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THE HOME LIFE OF THE BAIRD SANDPIPER

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WITH MAP AND FIVE PHOTOS

THE BAIRD Sandpiper (*Pisobia bairdi*) is certainly an "extremist" in its conception of the proper places at which to spend the different seasons of the year, for it breeds entirely within the Arctic Circle, and passes the winter in southern South America. In the United States it occurs merely as a passing migrant in spring and fall. The present author became acquainted with the species in its summer home during the seasons of 1913 and 1914, which he spent in the heart of its summer habitat, on the two hundred mile stretch of Arctic coast extending westward from the mouth of the Mackenzie River. Notes and photographs secured at that time are used in the following account of the bird; for permission to use this material the writer is indebted to Mr. John E. Thayer, who met the cost of the field work whereby it was obtained. He is further indebted to Mr. Thayer and to Mr. Samuel Henshaw, Curator of the Museum of Comparative Zoology, for the photographs of the two sets of eggs (figs. 27 and 28). These specimens, taken upon this same expedition, are now in the collection of the above named institution.

Specimens of the Baird Sandpiper have been taken in winter at 13,000 feet elevation in the mountains of northern Chile, in Argentina, and in Patagonia. It is said to remain in its winter home until the last of March (Cooke, Biol. Surv., Bull. 35, 1910, p. 39). When it starts on its northward journey to the shore of the Polar Sea the route followed in traversing northern South America appears to be unknown, for the species is practically lost sight of until its arrival on the Gulf coast of Texas. Here it has been reported as of common occurrence from early in March to the middle of May.

The main migration route to the breeding ground may be said to lie between the eastern foothills of the Rocky Mountains and the Mississippi River. There are comparatively few spring records from the Pacific Coast of North America,

and these mostly from southern stations. From southeastern Alaska there are but two or three. The Baird Sandpiper seems to be practically unknown east of the Mississippi during the spring migration. At points farther north large flocks foraging on masses of floating ice were noted by Preble at Lake Athabasca, Canada, May 25, 1901 (N. Am. Fauna, no. 27, 1908, p. 321); and Grinnell (Pac. Coast Avif., i, 1900, p. 23) records a female from Kowak River, Alaska, May 20, 1899.

The species arrives at its breeding grounds in the Arctic during the last week in May. Brooks noted the first arrival at Demarcation Point, on the Alaska-Canada boundary, on the Arctic Coast, on May 23, 1914, while the average date of arrival for three years at Point Barrow was May 29. At Griffin Point, Arctic Alaska, the first birds were noted May 31, 1914. Dr. R. M. Anderson

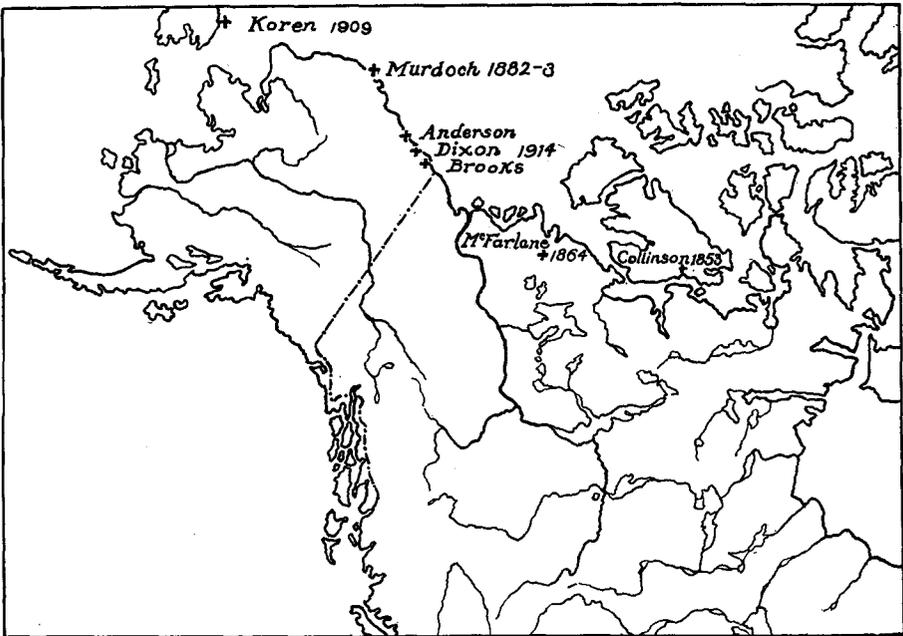


Fig. 26. MAP SHOWING BREEDING STATIONS OF BAIRD SANDPIPER, ALONG ARCTIC SHORES OF SIBERIA AND NORTH AMERICA. THE YEARS INDICATED ARE THOSE WHEN OBSERVATIONS WERE MADE.

