

male owl perched on the ground, as she appeared dark against the new snow. I stopped the car as close as possible (about 50 yards from the owl) in order to have a better look without leaving the vehicle. In a few moments, oblivious of the automobile, she took flight, sailed past us about five feet above the ground and only a few yards away, and realigned on the ground 30 yards from us. Only when she began to tear off and swallow chunks of something in her talons did we realize that she must have caught prey as she alighted, since she had been carrying nothing when she flew past us. We watched through binoculars (mine 9×) as she fed, and determined that the prey was a mouse, which was devoured in five or six bites, the long tail last. Then the Snowy Owl burrowed her face into the snow and rubbed it back and forth sidewise a few times, took a couple steps forward and burrowed and rubbed her face again ("as if finding a clean spot on the roller-towel")—repeating this hard wiping followed by stepping forward three or four times.

In "The behaviour, breeding, and food-ecology of the Snowy Owl *Nyctea scandiaca*" by Adam Watson (*Ibis* 99: 419–462) he states: "After feeding, both sexes sometimes cleaned their bills and faces by wiping them," but I could find in the literature no more detailed description of face-cleaning nor any from the wintering grounds.

Margaret S. Rusk, 220 Ostrom Ave., Syracuse, N.Y. 13210

Spring Warblers in Fall-like Plumage: On May 18, 1968, while banding at Vischer Ferry Game Management Area in southern Saratoga County near Schenectady with Will D. Merritt, Jr., of Rexford, I mist netted and banded two warblers that showed no apparent trace of spring aspect in their plumage.

The first bird was a Chestnut-sided Warbler (*Dendroica pensylvanica*) which was captured at 0710. The bird had an unflattened wing chord of 58 mm., was fat class 0 and weighed 8.5 g. The bird displayed the white eye ring, typical bright yellow-green back and a clean white breast with no trace whatsoever of chestnut streaking on the breast or flank. This corresponds to the typical fall aspect of an immature female, or possibly an immature male. The plumage was fresh looking and not excessively worn. The forehead of the bird lacked any hint of olive-yellow, so typical of the spring aspect.

Bent (1) in referring to Dwight says that the first nuptial plumage (first alternate feathering) is acquired by partial prenuptial (prealternate) molt in late winter or early spring, while Forbush (2) says that the molts are similar to those of the Myrtle Warbler (*Dendroica coronata*). For the latter he states that the bird acquires the "first breeding plumage by partial prenuptial molt (March to early May) involving body plumage, wing coverts and sometimes a tertial (this molt somewhat restricted in the female)."

The freshness and apparent lack of wear on the plumage suggest that the bird had recently molted and that the fall aspect was preserved. However, my examination of the plumage was not that complete, unfortunately, to ascertain definitely that the plumage had been recently acquired by molt, or that the bird was still in the process of molting. The examination for visible fat deposits, involving blowing the breast and belly feathers aside, revealed no sheathed feathers. Nowhere on the exposed surface of the plumage were sheaths visible either. Will Merritt photographed the bird with 35-mm. color transparency film.

The second bird was a Tennessee Warbler (*Vermivora peregrina*) which was captured at 0940 on the same net check, fortuitously, with a typical spring-plumaged male of the same species for comparison. I photographed these birds simultaneously in the hand with 35-mm. color transparency film. The individual in question had an unflattened wing chord of 58 mm., was fat class 2 and weighed 8.7 g. The more typical spring-plumaged individual had an unflattened wing chord of 67 mm., was fat class 2 and weighed 12.8 g.

In comparing these data with those in Table IV of Goodpasture (3) relating to fall, tower-killed Tennessee Warblers, the bird with the 58-mm. wing was clearly a

female, and possibly in her second year. The bird with the 67-mm. wing was clearly a male, of unknown age. Goodpasture's measurements were based on wing chords, and for 113 specimens ranged from 58 to 67 mm., with the conclusion that wings measuring 61.0 mm. or less represented females, and wings 64.0 mm. or greater represented males. These data are consistent with those more recently of Raveling and Warner (4), where fall, tower-killed Tennessee Warblers could be distinguished as follows: birds with flattened wings of 63 mm. or less are females and birds with flattened wings of 64 mm. or greater are males. These authors caution that these data should not be used for spring birds, for feather wear reduces the measurements. On the other hand, a flattened wing chord measurement of this size can be expected to be 1-2 mm. greater than the corresponding wing chord measurement. Even allowing for added feather wear for spring versus fall, the fact that this bird had a minimal wing length clearly denotes it as a female.

The female possessed the typical drab olive back, non-descript yellow-green underside and generally dingy aspect of a fall bird. There was no white line over the eye, or gray in the crown. The plumage appeared worn. In every respect, the bird looked like the typical fall aspect of the Tennessee Warbler. There were no feather sheaths visible externally about the head, and none were visible when the feathers of the belly and breast were blown aside to examine the bird for visible fat deposits.

Both Bent (5), and Raveling and Warner refer to Dickey and van Rossem's discussion of the prenuptial molt (prealternate). According to Dickey and van Rossem, this molt 'begins in late February and is not finished before the middle of March. The molt involves most of the anterior body plumage, but progresses so slowly that this species never has the ragged "pin-feathered" appearance.' Raveling and Warner in their investigation of about 1200 museum skins claim that this molt 'occurs over a much longer period of time.' They cite a specimen in molt on December 13, and further that in some birds the molt is complete by early February when it has yet to begin in others. Such early molt may produce a specimen possessing considerable feather wear by late March to early April. They further cite a migrating male collected in Louisiana on April 29 with molt about the head and breast and conclude "that many individuals begin spring migration before completion of the prenuptial molt."

