NEW WORLD SECTION

A contribution to the knowledge of the waders on St. Lawrence Island, Alaska

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In 1988 during an expedition to St. Lawrence Island, Alaska, 13 species of waders were observed. Of those, 10 species were breeding. Their distribution and abundance is described. The first nest records for the Rock Sandpiper *Calidris ptilocnemis tschuktschorum* and Baird's Sandpiper *Calidris bairdii* for the island were established in 1988 and 1987, respectively.

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INTRODUCTION

In May and June 1988, I observed waders during an American expedition to St. Lawrence Island, Alaska. St. Lawrence Island is an arctic land mass of 2,000 square miles in the north central sector of the Bering Sea between eastern Siberia and western Alaska (Fay *et al.* 1959) (Figure 1). Although currently surrounded by the shallow waters of the continental shelf, the island has had geologically recent connections with both the Eurasian and North American continents as a part of the Bering Strait Land Bridge (Walters 1955). As a result of these former connections and its unique intercontinental position, the island's flora and fauna contain species peculiar to both Palearctic and Nearctic regions, as well as others of Holarctic and local distribution. As on other islands of continental origin, its biotic communities are similar to those on the adjacent mainlands, but these communities have been modified by at least three physical factors: isolation, restricted space and special climate (Hesse *et al.* 1951; Darlington 1957).

CLIMATE

Although about 250 miles south of the Arctic Circle, St. Lawrence Island has a typical polar maritime climate, with short cool summers and comparatively heavy precipitation for an arctic area. Due to the presence of the polar ice pack during the winter and spring, the warming influence of the surrounding sea is not strongly felt during the cold months and winter temperatures are comparatively low.

Lying in a stormy sea, the island is particularly characterized by cold winds of gale force. High winds and intermittent rains are believed to be prominent factors affecting brood survival of many of the breeding birds. Most of these birds start nesting in June, one of the most favourable months of the year, with an average of two clear days and only nine days with precipitation of 0.01 inches or more. In July and August, when the broods are hatching and growing, there is on average only one clear day for the entire period, and

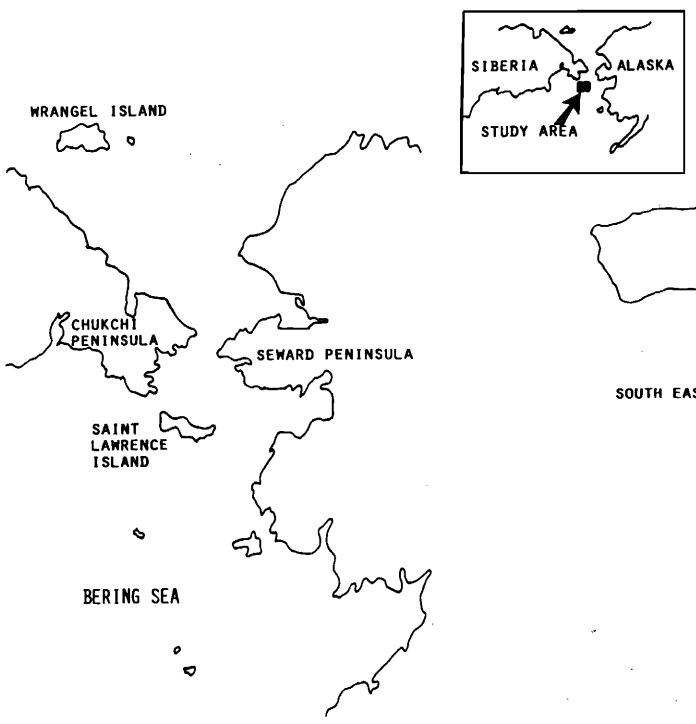

Figure 1. St. Lawrence Island, Alaska, showing its position relative to the continents (insert).