took a specimen at Collinson Point, Arctic Alaska, on May 31, 1914.

According to the A. O. U. Check-List (1910, p. 114) the Baird Sandpiper "Breeds along the Arctic Coast from Point Barrow to Northern Keewatin". The most eastern record that I have been able to find is that of Collinson (1853) at Cambridge Bay on Victoria Island, Franklin. However, recent evidence indicates that the breeding range of this species is not entirely restricted to the western hemisphere, as had been supposed. (See fig. 26.)

On June 11, 1913, an adult male Baird Sandpiper was secured by our party at the head of Providence Bay, East Siberia (Brooks, Bull. Mus. Comp. Zool., LIX, 1915, p. 385). John Koren (Warbler, xi, 1910, p. 10) states: "On July 3 [1909] I found a nest of Baird Sandpiper on the high, stony plateau on the south end of the island [Koliuchin Island, northeast Siberia], the eggs about five days incubated". Thus it appears that the species also breeds along the coast of north-

east Siberia, where conditions are similar to those of the nesting ground in northernmost North America. There seems to be no instance of the Baird Sandpiper nesting south of the Barren Grounds of the Arctic Coast.

Dr. R. M. Anderson (in Stefansson's "My Life with the Eskimo", 1913, p. 472) says that this species "nests somewhat locally, usually on dry ground near the coast". He also points out that it may be absent at a certain point and abundant only a few miles away. The present author also noted this tendency of the species to breed in comparative abundance at one particular place, while it might be entirely absent at a similar, and as far as could be seen, equally suitable, place only a few miles distant. This bird was found to be the commonest breeding sandpiper at Herschel Island, Yukon, where an officer of the Northwest Mounted Police informed me that several nests had been found on the dry tundra in late June.

Upon our arrival at Herschel Island on July 28, 1914, between thirty and forty young Baird Sandpipers were noted daily in a series of shallow tide pools adjoining the "Barracks". Some of these were scarcely able to fly, in fact the Eskimo boys ran one down, so these birds could not have flown across the channel from the adjoining mainland, where the species was rare or absent at this date.

Unlike the Longspurs and some other birds, the male and female Baird Sandpiper arrive at the breeding grounds together. They were notable among the shore birds on account of their nervous demeanor and retiring nature. Another good field character is found in the long wings and legs, combined with a relatively slender body, which makes the birds appear much larger than they really are, especially in comparison with the wee Semipalmated Sandpiper, with which they are most often associated. As a rule the Baird Sandpiper is a retiring personage, preferring his own or his mate's company to that of other birds.

On May 31, 1914, at Griffin Point, Arctic Alaska, the first pair of Baird Sandpipers for the season were noted feeding along the rim of a frozen tundra pond. The weather had turned bitterly cold during the previous night, and as a result the newly formed ice on the ponds was thick enough to support a man. Strictly speaking, there was no night at this date, for the two months of continuous daylight had already begun; so in a short time the sandpipers were bustling about picking up the mosquito and other pupae which were being washed out by a newly-born stream that gurgled under the snow and ice on its way down to the frozen lagoon.

The Longspurs and Semipalmated Sandpipers waded boldly along the margins of the shallower pools when feeding, but the Baird Sandpipers seemed to be more dainty, and at this time were not observed to wade to the extent that the other birds did. They apparently preferred to hunt their food along the edges of pools with banks sufficiently abrupt so that from the shore they could pick up floating pupae and other dainties and still keep their feet dry.

