First Documented Nest of Stilt Sandpiper in Ontario

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The Stilt Sandpiper (*Calidris himantopus*) is an entirely New World nesting calidrid with a disjunct breeding range. It nests from northern Alaska to James Bay mainly in low tundra habitat. Stilt Sandpipers breed: along the coastal plain in Yukon Territory (Sinclair et al. 2003); eastward along the northern coastline of Mackenzie, probably to Perry River (Godfrey 1986); on southern Victoria and Jenny Lind islands (Parmalee et al. 1967); and in northern Keewatin; also in southeastern Keewatin, northeast Manitoba and Ontario (Klima and Jehl 1998). In Ontario, it breeds along the coast of Hudson Bay from the Manitoba/Ontario border east to the Cape Henrietta Maria area and the northern end of James Bay (Peck and James 1983).

Manning (1952) provided the first evidence of breeding of Stilt Sandpiper in Ontario when a half-fledged juvenile was collected at Cape Henrietta Maria during a geodetic survey of the area in 1947. The following year, a field party from the Royal Ontario Museum collected two downy young (out of a total 18 birds) about 40 km south of the Cape near Hook Point, James Bay (Peck 1972). During a trip down the Sutton River in 1962, D. H. Baldwin and D. J. T. Hussell collected a downy young on 24 June west of the river mouth (Schueler et al. 1974). Further observations of birds during the breeding season were made in the vicinity of the Cape in 1957 and 1970 (Peck 1972). R. I. G. Morrison reported a nest found in the vicinity of radar site 415 on 20 June 1976 (Hussell 1987); however, no documentation has been forthcoming.

During the first Ontario Breeding Bird Atlas (OBBA) from 1981-1985, Stilt Sandpiper was reported from nine 10 x 10 km squares in six different 100 x 100 km blocks, extending from radar site 415 along the northern James Bay coast to the Manitoba border (Hussell 1987). Evidence of probable breeding was reported for six of the nine squares as either agitated behaviour or observed pair. In 1984, Stilt Sandpiper was reported daily in the vicinity of radar site 415 with as many as 12 seen per day; agitated behaviour of some birds suggested nesting or young out of the nest but no nests were found (James and Peck 1985). Wilson and McRae (1993) found small numbers in wet hummocky tundra near the Brant River mouth in 1991 and also suspected breeding.

Provisionally, the species has been recorded from seven of the ten blocks along the Hudson Bay and

northern James Bay coastlines during the second OBBA (2001-2005; unpubl. data). It is important to recognize that only a very small percentage of suitable nesting habitat was visited during peak detection time, and by a means with which a singing male could be heard. Many squares were accessed by air or along rivers only. The fact that Stilt Sandpiper was detected in only eleven squares is likely a result of limited coverage rather than a low population. Thus, it appears that Stilt Sandpiper is an uncommon to locally common breeder in moist, vegetated subarctic tundra, as well as sedge fens in the taiga as far as 50 km inland (R. K. Ross/K. F. Abraham and D. A. Sutherland/W. J. Crins, pers. comm.) from the Hudson Bay and northern James Bay coastlines in Ontario. Here, we present information on Ontario's first documented Stilt Sandpiper nest, found 24 June 2004 southwest of West Pen Island, Kenora District, and provide further evidence of breeding along with comments on abundance.

From 23 June to 7 July 2004, the authors conducted field work in the vicinity of the Pen Islands in support of the second Ontario Breeding Bird Atlas (Figure 1). Our base camp was located on a narrow marine beach ridge running parallel to the Hudson Bay coast, approximately 6 km SSW of West Pen Island (56° 47' 8" N, 88° 57' 7" W). The immediate area is maritime subarctic wet tundra dominated by sedges (*Carex aquatilis, C. chordorrhiza, C. scirpoidea*) and interspersed with low willow (*Salix* spp.) and dwarf birch (*Betula spp.*) thickets, numerous shallow lakes and ponds, and a series of parallel low gravel marine beach ridges extending inland. The ridges support a lichen-heath community (Johnson 1987) dominated by lichens (*Cladonia* spp.), Mountain Avens (*Dryas integrifolia*), Black Crowberry (*Empetrum nigrum*), Alpine Blueberry (*Vaccinium uliginosum*), Mountain Cranberry (*V. vitis-idaea*) and Lapland Rosebay (*Rhododendron lapponicum*). Approximately 5 km inland from the coast, widely scattered trees or small copses of "krummholz" White Spruce (*Picea glauca*) become increasingly frequent on the ridges, giving way to lichen-spruce woodland approximately 10 km inland from the coast.