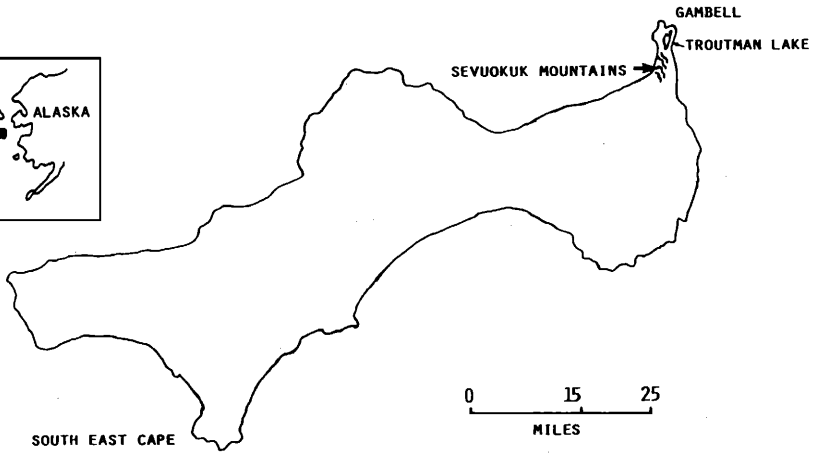

Figure 2. St. Lawrence Island, with names of investigated areas.

precipitation falls on one of every two days (Anon 1953).

VEGETATION

The almost total lack of tall brush on St. Lawrence Island is the chief difference between its vegetation and that of similar areas in Arctic Alaska and Siberia. Strong almost constant winds, thin soil and summer temperatures which are lower than average for the altitude, are probably the factors preventing some of the more erect forms from becoming established.

The island consists entirely of a low, generally herbaceous growth which ranges from essentially complete cover in some wet areas to virtually no cover, at least of vascular plants, on alpine rock deserts and lava flows. Lichens, however, particularly species of *Cladonia* and *Cetraria* are often common in these areas.

A reasonable breakdown of the habitats on the island would distinguish four major types, each with a corresponding vegetation formation. The types are: bog and wet tundra (in terms of area covered, the most important vegetation formation of St. Lawrence Island), alpine and fell-field, mesic tundra and aquatic habitats.

WADERS OBSERVED ON ST. LAWRENCE ISLAND

Mongolian Plover *Charadrius mongolus*

Friedman (1936) reported an adult of unknown sex from Gambell in May 1935. Kessel *et al.* (1978) mentions this species as a rare spring migrant on St. Lawrence Island in late May-early June (earliest record: 18 May 1976 at Gambell). We saw a male in summer plumage at Gambell on 5 June 1988.

Lesser Golden Plover *Pluvialis dominica fulva*

Breeding records from St. Lawrence Island are reported in Friedman (1932) and Cade (1959). According to Cade (1959) the Lesser Golden Plover was the most common wader species on the island in the 1950s. There has been some confusion about the subspecific status of Golden Plovers on St. Lawrence Island. Nelson (1883, 1887) reported both *P. d. dominica* and *P. d. fulva* breeding there. Cade (1959) concluded that the population there is a typical small *fulva* of the Bering Sea region.

During an expedition to Nekeelit Point in the mountains, south of Troutman Lake, on 2 and 4 June, we saw four

pairs exhibiting territorial behaviour. On the same date along this lake I also saw 3 other pairs in territorial postures and on 3 June, near a pond in the Gambell area, I observed three other birds. All these birds showed the *fulva* characteristics.

Red Phalarope *Phalaropus fulicarius*

This species breeds on St. Lawrence Island (Bailey 1925). I saw four birds on 1 June near a pool close to Troutman Lake and three days later observed feeding birds exhibiting territorial behaviour in a wet tundra in the mountains near Nekeelit Point. During our walk back along the beach we saw about 250 Red Phalaropes together with 15 Red-necked Phalaropes *Phalaropus lobatus* in a flock feeding in the Bering Sea close to the rocky beach situated at Nekeelit Point.