The courtship of the Baird Sandpiper appears to be carried on in absolute silence. This is in marked contrast to the ventriloquial hooting of the male Pectoral Sandpiper, or the cricket-like song and peculiar nuptial flight of the Semipalmated Sandpiper. Brooks (loc. cit.) has aptly described the courtship of the Baird Sandpiper as follows: "Only once did I note any courtship activity. On this occasion (May 24), the male would fly a few feet above the female, while she rested on the ground, with quick erratic wing strokes suggesting a Nighthawk. Frequently he would alight and raise the wings high over the back as a gull does before folding them. Then with the forearms perpendicular, the primaries

would be slowly raised and lowered like a pump handle, generally lowered to right angles with the forearms, sometimes lower. Not a sound was uttered." On May 31 the present author witnessed a similar silent courtship at Griffin Point, Alaska.

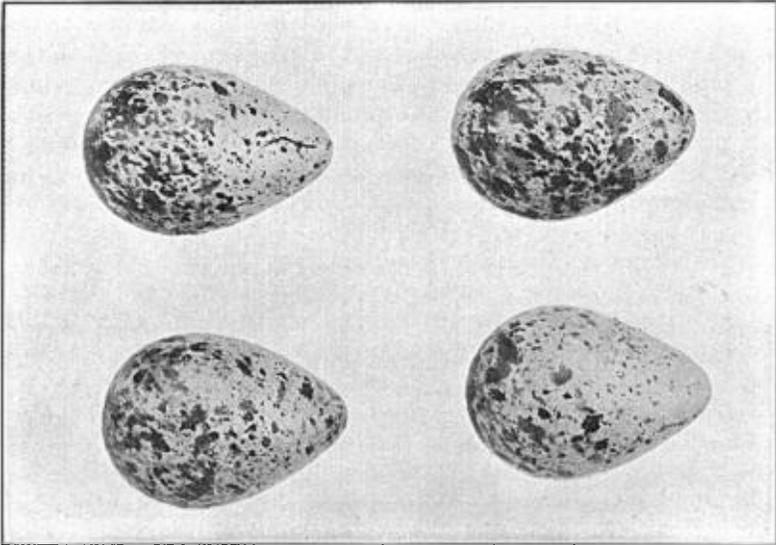


Fig. 27. EGGS OF THE BAIRD SANDPIPER, NATURAL SIZE. SET SECURED BY W. S. BROOKS AT DEMARCATON POINT, ALASKA, JUNE 12, 1914.

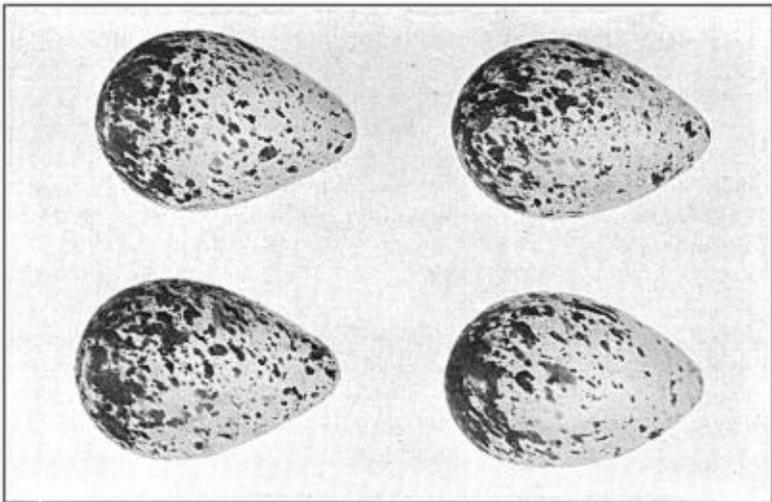


Fig. 28. EGGS OF THE BAIRD SANDPIPER, NATURAL SIZE. SET SECURED BY W. S. BROOKS AT DEMARCATON POINT, ALASKA, JUNE 14, 1914.

All of the nests of the Baird Sandpiper which I have examined were near the coast and placed on dry, well drained tundra, away from the immediate vicinity of ponds. Murdock, at Point Barrow, Brooks, at Demarcation Point, and Anderson at various points along the Arctic Coast, have all noted this same nesting

preference. MacFarlane (Proc. U. S. Nat. Mus., xiv, 1891, p. 426), however, states: "On 24th June, 1864, a nest containing four eggs was found in the Barren Grounds in a swampy tract between two small lakes, and was composed of a few decayed leaves, placed in a small cavity or depression in the ground, shaded by a tuft of grass."

