability of the tundra near Utqiagivik, (2) the propensity for Little Stints to occur there during their breeding period (Table 1), and (3) the potential for greater immigration of birds from Asia across Beringia with a warming climate (Winker and Gibson 2018), extralimital breeding by the Little Stint may become more common over the coming years (Winker and Gibson 2018).



Figure 1. A Little Stint nest found near Utqiagʻvik, Alaska, on 1 July 2019.

Photo by Benjamin J. Lagassé/USFWS



 $\label{thm:continuity} \mbox{Figure 2. The frost boil in dry dwarf shrub-graminoid tundra where the Little Stint nested near Utqiagʻvik, Alaska.}$

Photo by Benjamin J. Lagassé/USFWS

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