

Xanthochroism in a Cape May Warbler.—On 20 September 1963 one of us (Caldwell) picked up 73 Cape May Warblers (*Dendroica tigrina*) and many other dead birds at the WWTV television tower, near Cadillac, Wexford County, Michigan. One of these warblers exhibited an extreme amount of yellow in the plumage.

This bird, a male, was evidently an adult (skull fully ossified). It weighed 13.2 g and measured: 133 mm (length); 71 mm (wing); 49 mm (tail); 9 mm (exposed culmen); 19 mm (tarsus); and 8 mm (middle toe without claw). The eyes and legs were dark; subcutaneous fat was moderate; there was no sign of molt; and each testis was approximately 1×1 mm. These features seem normal for an adult male of this species.

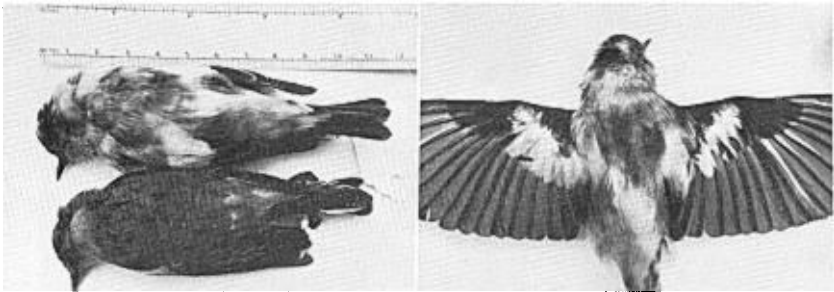


Figure 1. Left. The abnormally plumaged Cape May Warbler (upper) with a typical specimen, showing the light areas on the head, neck, and back of the abnormal bird. Right. The xanthochroistic specimen with wings extended to show the white, upper, greater secondary coverts.

However, as is clearly shown in Figure 1, the plumage of this specimen was highly aberrant in possessing yellow areas involving parts of the head, back, and rump. On the head two small groups of abnormal feathers (yellow with white tips) were present, one on each side immediately dorsal to the superciliary lines and posterior to the eyes. A yellow band of like feathers extended across the back adjacent to the nape. Several abnormal feathers were found on the back and numerous ones in the scapulars. The posterior portion of the back and rump were pale orange-yellow.

We also noted variation in the feathers of the wings. Most of the upper greater secondary coverts on the left wing were white, with a slight yellow wash on the distal portions of the outer veins. This yellow wash is present in typical feathers. Some abnormal feathers found on the right wing were similar to those described above, while others showed varying degrees of darkness (Figure 1). The medium primary coverts were more white than in a normal specimen.

The ventral side of our warbler was similar to a typical bird. However, some of the feathers on the breast lacked the darker coloration usually present at the proximal ends.

Our specimen was compared with approximately 1,000 study skins of Cape May Warblers found at The American Museum of Natural History, the Field Museum of Natural History, the U. S. National Museum, The University of Michigan Museum of Zoology, and several smaller museums. No bird in these collections exhibited xanthochroism, and only one other aberrant specimen, a partial albino, was found (Field Museum of Natural History no. 127904), an adult female taken near Atlanta, Fulton County, Georgia, on 3 May 1932. In this specimen there was little yellow in

the plumage and the dark melanins were absent or "diluted" in many of the feathers. Gross (*Bird-Banding*, 36: 240-242, 1965) listed only six cases of xanthochroism in North American birds, none occurring in Parulidae.

The coloration of the abnormal feathers on our warbler was apparently due to a deficiency of melanic pigments. We were unable to determine whether the structural color determiner (needed for the feathers to appear green) was altered. It appeared that the yellow pigments were distributed in a similar manner in both the normal and abnormal feathers. Thus, the xanthochroistic condition was apparently due to the absence of the melanins which serve in conjunction with yellow pigments and a structural color determiner to produce a green color. We propose that definitions of xanthochroism, such as Pettingill's (*A laboratory and field manual of ornithology*, Minneapolis, Burgess Publ. Co., 1956), be expanded to include not only conditions where excessive yellow pigments are present, but also circumstances where the yellow is unmasked because melanic pigments are lacking.

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Mid-winter nesting of the American Robin in western Pennsylvania.—The majority of American Robins (*Turdus migratorius*) of the northeastern part of the United States are migratory, although often several Robins, perhaps birds from still farther north, are reported from many localities there during the annual Christmas "census" conducted by members of the Audubon Society.

The winter of 1964-1965 in many eastern states was characterized by unusually mild weather through December, with severe cold and heavy snow beginning in January, 1965. Mrs. G. C. Denniston, my mother-in-law, of Ellwood City, Pennsylvania, reported to me (letter, 1/25/65) that a Robin's nest with three eggs had been found by Chet McCrumb on 4 January 1965. The nest was built about seven feet above the ground in the crotch of a maple tree. Some artificial icicles from a Christmas tree had been woven into the exterior of the nest. A Robin incubated the eggs from 4 January (when the nest was found) until 20 January. Throughout this period, a male Robin often was seen to chase birds of other species that came for food that had been put out. Mrs. Denniston took pictures of the incubating bird and of the three eggs.

On 10 January, when there was a light snow cover on the ground, the air temperature dropped to 12° F. Lower temperatures were recorded on 11 January (0° F) and 17 January (-10° F). About five inches of snow fell on 20 January, but the Robin continued to incubate as the snow piled up around it on the nest rim. The bird deserted the nest the following day.

Such mid-winter nesting, especially in the northeastern area of the United States, is, of course, very rare. T. R. Howell and R. D. Burns (*Condor*, 57: 246, 1955) reported a late December nesting of the House Finch (*Carpodacus mexicanus*) at Los Angeles, California.—ANDREW J. BERGER, *Department of Zoology, University of Hawaii, Honolulu, Hawaii*.