Red-necked Phalarope *Phalaropus lobatus*

This Phalarope also has been found nesting on the islands in the Bering Sea, including St. Lawrence Island (Friedman 1932). Cade (1959) considered it a common breeding species and stated that pairs were common on Troutman Lake in June 1950. We saw four birds feeding near a pool, close to Troutman Lake, southeast of Gambell on 1 June.

Long-billed Dowitcher *Limnodromus scolopaceus*

This species has been recorded as a fall migrant on the island but never as a breeding species (Friedman 1938; Cade 1959). Cade (1959), however, stated that the species seems to be a fairly common resident and probably nests on the wetlands of the interior, but is rare near Gambell. On 1, 2 and 3 June I saw two pairs west of Troutman Lake, in a wetland area with marshes and pools. On 1 June I observed copulation by a pair, indicating that the birds were in their probable breeding habitat.

Ruddy Turnstone *Arenaria interpres*

Gabrielson *et al.* (1959) mention this species as a breeding bird for St. Lawrence Island. Cade (1959) found Turnstones nesting along the east shore of Troutman Lake, observing five resident pairs along that side of the lake in June 1950 and one nest containing four eggs on 25 June near the water's edge.

On 31 May I saw what seemed to be a pair near Gambell and recorded three birds at Troutman Lake. On the humid tundra in the Nekeelit Point mountains, 3 territorial birds were observed on 2 June and I found one male in summer plumage which had been shot by Inuit Eskimos near Troutman Lake on 3 June.

From examination of the series in the US National Museum and the Gabrielson collection it has been concluded that both breeding and migrant Alaskan Turnstones are much closer to the European race than to the Ruddy Turnstone *A. interpres morinella*. Gabrielson *et al.* (1959) agree with both Ridgway and Friedman in this respect: although they were unable to find any character by which every specimen could be identified, they found Alaskan Turnstones to be darker on the back, with more black, than is the case with birds from eastern Northern America.

I observed the same plumage features for the Turnstones on St. Lawrence Island, near Gambell, where they were feeding communally on whale meat. Although this brings them much closer to the European form, I think they probably would be more accurately identified as intermediates.

Rock Sandpiper *Calidris ptilocnemis tschuktschorum*

Rock Sandpipers breed on St. Lawrence Island, Nunivak Island, off the mainland on Seaward Peninsula and probably the higher ridges and isolated ranges in the Yukon Delta (Gabrielson *et al.* 1959). Cade (1959) concluded that this bird is a common breeder on the island, ranking nearly as high as *Calidris alpina* in average numbers, but he found no nests. He also stated that the St. Lawrence Island birds range in size from that of the smallest *tschuktschorum* through the largest *ptilocnemis.*

Nelson (1887) assumed that Rock Sandpipers were nesting on St. Lawrence Island on 24 June 1881 but he never found any nests.

On 4 June 1988 I observed a female walking to a nest situated in dry rocky tundra in the mountains near Nekeelit Point in the vicinity of a rocky beach on a western slope. After about half an hour the bird had laid her first egg. The breeding plumage of the female resembled very closely that of *tschuktschorum* race. Seven other pairs were seen in this area together with three empty nests.

Dunlin *Calidris alpina pacifica*

Dunlins have appeared with some regularity on St. Lawrence Island (Gabrielson *et al.* 1959). Nelson (1883) found it to be common. Baily (1925) found several pairs with well-developed sex organs in early July. Dunlins were reported by Brook (1915) and by Cade (1959) who took specimens at Gambell and observed many nests there and at Boxer Bay. According to Cade (1959) this species is a common shorebird on the island. Cade reported arrival at Gambell on or about 19 May each year; within a few days small flocks were seen on nearly every large patch of snow-free tundra as also observed by us in the Nekeelit Point mountains at the end of May 1988. Cade (1959) saw about a dozen resident pairs in late June in the 1950s at the steep slope above the east side of Troutman Lake. He found four nests in the area on 25 June in a patch of *Salix* and grass in dense ground vegetation on well drained soil.

