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## NESTING OF THE WANDERING TATTLER

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WITH EIGHT ILLUSTRATIONS

For many years the location of the nesting grounds of the Wandering Tattler, *Heteroscelus incanus* (Gmelin), remained a mystery to ornithologists. The summer range is still imperfectly known. But the winter range is known to extend along the Pacific Coast from southern California south to Ecuador, to the Galapagos Islands and other islands of the South Pacific Ocean, and westward to and including the Philippine Islands. By the first of May most of the tattlers have left their winter home and are on their northward migration to their breeding grounds in the interior of Alaska, which are reached by the middle of May.

Like the Surf Bird, the Wandering Tattler spends nine months of the year along the rugged reefs, amid the flying spray of the Pacific seacoast. When the breeding season arrives the birds forsake the coast and fly far inland where they breed just above timber line along secluded mountain streams in Alaska.

The writer has been a member of six expeditions to Alaska during the past twenty-five years, covering nearly all of the coast line of Alaska and quite a bit of the interior. From this field work and from the reports of other observers he has come to the conclusion that the main nesting ground of the Wandering Tattler lies along the interior base of the main Alaska range from the region of Yakutat Bay northward to Mount McKinley. In this territory, many glacial streams from the mountains and glaciers (fig. 35), as they emerge, form numerous channels and extensive gravel bars. Here along the gravel bars and seepage waters the Wandering Tattler makes its summer home.

It is indicated clearly that two conditions are required to form a suitable nesting habitat for this species. The nest is usually placed on a rough gravel bar where the rocks vary in size from that of a grapefruit to that of a small watermelon, and here it is placed in a natural depression amid the bare rocks. However, not every gravel bar will do, for there must be seepage pools of shallow, clear water near the nest so that the downy chicks which leave the nest soon after they are hatched may find suitable foraging ground. Food in the form of small aquatic insects is apparently exceedingly important for the survival and growth of the downy young.

The first nest of this bird to be reported was discovered in 1912 by Sir Frederick Lambart of the Canadian Coast and Geodetic Survey. This nest was located about twenty-five miles south of the Arctic Ocean near the international boundary



Fig. 35. STREAMS FLOWING FROM THE INTERIOR SIDE OF THE ALASKA RANGE FORM NUMEROUS GRAVEL BARS AND MANY SHALLOW POOLS AND CHANNELS. THIS IS THE TYPICAL BREEDING HABITAT OF THE WANDERING TATTLER. HEAD OF TEKLANIKA RIVER, ALASKA. PHOTOGRAPH TAKEN JULY 18, 1932; WILD LIFE DIVISION NO. 2628.



Fig. 36. AN EXCELLENT EXAMPLE OF CONCEALING COLORATION IS FURNISHED BY THE WANDERING TATTLER, WHOSE SLATY BACK AND BARRED UNDERPARTS CAUSE THE BIRD (CENTER OF PHOTOGRAPH) TO BLEND WITH THE BACKGROUND. SAVAGE RIVER, ALASKA. PHOTOGRAPH TAKEN MAY 24, 1926; MUS. VERT. ZOO. NO. 5270.

between Canada and Alaska. The first set of eggs to be collected was obtained by Mr. O. J. Murie of the United States Biological Survey, on the upper Savage River in Mount McKinley National Park on July 1, 1923. This nest was discovered by accident, by a camp wagon and attached team of horses being driven almost over the incubating bird on the nest. This nest was described by Murie in the *Auk* (41, 1924, p. 231) and was typically located amid bare rocks on a rough gravel bar near the main stream. It was composed of fine rootlets and small twigs which the bird had woven into a firm basket-like nest, the cup of the structure being about five inches across and about an inch and a half in depth. So durable are these nests that I have found several nests of a previous year's vintage that had remained intact throughout the winter and the following spring.

The eggs of the Wandering Tattler are unlike those of any other shore bird that the writer has examined. As a matter of fact, they are in color and shape very suggestive of certain eggs of the common crow. The ground color is "greenish glaucous" and they are heavily blotched around the larger end with blotches of "seal brown" and "burnt umber." Sets of four eggs are the rule. Broods of four downy young have been found by the writer on four different dates while two broods of three downies have been watched and studied.

