

Diego County. On 6 May 1967 I observed Starlings carrying food into palm trees in Ruth Hardy Park near Palm Springs, Riverside County, California.

The adaptability of these birds to new situations, as illustrated by these examples of choices of nest sites, no doubt contributes to their success in rapidly colonizing areas into which they are introduced or have spread.

My thanks to Drs. Emanuel Fritz and Ned K. Johnson who read this manuscript and offered helpful criticisms.—LUIS F. BAPTISTA, *Museum of Vertebrate Zoology, University of California, Berkeley, California, 17 May 1968.*

**Fall and winter food habits of Red-winged Blackbirds and Brown-headed Cowbirds in western Oklahoma.**—Since the establishment of the Washita National Wildlife Refuge on the upper portion of Foss Reservoir in western Custer County, Oklahoma, there has been a large increase in the number of wintering Red-winged Blackbirds (*Agelaius phoeniceus*) and Brown-headed Cowbirds (*Molothrus ater*). There have been several reports by local farmers of grain sorghum (*Sorghum vulgare*) depredations by blackbirds coincident with this buildup.

This paper deals with the food habits of Redwings and Cowbirds during the September through January period. The objectives were to determine: (1) frequency of various items in the diet; (2) significance of grain sorghum in the diet; and (3) effect of large winter concentrations of Redwings and Cowbirds.

Beal (U.S. Dept. of Agric. Biol. Surv. Bull., 13, 1900) reported that in the stomachs examined weed seeds occurred most frequently in Redwings and ragweed in Cowbirds.

Analysis of 92 blackbird stomachs collected in Okfuskee County, Oklahoma on 30 January 1950, showed that the eight food items which occurred most frequently had no commercial value. Grain sorghum ranked ninth and oats eleventh (Stebler, Oklahoma Coop. Wildl. Res. Unit Quarterly Report 5:20–24, 1952).

During the period September through January 1964 and 1965, 83 Redwings and 35 Cowbirds were shot in the evening at blackbird roosts on the refuge and adjacent terrain. Contents of the crops and gizzards of the specimens were examined and identified and frequency of each item determined.

The frequency of various items in the diets of Redwings and Cowbirds is presented in Table 1. Grain sorghum was the most frequently found food item in Redwings and Cowbirds, occurring in 93 and 71 per cent respectively of the crops and/or gizzards examined.

The importance of grain sorghum in the diets differed from that reported by Martin, Zim, and Nelson. (A guide to wildlife food habits. Dover Publ., 1951) for each species. They reported a greater preference for foxtail (*Setaria*), corn (*Zea mays*), oats (*Avena*), and panic grass (*Panicum*) for Redwings in the prairie region of the United States. In the southeastern United States, foxtail, panic grass, ragweed, oats, wheat, and doveweed were listed as important items in the diets of Cowbirds.

Redwings and Cowbirds had varied diets (about 15 items in each). Only five items were found in 20 per cent or more of the Redwings, while eight items were found in over 20 per cent of the Cowbirds examined. This apparently was due to the latter's habit of feeding in smaller, more dispersed groups over the study area in early fall. Cowbirds did not center their feeding on the refuge until later in the year. Most of the less important items were probably picked up while feeding on grain sorghum or other favored foods because these other grasses and weeds were usually found in or around sorghum fields.

TABLE 1  
PERCENTAGE OCCURRENCE OF VARIOUS FOOD ITEMS IN CROPS AND GIZZARDS OF REDWINGS  
AND COWBIRDS

Food item	Redwings (83)	Cowbirds (35)
grain sorghum ( <i>Sorghum vulgare</i> )	93	71
ragweed ( <i>Ambrosia</i> )	75	63
insects	36	63
sunflower ( <i>Helianthus</i> )	36	49
johnson grass ( <i>Sorghum halepense</i> )	24	49
foxtail ( <i>Setaria</i> )	10	46
lamb's quarter ( <i>Chenopodium</i> )	10	26
doveweed ( <i>Croton</i> )	7	20
pigweed ( <i>Amaranthus</i> )	10	14
sand dropseed ( <i>Sporobolus</i> )	2	14
panic grass ( <i>Panicum</i> )	5	6
<i>Paspalum</i>	0	14
smartweed ( <i>Polygonum</i> )	1	0
grama grass ( <i>Bouteloua</i> )	2	0
bush-clover ( <i>Lespedeza</i> )	1	3
bluestem ( <i>Andropogon</i> )	1	3
wheat (green) ( <i>Triticum</i> )	0	3
miscellaneous and unidentified	11	3

Damage to grain sorghum off the refuge was not significant if local farmers were able to complete their harvest by the middle of October. However, blackbirds did cause considerable damage in some fields close to the refuge when the harvest was delayed by late fall rains. Blackbird populations did not start to build up rapidly until the latter part of October (Goddard, Unpubl. Ph.D. thesis Oklahoma State University, 1967) at which time their feeding was centered in refuge sorghum fields. These fields were available because portions of them had been left unharvested to provide food for wintering waterfowl. The availability of this grain sorghum as a food supply is probably responsible for the increased populations of migrant blackbirds in the area.

Blackbirds competed with ducks for sorghum and depletion of this food source may have been responsible for the daily duck feeding flights in late December and January. A shortage of food may have accounted for the large duck and blackbird population movements away from the refuge in January both years and may have resulted in a reduced duck use of the refuge during spring migration.—STEPHEN V. GODDARD, *Department of Biology, Wisconsin State University, River Falls, Wisconsin, 5 September 1968.*

**Sharp-tailed Sandpiper and Palm Warbler in Alaska.**—On the afternoon of 28 June, 1967, together with my wife Helen and my daughter and son-in-law, Ann and Peter Wendt, I observed four Sharp-tailed Sandpipers (*Erolia acuminata*) on the tundra about three-quarters of a mile east of the lagoon bordering the airstrip at Kivalina,