Murdock (Rept. Exp. Pt. Barrow, 1885, p. 112) says: "The nest was always well hidden in the grass, and never placed in marshy ground or on the bare black patches of tundra, and consists merely of a slight depression in the ground thinly lined with dried grass. All the eggs we found were obtained from the last week in June to the first week in July, a trifle later than the other waders."

Brooks (loc. cit.) remarks: "Two nests were found, each containing four eggs and about one quarter incubated on June 12 and 14, 1914. Murdock found them nesting rather later than other waders at Point Barrow, but my experience at Demarcation Point was quite the opposite, for here they were the first to breed. A female taken June 2, had a fully formed and colored egg about ready to lay. Both of the above nests were like the other sandpipers, and lined with dry willow leaves, but the cavities were less deep than those of the Semipalmated Sandpiper."

At Griffin Point, less than fifty miles to the eastward of Demarcation Point, the first set of eggs (fresh) was taken on June 24. The last set was found July 11, with the four eggs nearly ready to hatch. Murdock speaks of the nests being well concealed and always hidden in the grass. In those nests which we found, no attempt had been made at such concealment, as they were placed absolutely in the open, with nothing to cover or conceal the eggs at all, and the nests so shallow that the tops of the eggs were almost or quite level with the surrounding grass. Far from being conspicuously exposed thereby, however, the eggs were shielded from discovery in the most effective manner possible, for in color and markings they blended so perfectly with the brown tundra that a person could easily look directly at them from a distance of six feet and still not be able to see them.

This method of nesting seems to be the most effective way of escaping one great danger at least, namely, the notice of the countless Jaegers, both Parasitic and Pomarine. These robbers subsist almost entirely during the breeding period on the young and eggs of other birds, and cruise continually back and forth over the sandpipers' nesting ground, looking for the least telltale feather, bit of wind-blown down, or other object which might afford a clue to the whereabouts of a nest.

On June 26 I found a nest of the Baird Sandpiper by nearly stepping on the bird. It contained three fresh eggs, and was in the usual exposed position on the tundra, there being only the slightest of depressions lined with dead willow leaves which were also well strewn over the tundra in general at this particular point. I marked the nest by placing a fresh chunk of turf on a little mound about ten feet to one side. Upon taking my departure I noticed a Pomarine Jaeger following in my wake, and as I looked back the bird spied the upturned clod and promptly lit and began to walk around on the ground to see the cause of the disturbance. It is perhaps needless to add that the three eggs were gone when I returned. I found that the only way to mark down a nest was by placing two guides in a line, keeping them at least fifty yards away from the nest site.

All of the complete sets of eggs which have come under my notice have con-

sisted of four eggs. The three eggs referred to above were fresh, and the set probably incomplete.

In those pairs which I have observed the male bird was found covering the eggs more often than the female, so I believe that it is safe to say that the male does at least half of the incubating. The birds are very nervous and extremely wary when once they have been flushed from the nest. They usually "sit tight" the first time, however, and do not flush unless nearly stepped upon.

On June 25 a male bird was flushed from a nest at a distance of less than six feet. I had been told the general location of the nest, hence was carefully examining the tundra as I walked slowly along, yet I was unable to see the bird, flattened out as he was, and doubtless would have passed directly over him had he not darted from under my feet. Desiring a photograph of the brooding bird I set up the camera a few inches off the ground, and four feet from the nest, covering it completely with brown tundra moss. I then hid in a slight depression



Fig. 29. NEST OF BAIRD SANDPIPER ON DRY TUNDRA NEAR GRIFFIN POINT, ARCTIC ALASKA, JULY 11, 1914.

about thirty yards away, and awaited the return of the bird.