The nesting date varies considerably with the year. In 1926, which was an early season, we discovered a brood of downy chicks just out of the shell on June 22, whereas, in 1932, which was a backward season, the first brood of downy young was not found until July 14, and a late brood of four downies just out of the eggs was discovered at Sable Pass on July 20.

Generally speaking, the birds are to be found foraging along the water's edge, particularly where the stream-bed is composed of fair-sized cobblestones and where the stream flows swiftly. The slatish color of the back of the bird blends surprisingly well with the rocky background (fig. 36), so that a person may be within twenty or thirty feet of a tattler and still not notice the bird. The tattlers seem to be aware of the fact that they are practically invisible so long as they stand stock still, and we found by repeated trial that they would often remain motionless and let us go by within a few yards of them. Several pairs of tattlers are to be found in summer along the upper portion of the Savage River.

In foraging, the tattlers thrust their bills down, keeping their heads in a nearly vertical position, and feel around under the water about the edges of the larger pebbles and stones. In shallow water we could see the smaller pebbles, those about the size of marbles, move as a bird worked around them and under them with the bill in search of certain fresh-water animals. Where the water was four inches deep, the bird's whole head and part of the neck were immersed for as long as ten seconds at a time, by the watch. On May 21, while we watched, one of the birds waded out into a pool of water until it got beyond wading depth. Instead of trying to fly across to the other side of the pool, this bird just sat down in the water and swam across, paddling vigorously.

The tattlers are noisy birds when flushed, particularly after the young are hatched. But during the period of incubation, the birds are remarkably quiet and secretive. The nesting sites are located on open, gravelly bars, where the accumulated rocks are about the size of cantaloupes. The nest itself is merely a depression, wallowed out by the bird, between small boulders. A scant lining of interwoven willow rootlets cradles the eggs and keeps them from coming in direct contact with the broken, sharp edges of the rocks. During incubation, the male bird was usually found standing guard, giving warning to his mate of the approach

of any and all enemies. This warning enables the brooding female to sneak off the nest, unobserved, while enemies are still at some distance. For this reason it is difficult to locate the nest of the tattler, since the eggs are spotted and colored in such a manner as to blend with the background and to render them difficult of detection, even when a person is standing almost, or quite, over the nest.



Fig. 37. THE PERCHING ABILITY OF TATTLERS, WHICH ARE TRUE WADING BIRDS, IS NOT GREAT, AND THEY HAVE CONSIDERABLE DIFFICULTY IN MAINTAINING THEIR BALANCE. NOTE LONG TOES EXTENDING ACROSS FORKS IN TWIG TO GIVE A LARGE PERCHING SURFACE. MOUNT MCKINLEY, ALASKA. PHOTOGRAPH TAKEN JULY 14, 1926; MUS. VERT. ZOOLOG. NO. 5297.

On May 24, a male tattler began to scold as soon as we came near his nesting ground. He then flew around us on a tour of investigation, and at length alighted in the top of a slender, dead willow (fig. 37). He then circled back over his mate, which was feeding at the edge of a nearby pool, and fluttered and paused momentarily above her while he uttered a clear *tweet tweet tweet*, very