We found nests in very wet tundra with dense grasses in the mountains near Nekeelit Point on 4 June and counted about 12 resident pairs displaying territorial behaviour and calling on 2 and 4 June. In addition ten resident pairs were observed along the roads in the Gambell area, while six territorial pairs were seen at the southwest side of Troutman Lake on 1 June and five pairs on 2 June at the west side of the same lake.

Western Sandpiper *Calidris mauri*

This species breeds from the mouth of the Kuskokwim River north along the coast to Point Barrow on the mainland and commonly also on Nuniak Island (Gabrielson *et al.*1959). Nelson's (1887) statement that he had seen the species on St. Lawrence Island was the only reference to it there until Cade (1959) reported seeing it several times at Gambell and collected a specimen on 26 June 1950. A female in breeding plumage taken on 14 July 1953, and a juvenile male taken on 9 August the same year, both on the north shore of Troutman Lake, are in the UBC collection. They prefer the drier tundras for nesting sites, the nests being well hidden in the abundant short vegetation.

We spotted two courting pairs along the northern slope of Troutman Lake on 2 and 3 June 1988. The males tried to move the females to a suitable nesting place amongst dense grasses. A few days previously, on 31 May, we had seen a pair in Gambell village.

Baird's Sandpiper *Calidris bairdii*

Cade (1959) states that this species may breed on St. Lawrence Island. Three adult males taken on the north shore of Troutman Lake on 8 August 1953, are in the UBC collection. In August 1950, flocks of 2-6 birds, often mixed with larger groups of Western Sandpiper, were sometimes seen near Gambell and on the beaches of the south coast (Cade 1959). No previous records for the island are available. In 1987, the first breeding record (a nest with five eggs in Gambell) was established by a member of our expedition.

Little Stint *Calidris minuta*

Accidental in Alaska, one bird was observed at Point Barrow on 28 June 1976 (Kessel & Gibson 1978). This species was not known from St. Lawrence Island (Gabrielson *et al.* 1959; Cade 1959).

We observed one bird in breeding plumage on 31 May near Gambell along a roadside. Two other birds were seen on 1 June near the southwest corner of Troutman Lake and one bird on 2 and 3 June in the same location.

Rufous-necked Stint *Calidris ruficollis*

This species is a rare spring migrant, a very rare summer visitor and a possible breeder on St. Lawrence Island (Kessel & Gibson 1978). We saw five birds in summer plumage near Gambell along the edge of a pool on 31 May and 3 birds were seen at the same place on 1 June.

Pectoral Sandpiper *Calidris melanotos*

This species has been recorded in breeding plumage from islands in the Bering Sea like St. Lawrence (Bailey 1926; Friedman 1932, Murie; 1936) and seems to fluctuate widely in numbers from year to year (Cade 1959). I saw 8 birds on 31 May near Gambell along a pool. On 1 and 2 June two resident pairs displaying courtship behaviour near the southwest corner of Troutman Lake were observed. On 2 and 4 June one territorial pair was seen near Nekeelit Point. On 3 June 3 pairs were seen in wet tundra close to a small pool on the south east corner of Troutman Lake.

Ruff *Philomachus pugnax*

This species has been reported from St. Lawrence

(Gambell) as a non-breeding bird (Gabrielson *et al.*1959), one male was recorded by Murie (1936) on 7 May 1933, and five birds were reported on 17 June 1961 (Sealy *et al.*1971). We saw one female on 1 June near a pool west of Troutman Lake.

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Recent ringing totals

compiled by Robin M. Ward

Tables 1 and 2, overleaf, are ringing totals listings received for the period January to December 1989 inclusive.

The nomenclature and systematic order used in the tables follow Hayman *et al* (1986). Totals given in parentheses are for chicks, where these were reported separately from full-grown birds. We would like to encourage all members worldwide who catch and ring waders to send us their ringing totals enabling us to present the global picture.

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