Upon our arrival on the evening of 23 June, several different Stilt Sandpipers were heard and observed performing aerial displays in the general vicinity of the camp. From the base camp at approximately 1200 h on 24 June, Burke heard alarm calls of an adult Stilt Sandpiper in flight, apparently disturbed by a female Northern Harrier (*Circus cyaneus*) hunting nearby. After the harrier departed, the Stilt Sandpiper attempted to land several times on the beach ridge about 200 m away from the camp, then finally landed and walked about 20 m until it was lost from view. After waiting about 10 minutes for the bird to reappear,

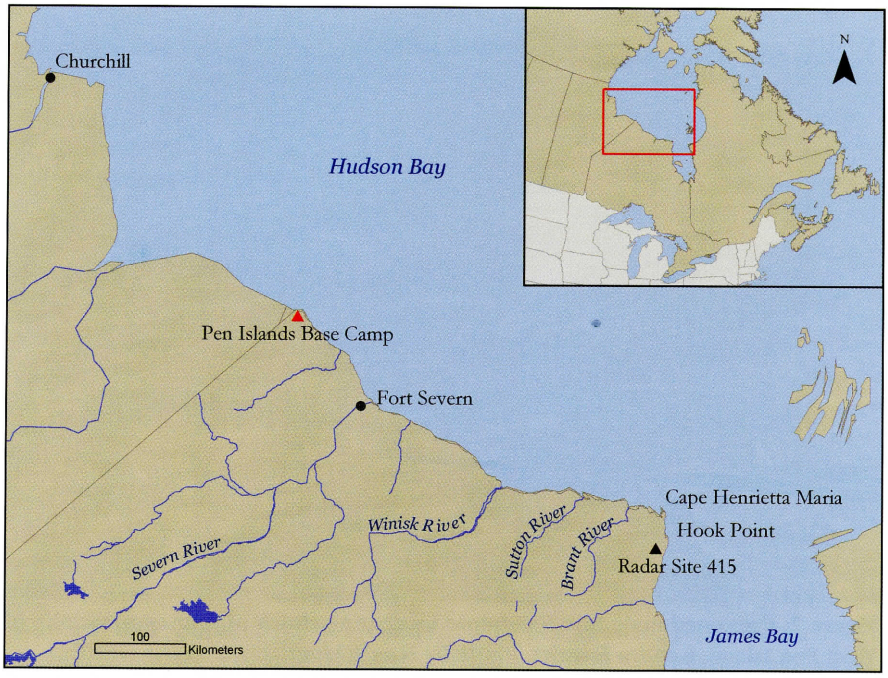

Figure 1: Map of southern Hudson Bay and northern James Bay coastlines showing the location of the Pen Islands base camp and other sites mentioned in the text.

Burke walked down the ridge to the approximate location where the bird had been lost from view and a nest was located when the bird flushed from nearly underfoot.

The incubating bird (Figure 2), a presumed male as males normally incubate during the day (Parmelee et al. 1967, Jehl 1973), flew off but reappeared within 5 m of the nest after others in the party were called over. The nest was a scrape between two crustose lichen-covered peat hummocks and was lined with a few dead leaves of a Net-veined Willow (*Salix reticulata*). It contained four ovate pyriform eggs, deep olive-brown with heavy brown markings, and the bird returned to incubate shortly afterwards. From then until the nest was depredated sometime during the night between 1 and 2 July, we were able to pass by the nest daily without the adult flushing. No exchange of incubating parents was observed, nor was the other parent ever observed in the proximity of the nest before it was depredated. At 0730h on 3 July, however, Burke noted the pair performing aerial courtship display over the nest. The pair landed on the ridge in the vicinity of the nest and one adult settled momentarily on the ground, stood up and attended this location for 1.5 minutes while

Figure 2: Presumed male Stilt Sandpiper incubating clutch of four eggs, vicinity of West Pen Island, Kenora District. Photo by *Ron Ridout*.

the other adult stood nearby. The first bird then walked into the sedge fen, but it was not noted whether the other bird followed. This was the last observation of the pair.

On 4 July, the nest was measured and the habitat was described. The width of the nest scrape was 105 mm and its depth was 20 mm. No egg measurements were made during the time the clutch was incubated, to minimize disturbance to the nest. The beach ridge was aligned in a NW to SE orientation and was 35 m wide at the location of the nest, with a slight north-south gradient. The nest was positioned 11 m from the south edge. The closest parallel beach ridge was about 300 m south and a small tundra lake was located approximately 200 m to the north. The vegetation of the ridge was typical of ridges in the area. Wet graminoid tundra bordering the ridge supported scattered thickets (≥25% cover) of low (0.5 m) dwarf birch/willow and vernal meltwater pools.

Other bird species nesting on the ridge in close proximity to the Stilt Sandpiper nest included: Least Sandpiper (*Calidris minutilla*), Horned Lark (*Eremophila alpestris*), Smith's Longspur (*Calcarius pictus*) and Savannah Sparrow (*Passerculus sandwichensis*). Dunlin (*Calidris alpina*), Canada Goose (*Branta canadensis*), and Willow Ptarmigan (*Lagopus lagopus*) were confirmed or probably breeding nearby in the adjacent wet tundra.