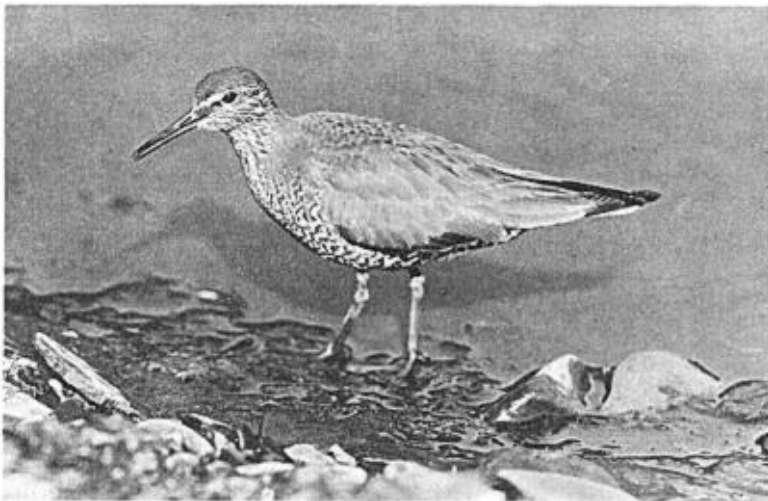


Fig. 38. THE MALE TATTLER KEPT HIS EYE ON US AS HE FED IN SHALLOW WATER ONLY AN INCH DEEP. SAVAGE RIVER, ALASKA. PHOTOGRAPH TAKEN JUNE 22, 1926; MUS. VERT. ZOOLOG. NO. 5281.

much as does the Spotted Sandpiper in its mating season. When close pressed, tattlers often teeter nervously up and down, just as these sandpipers do.

Usually when a person approaches within one hundred yards of the tattler's young, the adult birds fly up and perch on the top of some willow bush. The perching ability of tattlers, which are strictly wading birds, is not very great, and they have considerable difficulty in maintaining their balance when perched in willow tops (fig. 37). However, from such vantage points they watch the intruder and warn their offspring of any approaching danger. Most of the tattler chicks heed instantly the warning of their parents and crouch motionless, with neck extended, on the gray gravel, where their gray backs blend so perfectly with the slatish color of the rocks that a person is likely to walk over or even step on them without seeing them. As long as the intruder remains in sight, the parent tattlers keep up their warning cries. However, we found that if we would walk away, apparently leaving the locality, but after going a couple of hundred yards, would retrace our steps and sneak back and watch with binoculars, the parent tattlers would soon call forth their chicks and would resume hunting for their food along the shallow margins of the clear seepage water.

On June 21, near the head of Savage River, we found a tattler feeding in shallow water only an inch or so deep. It kept its eye on us as it fed (fig. 38), reaching under stones with its bill.



Fig. 39. THE PARENTS FLUTTERED WILDLY AT OUR FEET AND THEN FLEW UP AND PERCHED IN TOPS OF LIVE WILLOWS, SCOLDING VIGOROUSLY. SAVAGE RIVER, ALASKA. PHOTOGRAPH TAKEN JUNE 22, 1926; MUS. VERT. ZOO. NO. 5290.

On June 22, as we again approached this spot, the male tattler began to chirp excitedly, the warning call being very much like the metallic warning note of the California ground squirrel. As we stood listening, we heard a faint reply to the parent's call, and looking upstream, saw a downy young tattler chick running about, seeking food along the edge of a shallow seepage pool. We ran up and caught this chick, which instead of hiding at once, had run across the open gravel bars toward a clump of willows. Upon

looking around, we discovered another chick, running up the gravelly stream bed. As we ran after it, we almost stepped on the third chick, which had crouched on the rocky ground at our first appearance. The fourth and last chick in the brood was then spied, just as it was going out of sight. During this time, both parents fluttered about wildly at our feet and then flew up and perched in the tops of the willows nearby (fig. 39), from which vantage points they scolded us vigorously. When we put the chicks into our rucksack, the male tattler came up and nestled down about four feet away from the sack and then tried to call the chicks to him. This call note was the low *deedle-deedle-cherr* brooding note.

We found that the general appearance of the two parent birds was much the same. However, the male is smaller than his mate, being about one-half inch less in length. He is also darker, particularly with regard to the dark bars across the breast. In the male the white area on the chin is covered with small, faint, dark spots. The male tattler, rather than the female, showed the greatest anxiety and solicitude for the welfare of the chicks. When one of the downy young-

