

ON THE MEANING OF THE WINTER-TIME YELLOW PATCHES ON ADULT MALE AMERICAN GOLDFINCHES

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In this *Bulletin* for July 1925, (Vol. I, No. 3), pp. 45 to 48, Mrs. Whittle and the writer published a "progress report" entitled "Notes on Plumage Changes of Male American Goldfinches" (*Astragalinus t. tristis*). This paper dealt with the occurrence of summer yellow areas variously located on many birds and noted well developed as early in the winter season as February 2 (p. 46), but unfortunately no feathers of the seemingly abnormal yellow patches were collected for microscopic study. These patches at that time were regarded as probably "hold-over" areas of the previous summer plumage, rather than as the first stages of the prenuptial molt.

Commenting on the article, Dr. Stone (see *The Auk*, Vol. XLII, p. 607) writes: "We have given much attention to the molt of this species and would regard the yellow patches on adult winter birds not as remains of the previous nuptial plumage, but as part of the winter plumage, some of the feathers of which have come in yellow ahead of time. We have seen such feathers in several species appearing one molt too soon if we may so express it." This comment appears to be equivalent to saying that such yellow blotches are due to molting directly from summer plumage to summer plumage.

From the winter of 1924-25, when the observations were made forming the basis of the paper referred to, until February 25, 1928, I have searched in vain for additional examples of Goldfinches in winter-time having such yellow patches. On the later date, however, I banded an old male Goldfinch having two summer yellow patches on his ventral tract, about one fourth inch across and one half inch apart. From these patches feathers were collected for study, and from other old males feathers were collected from the same tract, but of normal winter-plumage color. A comparison of the condition of such feathers with those from the yellow patch yielded results of great and unexpected interest. The yellow feathers collected February 25th were nearly full-grown and of perfect outline; no evidence of abrasion whatever was discernible, and the evident newness of the feathers was further indicated by the fact that a portion of the sheath still adhered to the calamus. On the view that such feathers required two to three weeks to grow, their growth began about the 10th of

February. That these feathers were younger is inferred by an examination of feathers of normal winter plumage from several old males collected on February 28, 1928, from the ventral feather tract, as already stated, all such feathers showing unmistakable and pronounced abrasion.

From the above observations it appears fairly certain that summer yellow patches occurring on male Goldfinches in winter, excluding of course the yellow rump, and yellow lesser and tips of the median coverts of old males, represent the first stages in the change from the winter plumage to that of the summer dress. This prenuptial molt begins in individual males as early as the middle of January in certain examples noted, and it is characteristic of this species' molting in general to have the new yellow appear as blotches at whatever time, from January to March, molting first manifests itself. Such early-appearing yellow patches, however, are often stagnant, that is, do not increase in area for weeks.