

## COURTSHIP DISPLAY AND TERRITORIAL DEFENSE

### BY YELLOW-BREASTED CHAT

by William E. Davis, Jr.

While walking along a sandy lane in Mathews County, Virginia, on the morning (9:45 A.M.) of May 14, 1987, I noticed a bird flying with a flight pattern that I had not seen before from the crown of one tree to another. The bird was a Yellow-breasted Chat. I followed it as it moved to another tree every few minutes, encompassing a territory roughly square in shape and about 125 feet per side. The perches selected were generally twenty-five to thirty feet high near the tops of the largest trees emerging from a dense thicket. The bird sang constantly when perched, uttering the chat's usual bewildering assortment of whirs, seeps, chirps, and catbird-like wheezes.

When the chat flew from tree to tree, it used, with one or two exceptions, a display flight -- the "peculiarly standardized and often exaggerated performances including all vocalizations and many movements and postures which have become specialized and modified as social signals or releasers" (Moynihan 1955). This flight was characterized by an undulating flight pattern, with the bird dragging and pumping its tail and pausing between wing beats with its wings pointed skyward. Sometimes the pause followed several wing strokes, producing the undulating flight pattern. This appeared to be a low-intensity version of the courtship-display flight described by Petrides (1938) as "clownish 'courtship' flight-song given with 'dangling legs, pumping tail, and slowly flapping wings.'" The chat I observed did not extend its legs or make the more typical vertical flights associated with courtship in the chat, as described by numerous authors.

My immediate impression was that the bird in flight resembled a moth or caprimulgid. I watched for about forty minutes and left when the bird stopped calling. I later returned to find a chat, my bird, I presume, singing and displaying again on the same site. Another chat was calling from a second thicket separated from the first by thirty feet of lawn. At 11:20 A.M. the two birds were directly across the lawn from each other. They then flew at each other over the lawn and fought, locking together and tumbling about six feet before separating just above the ground and returning to their respective thickets. My bird landed on a perch six feet from the ground and faced towards the lawn, head low, tail erect, and wings drooping, in what seemed to be a threat display. It sang from this low site for perhaps a minute and then resumed a high perch and sang for several more minutes before flying to a position on the opposite side of its territory. It ceased singing at 11:23 A.M.

The general references to warblers that I have consulted (e.g., Chapman 1917, Griscom and Sprunt 1957, Harrison 1984) make little mention of warblers fighting in territorial squabbles, but monographs on individual species often do. For example, Nolan, Jr. (1978) describes fighting in Prairie Warblers, and Walkinshaw (1983) describes "violent battles" between Kirtland's Warblers along territorial boundaries. In addition, visual and vocal displays are given by many species of wood-warblers (Parulinae). Ficken and Ficken (1965) report that during territorial encounters "gliding" (coasting flight with wings and tail spread) and "wings out" (wings held away from the body while facing an opponent) occur in Yellow and Chestnut-sided warblers and in American Redstarts. "Moth flight" (wings beat rapidly in slow flight) occurs in Yellow Warblers. Both gliding and moth flight were also noted in courtship displays and hence, are apparently used both in courtship and in territorial defense.

Since I observed courtship flight in this chat while it patrolled its territory as well as before and after a boundary fight, I suggest that this display is probably used in territorial defense as well as courtship. I did not find any mention of this possibility in the literature on chats that I consulted.

#### REFERENCES

- Chapman, F. M. 1968 (1917). *The Warblers of North America*. Dover, New York.
- Ficken, M. S., and R. W. Ficken. 1965. Comparative Ethology of the Chestnut-sided Warbler, Yellow Warbler, and American Redstart. *Wilson Bulletin* 77: 363.
- Griscom, L., and A. Sprunt, Jr. 1957. *The Warblers of North America*. Devin-Adair, New York.
- Harrison, H. H. 1984. *Wood Warbler's World*. Simon and Schuster, New York.
- Moynihan, M. 1955. Remarks on the original sources of displays. *The Auk* 72: 240-246.
- Nolan, V., Jr. 1978. *The Ecology and Behavior of the Prairie Warbler* *Dendroica discolor*. A.O.U. Monograph no. 26. Allen Press, Lawrence, Kansas.
- Petrides, G. A. 1938. A Life History Study of the Yellow-breasted Chat. *Wilson Bulletin* 50: 184-189.
- Walkinshaw, L. H. 1983. *Kirtland's Warbler*. Cranbrook Institute of Science, Bloomfield, Michigan.

**WILLIAM E. DAVIS, JR.**, a member of the *Bird Observer* staff, is professor of Physical and Biological Sciences at Boston University and has authored many articles on bird behavior. Ted wishes to thank John C. Kricher for reviewing an early draft of this manuscript. Ted's recent book, *History of the Nuttall Ornithological Club 1873-1986*, is described in **Book Views** in this issue.

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