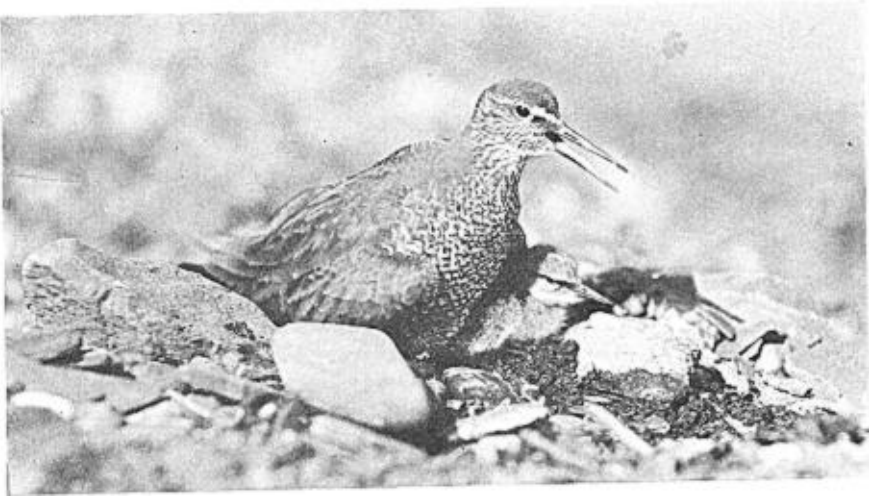


Fig. 40. THE MALE TATTLER HOVERED THE CHICK AND ASSUMED MOST OF THE CARE OF THE DOWNY YOUNG. SAVAGE RIVER, ALASKA. PHOTOGRAPH TAKEN JUNE 22, 1926; MUS. VERT. ZOOL. NO. 5269.

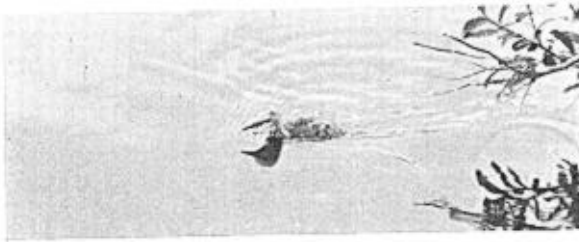


Fig. 41. THE DOWNY CHICKS ARE ABLE TO SWIM READILY, AS WAS DEMONSTRATED BY THIS INDIVIDUAL. SAVAGE RIVER, ALASKA. PHOTOGRAPH TAKEN JULY 8, 1926; MUS. VERT. ZOOL. NO. 5293.



Fig. 42. WHEN ONE-THIRD GROWN, THE YOUNG TATTLER SOUGHT TO ESCAPE BY RUNNING AND HIDING IN THE DENSE HERBAGE THAT GREW ALONG THE STREAM. SAVAGE RIVER, ALASKA. PHOTOGRAPH TAKEN JULY 8, 1926; MUS. VERT. ZOOL. NO. 5296.

sters, which had been turned loose, peeped plaintively, the male tattler flew over and, with partially spread wings, hovered the chick (fig. 40), uttering a series of reassuring notes meanwhile. Then both parents coaxed and accompanied this youngster about until the chick came to a steep gravel bank, where it sought refuge under a shelving rock. At this time we saw the adult tattlers pursue craneflies which they captured on the wing, jumping clear off the ground in doing so. We watched them as they fed on small fresh-water snails and on small larvae that crawled along under stones in water which was about two inches deep.

The chicks are able to swim when first hatched, as was demonstrated by one downy youngster when he came to a place where the water was deep (fig. 41). However, the young do not take to water as readily as do the chicks of the Semipalmated Sandpiper.

By July 12 we found that the young tattler chicks had grown surprisingly and that their slate-colored primary wing feathers were already over an inch long. The gray, natal down on their backs was entirely replaced by slate-colored feathers, while on the lower breast and belly cream-colored pinfeathers had replaced the natal down. When we attempted to capture a young tattler, he sought to hide, not out upon the open gravel as he had when two or three days old, but by running and hiding (fig. 42) among the grass and flowers that grew on the stream bank. If closely pursued, he would take to the water, where he swam readily, making headway even against a fairly stiff current. By this date, when about twelve days old, young tattlers were active and fleet enough to capture flying insects that moved about the fireweed which grew in clumps about the sandy bank.

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May 10, 1933.*