Instead of returning directly to the nest the bird first flew about in wide circles. Then, having satisfied himself that no active danger threatened, he lit about twenty yards away and began to run in circles about the nest, gradually approaching nearer and nearer. He stopped every few yards, and remaining motionless, blended into the landscape so effectively that I was quite unable to distinguish him unless I had had my eyes directly upon him when he stopped. During these stationary periods a low whining bark was heard, of which he appeared to be the author, for the sound always came from where the bird stood, and moved about as he moved. No other bird put in an appearance. The male finally went onto the nest, but bolted wildly at the click of the shutter. He would not return at all after being flushed a second time.

On July 11 another nest was located, on a barren ridge close to a large snow

bank. In this case the bird fluttered off, simulating a broken wing and uttering cries of distress. We were some twenty-five yards distant when he flushed, and had considerable difficulty in finding the nest. It contained the usual four eggs, so badly incubated that there seemed little hope of saving them, and in every respect was typical of the species. The photo (fig. 29) was taken about nine o'clock in the evening. Unfortunately the slanting rays of the sun glinted from the upper surface of the eggs, obscuring the markings, which were unusually bold in this set. Both female and male came about and inspected the camera, while we hid behind a snowbank trying to keep warm by fighting mosquitos. It was over half an hour before the male returned to the nest, and then he insisted upon facing the camera, which is a trait typical of all sandpipers that I have tried to photograph on their nests (fig. 30).

We did not secure any Baird Sandpipers in natal down, as apparently we



Fig. 30. SAME NEST AS IS SHOWN IN FIG. 29; NEAR GRIFFIN POINT, ARCTIC ALASKA, JULY 11, 1914. MALE BAIRD SANDPIPER BROODING.

left too soon, going aboard the ship leaving winter quarters on July 16. We did not again meet with the species until reaching Herschel Island on July 28. Dr. Anderson, however, took downy young at Collinson Point on July 11.

In the report of the McIlhenny Expedition to Point Barrow, Stone states: "Ten young in the down were taken July 16, 18 and 27; they are darker than young Dunlins, with the brown tints darker and not so rufous, while the light mottlings are whiter and less tinged with buff. Two others taken August 1 are intermediate between the down and first winter plumage" (Proc. Acad. Nat. Sci. Phila., 1900, p. 26).

A young Baird Sandpiper taken at Herschel Island, Yukon, July 30, has the natal down still plainly visible on the back and top of the head (fig. 31); the whitish tips of the feathers on the back are much in evidence. These white edg-

ings on the dark feathers were very much in accord with the general black and white color scheme of the gravel bar upon which the bird had squatted, endeavoring to escape notice by remaining motionless. The change from natal down to the immature plumage is well illustrated in this individual.

The young sandpipers were found feeding in the shallower pools, where the water was less than one inch deep. At times as many as five were noted in an area one yard square. They congregated along the water's edge, picking up, as the tide slowly receded, many bits of food. The nature of this provender I could not make out although the young birds would often come within twenty feet of me when I remained motionless for a few minutes. The old birds were much more shy, often taking flight or retreating to distant gravel bars upon my approach. Considerable time was spent by both young and old in making short flights about the harbor. These flights alternated with periods of food getting, and were seemingly in preparation for the fall migration. It was only a few days then until the bulk of the species left on their southward journey.



Fig. 31. IMMATURE BAIRD SANDPIPER HIDING ON GRAVEL BAR. HERSCHEL ISLAND, YUKON, JULY 30, 1914.

Murdock reports the last bird seen at Point Barrow on August 12. In 1913 we noted the last of the species on August 11, near Barter Island, Arctic Alaska; in 1914 I saw none after August 15. There is no apparent reason for the sandpipers leaving their summer home as early as they do, as the weather is very much more genial at this time than it is during the breeding season, and the food supply is certainly as abundant.

The main body of Baird Sandpipers return south by the spring migration route, between the Mississippi and the Rockies, but there is a tendency to spread out along both the Atlantic and Pacific sea coasts. Swarth (Univ. Calif. Publ. Zool., VII, 1910, p. 51) noted the first fall migrant at Thomas Bay, in southeastern Alaska on August 15, 1909, and the birds were common a week later. The species has been considered rare on the Atlantic coast in fall, but recent observations have produced numerous records until it seems now that the bird must be more common there than it was believed to be. The birds reach their winter home in southern South America in September.

, *Museum of Vertebrate Zoology, University of California, March 14, 1917.*