

*Lanius ludovicianus*.\* Loggerhead Shrike. Observed infrequently but regularly during June–September 1963 (possibly a single bird). Last observed on 20 September 1963.

*Wilsonia pusilla*.\* Wilson's Warbler. Two males and three females were observed on 4 May 1963. Four females (or immatures) were observed on 22 September 1963.

*Passer domesticus*.\* House Sparrow. Breeding resident. Total population was approximately 200 birds.

*Sturnella neglecta*.\* Western Meadowlark. Common, breeding resident.

*Euphagus cyanocephalus*. Brewer's Blackbird. Breeding, summer resident in small numbers. Observed in June, July, and August of 1962, and July through November 1963. Two nests were found in a wrecked ship on 10 July 1963. One nest contained 3 young on 28 July 1963. Ten birds including five immatures were observed from 28 October through 6 November 1963.

*Molothrus ater*.\* Brown-headed Cowbird. Four birds were observed from 30 October through 3 November 1963.

*Piranga ludoviciana*.\* Western Tanager. One male and 1 female were observed on 4 May 1963, and 1 male and 3 females (or immatures) on 22 September 1963 and a single female (or immature) on 18 October 1963.

*Pheucticus melanocephalus*.\* Black-headed Grosbeak. Three males and 2 females were observed throughout September 1962, and 2 males were observed throughout September 1963.

*Carpodacus mexicanus*. House Finch. Common, breeding resident. In one instance a female was observed attempting to incubate 11 eggs.

*Chlorura chlorura*.\* Green-tailed Towhee. A single bird was observed on 9 October 1963.

*Junco oreganus*.\* Oregon Junco. A single bird was observed on 25 November 1963.

*Zonotrichia leucophrys*.\* White-crowned Sparrow. Present in small numbers in all months. Immature birds were observed begging for food, but no nests were found.

*Melospiza melodia*.\* Song Sparrow. Present in small numbers in all months.

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## FEEDING-PERCHING BEHAVIOR IN THE MOCKINGBIRD

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Two Mockingbirds (*Mimus polyglottos*) wintering in a 20-acre orchard in Willow Glen, Santa Clara County, California, showed a consistent alternation between feeding and perching, a behavioral trait not previously reported.

Between the hours of 08:30 and 15:30 on 27 November 1966, a Mockingbird divided its time between feeding in a fig tree and perching in an almond tree about 15 yards away. The pattern of behavior was very consistent. Feeding on figs would occur for a few minutes, then the bird would fly to the almond tree, entering at a point about halfway up the tree, and quickly work its way up to a "favorite" perch near the top (usually facing the sun), where it performed various acts such as preening, scratching, stretching one wing back, or sitting quietly. This "feeding-perching" alternation occupied nearly all of the seven hours of observation with the exception of two short periods to the ground nearby, each lasting about five minutes.

On 10 and 11 December 1966 a Mockingbird was observed in another part of the orchard and found to have a similar "feeding-perching" alternation. This time the food was two ripe pears at the base of a small pear tree, and the perch tree was a cherry tree 15 yards away. Behavioral data collected at intervals throughout the two-day period totaled 90 minutes of activity representing 14 round trips between the perch tree and the food. Mean time spent in the perch tree during a full cycle of "feeding-perching" was 4.9 minutes (range 2.5–12.3 min), while the time spent on the ground by the food was 1.3 minutes (range 0.3–3.1 min). These data are representative of the time period 09:00–15:30 on the two days on

which data were gathered. Thus, in a single day the bird made approximately 65 round trips, spending about 5.5 hours perching and 1.5 hours feeding.

When the bird was on the ground near the two pears, it would take two to eight pecks at the food and spend the rest of the time standing near the food before flying back to the perch tree. In a single four-hour period, five intraspecific encounters occurred. In two encounters "hostile dancing" (Hailman, Condor 62:464–468, 1960) preceded fighting. In two others, fighting broke out immediately, and in one case the invading bird flew away at the approach of the resident.

By 28 December there were no Mockingbirds feeding in the 20-acre orchard. No pears or other fruit could be found. Night temperatures had been slightly below freezing for four days. Mockingbirds were seen feeding on *Pyracantha* berries in an adjacent suburban housing development.

These observations suggest that the "feeding-perching" alternation is a means for providing defense of a food source in an area where the food supply is low and decreasing. Possible reasons for a bird taking up a perch tree 15 yards away from the food rather than in the food tree itself or the tree above the food (perching closer to the food would seem more efficient defense) may be: (1) the food supply may not have reached the low level necessary to force the birds into more intense defense, and (or) (2) defense may be more effective when the bird flies between the perch tree and the food supply. The latter explanation seems more likely. Flight between perch and food gives maximum display of the bird's presence (including white wing patches). Also, the small fraction of time at the food source spent in eating (2–8 pecks per 1.3 minutes) seems to support the idea that frequent trips to the food were as important for defense of food as for securing nourishment.

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