In light of the bird's worn plumage and the above molt information, it would appear that the bird 1) still possessed its fall plumage in its fall aspect, or 2) had molted extremely early into spring plumage, which by May was well worn, but which retained the fall aspect. The latter seems more reasonable.

Acknowledgement: I want to thank Dr. Kenneth Parkes of the Carnegie Museum of Pittsburgh for his critical review of this note, and his specimen research which led to the following comments:

"I have looked at our collection of specimens of both species of warbler, between 100 and 150 of each. I have found one spring female Chestnut-sided Warbler that *almost* fits Yunick's description, except for a barely perceptible trace of chestnut on one or two flank feathers on each side. The back resembles fall birds. This specimen was collected at Missanabie Lake, Ontario, June 10, 1908. I am inclined to think that the bird described by Yunick simply resembles the *extreme* in the range of spring females of this species.

As for the Tennessee Warbler, again I have only found one really 'fall-like' bird among our spring specimens, a female taken at Bunker Hill, Illinois, May 8, 1882. This, too, is not *quite* the extreme described by Yunick, and is not completely 'typical' of fall birds, although in this case rather distinctly set off from any other spring bird in our collection. It is hard to evaluate his statement that 'The plumage appeared worn.' I *assume* that the condition was noticeably different from that of the more normal bird with which Yunick compared it. May 18 would seem incredibly late for a bird of this species not to have even begun its prealternate molt. As stated by Yunick, citing Raveling and Warner, early molting individuals might

appear much worn by March or April, much less mid-May. I am inclined to suspect that if this bird's physiological cycle were upset enough so that it had *failed* to molt by May 18, it probably would have been too sick to migrate normally. I think it is more likely that it molted early, but that the timing of the presumably hormonal control of feather pigmentation was a bit off, so that it assumed an alternate plumage of an aspect essentially like that of the basic plumage. I would expect that this would be most likely to happen in a bird that had molted quite early, and in this case apparently before the pigment-controlling apparatus was 'ready' to produce a normal aspect."

Literature cited.

- 1) Bent, A. C. . *Life Histories of North American Wood Warblers*, Dover Pub., New York, 1963, Part 2, p. 372.
- 2) Forbush, E. H. . *Birds of Massachusetts and Other New England States*, Norwood Press, Norwood, Mass., 1929, Part III, p. 248.
- 3) Goodpasture, K. A. : "Age, Sex and Wing Length of Tower Casualties: Fall Migration, 1962," *Bird-Banding*, 34(4), 191-199 (1963).
- 4) Raveling, D. G. and Warner, D. W. : "Plumages, Molt and Morthometry of Tennessee Warblers," *Bird-Banding*, 36(3), 169-179 (1965).
- 5) Bent, A. C. : *Life Histories of North American Wood Warblers*, Dover Pub., New York, 1963, Part 1, p. 79.

Robert P. Yunick, 1527 Myron Street, Schenectady, N.Y. 12309

Sandhill Crane at Montezuma National Wildlife Refuge, Seneca County: On 20 October 1968 at 10:30 A.M. Margaret Otis, Katharine Price, Sam Sweet and I saw a Sandhill Crane (*Grus canadensis*) at Montezuma Refuge near Rt. 89 on the west edge of the Refuge. The crane was feeding among Canada Geese in the plowed fields to the east of the parking area across the road from South Spring Pool.

Binoculars used to study the bird, which was approximately 200 yards away, were 6 × 30, 7 × 35, and 7 × 50. Identification features seen were even greyish body color, drooping tail plumes, sloping forehead with dark patch, and a body seemingly heavier than that of a Great Blue Heron. The bird was probing in the earth. After ten minutes of observation, we watched the bird fly south, head and neck fully extended, body arching above the plane of the head.

After our sighting, we notified Refuge Headquarters, returned to Cornell and reported the bird to Dr. Sally Spofford at the Laboratory of Ornithology, who telephoned others in the area. We learned later that there were a number of sightings of this bird at the Refuge that day, and some photographs were taken.

It appears that the last specimens of *G. canadensis* in New York State were taken in the 1880's. The only recent Montezuma sighting was on 30 July 1948 by R. Fischer and E. Chalif, reported in *The Wilson Bulletin*.

R. Bradley Jacobs, Cornell University, Ithaca, N.Y. 14850

EDITOR'S NOTE: The sequel to this report is as follows. The crane was seen by various observers through October 24, then was unreported until November 9 when Clayton Hardy saw it in flight. On November 13 it was found on a back road near the Refuge, by Mr. Richard Brand of Tyre, with the left wing badly broken and dragging. The crane was rushed to Cornell where veterinarians inserted a pin and bandaged the wound. At the Laboratory of Ornithology it was turned loose in a pen containing two other Sandhills, under study by George Archibald, graduate student from Nova Scotia. For several days it seemed in good shape, then stopped eating, weakened, and died the night of November 18-19. On autopsy, it was found to have extensive embolisms in lungs and air sacs, result of the gunshot wound in the wings.

The Sandhill Crane will be the subject of the "Photographs of New York State Rarities" article in the next (May) issue of the *Kingbird*, which will summarize recent sightings in the state.