

physical contact between competing males. Since this is apparently also true of the Starling (Kessel, op. cit.), further explanation is needed for the above observation.

As defined by Van Tyne and Berger (1959. "Fundamentals of Ornithology"), primary song is the term given to the full-voiced utterings of a bird that serve to attract a mate, or warn away competing males; the secondary song is low and inward, inaudible beyond a few yards, and has no territorial significance. It was this latter "whispering" song that was rendered by both Starlings during the fight. However, this song occurred only during passive periods, not during the actual fighting—thus, it could be interpreted as another instance of "emotional song," given during the resting periods of an intense encounter. This explanation exceeds the terms of "emotional song" as given by Van Tyne and Berger (who include it as a type of primary song): ". . . a variety of songs that cannot be associated directly with securing a mate and defense of territory." But—it was a subsong, it did appear "emotional," and it was certainly, in the broadest sense, given in defense of territory.

I wish to thank Dr. Andrew J. Meyerriecks for his valued advice and assistance in the preparation of this manuscript.—JAMES BAIRD, *Massachusetts Audubon Society, South Lincoln, Massachusetts, 27 April 1961.*

Dowitcher attacks Willet.—On 3 July 1961, at Beach Haven, N.J., a small group of shore birds were resting and feeding at high tide when I noticed that a Short-billed Dowitcher (*Limnodromus griseus*) had hold of the tarsus of a Willet (*Catoptrophorus semipalmatus*) with his bill. The Willet tried to escape by running on one leg and fluttering. The dowitcher kept bracing himself to hold back the Willet. The Willet dragged the dowitcher about 200 feet in about four minutes. Finally, after the Willet fell down the third time, the dowitcher released the foot and grabbed the Willet by the neck, holding on about three seconds before the Willet escaped and flew away. The original flock, including about 10 Willets and 30 dowitchers seemed unconcerned.—E. I. STEARNS, *206 Lynn Lane, Westfield, N.J., 19 July 1961.*

An opossum-titmouse incident.—On the morning of 2 May 1961, while checking a grid of rodent livetraps at the south end of Lake Carl Blackwell, near Stillwater, Oklahoma, I noticed a pair of opossums (*Didelphis virginiana*). Startled by my presence, they at first remained still; but when I made no further movement they wandered off slowly in the dry oak leaves, amid poison ivy and coralberry. The female stopped and rooted something edible from beneath the leaves. The male followed and attempted to mate, but the female turned and bit him. Followed by the male, the female then climbed a 30–40-foot blackjack oak, to a horizontal limb some 25 feet from the ground. At the same time, I moved to a closer vantage point. Each time the male approached the female too closely, she repulsed him with mouth agape or with a quick sharp bite to the head or ear.

After observing this behavior for 45 minutes I saw a pair of Tufted Titmice (*Parus bicolor*) fly to the tree. Without much hesitation, the bird believed to be the female flew to the back of the male opossum and began plucking out hair. The opossum, at first somewhat startled, made various movements to chase the bird, which flew to a nearby branch, only to return for more hair. Each time the opossum moved she flew away, but soon returned to either the back, the rump, or the base of the tail to pull out more hairs. When the male opossum became too restless the bird flew to the back of the female for hair. After 15 or 20 trips to the back of either opossum, then to a branch

and back to an opossum, she flew southeast with her bill full of grey hair. This was of such quantity, and so carried, that it gave the appearance of a handle-bar mustache.

The same titmouse made 15 trips to the tree where the opossums were and back to her nesting site. During this time she made some 225–300 landings on the back of one opossum or the other. Eventually, the opossums became almost passive, so that with less trouble and chirping than at first, the bird got its billful of hair. It was estimated that 75–100 pecks were required to gather the 100 or so hairs carried on each trip to the nest. Thus, in some 1,125–1,500 pecks, the titmouse gathered at least 1,500 hairs. During the half-hour following the fifteenth trip, she returned no more. The opossums had napped, scratched, licked their fur and moistened their feet (with their tongues) in order to “wash” their backs, necks, and ears, during the antics of the bird. When I left, the opossums had been in the tree two and three-quarter hours and the titmouse had pulled hairs, at intervals, for one and one-half hours. While the female titmouse gathered hair, the male sang, fed, and followed the female back and forth. Five times between hair-gathering trips the female stopped to feed, and on seven occasions was fed large caterpillars by the male. When being fed, the female fluttered her wings and twittered like a fledgling.

Bent (1946. *U.S. Nat. Mus. Bull.* 191:394–397) gives instances of titmice collecting hair from living animals, these animals being the red squirrel, woodchuck, and man. Other fibrous material found in various nests, along with vegetation and mud were: horse hair, pig bristles, cat fur, wool, cotton, fibrous bark, Spanish moss, snakeskins, and feathers.—JOHN W. GOERTZ, *Oklahoma Cooperative Wildlife Research Unit, Oklahoma State University, Stillwater, Oklahoma. Contribution No. 333, Department of Zoology, Oklahoma State University, 8 May 1961.*

An unusual Brown Thrasher fatality.—On 16 April 1961, while conducting a field census in connection with certain fire ant investigations, I observed the following incident near Macon, Noxubee County, Mississippi.

In mid-morning, extremely strong and persistent winds were blowing from the northwest, and the temperature was in the low 60's. As I approached a farm pond (ca. 5 acres) from the northwest, a Brown Thrasher (*Toxostoma rufum*), came out of a patch of tall grass and flew to the levee which was devoid of vegetation other than short grass. In flight it was apparent that the bird was barely able to cope with the wind and considerable effort was required to maintain proper equilibrium.

A few minutes later, I climbed the levee and noted the thrasher still present some 60 yards away and that three pigs were approaching from the other side. As the pigs came near, the thrasher appeared to become frightened and flew down over the levee to the edge of the water, seemingly reluctant to fly into the wind. When the pigs reached a point opposite the bird, it flew out across the water, at a right angle to the wind and about 10 feet above the surface. After proceeding nearly 65 yards with obvious difficulty, the thrasher attempted to turn and return in the direction from which it had come. In so doing, the wind caught it, the bird lost equilibrium and plunged into the water. My first impulse was to attempt to rescue. However, the water was some 4 feet deep at the point of entry. As I observed with binoculars, the thrasher attempted several times to become airborne, but when its wings were lifted, the wind caught and forced them into an unusable position. After a minute or so the bird ceased to struggle and permitted its head to submerge. Later, the wind moved it to the center of the pond where the body became lodged in some aquatic vegetation.

The thrasher's short, broad wings and unusually great tail surface undoubtedly are