We determined Stilt Sandpiper to be a fairly common component of

the West Pen bird community, as we detected them on 49 of 121 point counts (40.5%) from 24 June to 5 July in four 10 x 10 km squares. A rapid decline in aerial displays was noted in the first week of July and birds became harder to detect. At 1515h on 4 July, Obbard heard alarm calls of an adult in flight over a small lake, and observed a second adult attending two downy young (Figures 3a and 3b) in sedges near the shore of a lake east-northeast of camp at 56° 47' 9" N, 88° 56' 7" W. This observation was about 1.2 km from the nest, and provided the second confirmed breeding record for atlas square 16CH89 in the second OBBA. From 1800-1830h on 4 July, Obbard and Sutherland searched unsuccessfully for a nest in the vicinity of the morning sighting and on a nearby elevated gravel ridge (20 m from lake). At 0845h on 5 July, Obbard relocated the family near the shore of the lake in the same general area as on 4 July. One adult (Figure 4) was brooding the chicks at that time and it was verified that there were only two chicks. On 6 July, the family group was relocated nearby by Jones.

Discussion

This first documented nesting of Stilt Sandpiper in Ontario is typical of what has been described for the species in the Churchill area (Jehl 1973) with one minor exception. Although the width of the scrape was within the range reported by Jehl (1973), the nest depth was slightly shallower, and this can likely be attributed to the fact that the nest was placed on a gravel beach ridge (Figure 5) rather than in the typical moist or relatively dry sedge meadow (Klima and Jehl 1998). We suspect that birds in the West Pen area do use typical habitat extensively; however, perhaps in a cold year like 2004, the only successful pairs are those that nest early on snow- and ice-free locations such as elevated beach ridges. Dry upland sites are used at Cambridge Bay, Victoria Island, as well as wet tundra (Parmalee et al. 1967).

Our planned arrival date of 16 June was pushed back to 23 June due to extensive snow cover in the West Pen Island vicinity (L. Walton, pers. comm.). Stilt Sandpipers have a typical incubation period of 24 days (Klima and Jehl 1998), so it is interesting that the brood Obbard discovered on 4 July had a clutch initiation date of about 11 June, a time when the incubating birds must have endured many days of inclement weather and much of the habitat, except for raised ridges, must have been snow-covered. Predation pressures at this time would have been intense, as a nearby Snow Goose (*Chen caerulescens*) colony of 8250 pairs experienced nearly complete failure (K. Abraham, pers. comm.). Lateness of season likely led to few Snow Goose nesting attempts (Abraham and Ankney 1986) and pairs that did nest likely suffered nest predation by Common Raven (*Corax corax*), Bald Eagle

Figure 3a: Downy young Stilt Sandpiper, West Pen Island vicinity, Kenora District, 4 July 2004. Photo by *Martyn E. Obbard.*

Figure 3b: Downy young Stilt Sandpiper at edge of small lake, West Pen Island vicinity, Kenora District, 5 July 2004. Photo by *Martyn E. Obbard.*

Figure 4: Adult Stilt Sandpiper calling to nearby downy young, West Pen Island vicinity, 5 July 2004. Photo by *Martyn E. Obbard.*

Figure 5: Habitat surrounding Stilt Sandpiper nest, West Pen Island vicinity, Kenora District. The nest was placed on the low gravel beach ridge covered by lichen-heath. Photo by *Donald A. Sutherland.*

(*Haliaeetus leucocephalus*), Parasitic Jaeger (*Stercorarius parasiticus*), Herring Gull (*Larus argentatus*), Arctic Fox (*Vulpes lagopus*), Red Fox (*V. vulpes*), Black Bear (*Ursus americanus*) and Wolverine (*Gulo gulo*), all of which were observed in the vicinity. Other shorebirds either appeared to delay their nesting schedules (Least Sandpiper; Dunlin; Red-necked Phalarope, *Phalaropus lobatus*), or abandoned the breeding season almost entirely (Whimbrel, *Numenius phaeopus*; Short-billed Dowitcher, *Limnodromus griseus*; and Hudsonian Godwit, *Limosa haemastica*) based on our observations of aerial displays and nests. Until our date of departure, there were several large mixed flocks of shorebirds near the coast, some of which contained up to 150 Stilt Sandpipers.

Nesting habitat within 3 km of the goose colony seemed minimal as overgrazing had diminished suitable nesting and brood-rearing sites, as observed near Churchill (Klima and Jehl 1998). However, it appears that the West Pen Island area of Ontario supports a substantial breeding population of Stilt Sandpipers based on point count censuses and our multiple observations of breeding birds in a small area. At Churchill, a local density of 2-4 pairs/100 ha in the mid 1990s was in decline compared to 12-16 pairs/100 ha in the mid 1960s (Klima and Jehl 1998). Based on our point count data, we estimated a density similar to what was most recently found at Churchill.

Acknowledgements

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