

California Wildlife Habitat Relationships System
California Department of Fish and Wildlife
California Interagency Wildlife Task Group

SPOTTED TOWHEE

Pipilo maculatus

Family: EMBERIZIDAE
B483

Order: PASSERIFORMES

Class: AVES

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

A common resident throughout California except at high elevations in the Sierra Nevada and lowlands of southern deserts. Found in chaparral and other shrub habitats and in open stands of riparian, hardwood, hardwood-conifer, and lower-elevation conifer habitats. Occupies relatively tall, dense stands of shrubs and riparian thickets with accumulations of leaf litter and humus, especially decadent stands and those at the bottom of slopes. East of Cascade Range and Sierra Nevada, breeds south to Owens Valley, Inyo Co. In southeastern deserts, breeds in higher ranges but not in lowlands. It is a rare winter visitor of Colorado River and Salton Sea areas, and locally elsewhere in southern California deserts. Migrants from north of California winter in northeastern California. In winter, mostly withdraws from montane habitats, moving downslope, at least in northern California and desert ranges (Grinnell and Miller 1944, McCaskie et al. 1979, Garrett and Dunn 1981).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Feeds on seeds, insects, other invertebrates, berries, and acorns. Insects make up about half the diet in spring and summer, but plant foods predominate at other seasons (Martin et al. 1961). Mostly scratches and gleans in litter, but also gleans foliage, plucks seeds and fruits from plants, and rarely flycatches (Davis 1957). Usually forages beneath overhanging vegetation of shrubs or thickets.

Cover: Shrubs, ground herbage, and thickets with abundant leaf litter in a variety of habitats provide cover throughout the year.

Reproduction: Nest is a stout cup of grasses, bark shreds, rootlets, and dead leaves; lined with fine grasses and hairs. Nest usually built in a depression formed on ground, concealed by surrounding vegetation; occasionally in a slash pile, dense shrub, or vine tangle up to 1.8 m (6 ft) above ground (Harrison 1978).

Water: Drinks and bathes regularly (Miller 1942, Bent 1968, Williams and Koenig 1980).

Pattern: Breeds and forages within dense brush or thickets with substantial accumulations of litter.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/Migration: Frequently some movement upslope postbreeding in late summer. Higher elevation populations move downslope to winter. Some individuals wintering in northeastern portion of the state breed north of California. Most individuals wintering in southern deserts are present from October to March or April. A common fall migrant on

Farallon Islands (DeSante and Ainley 1980).

Home Range: Winter home range averaged 7.0 ha (17.4 ac) in Kansas (Fitch 1958). Home ranges of 2 flocks (mostly males) in Kentucky were 3.8 and 12.5 ha (9.3 and 31 ac) (Barbour 1941). Breeding density, in numbers per 40 ha (100 ac), reported as: 17 males in Los Angeles Co. wax myrtle forest (McCarty 1975); 16-39 males in a Central Valley riparian area (Gaines 1974a); 13 pairs in a Montana riparian area, and 8 pairs in Montana pine-juniper woodland (Walcheck 1970); 54 pairs in California chaparral (Yeaton 1974); 21-32 males in New Jersey deciduous forest (Greenlaw 1969).

Territory: Eight territories near San Francisco averaged about 0.13 ha (0.33 ac) and varied from 0.07 to 0.24 ha (0.17 to 0.60 ac) (Baumann 1959). Kingery (1962) reported an average territory of 1.4 ha (3.5 ac). Mans (1961) reported territories of 0.8 to 1.11 ha (2 to 2.75 ac). Fitch (1958), in Kansas, reported 7 territories averaging 1.8 ha (4.4 ac) and varying from 0.8 to 2.7 ha (1.9 to 6.7 ac).

Reproduction: Breeds late April into late August, with a peak in May and June. A monogamous, solitary breeder. Clutch size 2-6, average 3 or 4. May raise 2 broods per season. Incubation 12-14 days, by female. Altricial young tended by both parents but brooded by female only; leave nest at 8-11 days (Baumann 1959, Davis 1960, Harrison 1978).

Niche: Scrub jays, king snakes, and California ground squirrels are potential predators (Davis 1960). Bond (1939) noted apparent predation by a prairie falcon. Although frequently parasitized by cowbirds elsewhere, apparently rarely parasitized in California (Rowley 1930, Friedmann 1963). May form loose flocks in winter (Ehrlich et al. 1988).

REFERENCES

- Barbour, R. W. 1941. Winter habits of the red-eyed towhee in eastern Kentucky. *Am. Midl. Nat.* 26:593-595.
- Baumann, S. A. 1959. The breeding cycle of the rufous-sided towhee, *Pipilo erythrophthalmus*, in central California. *Wasmann J. Biol.* 17:161-220.
- Bent, A. C. (O. L. Austin, Jr., ed.). 1968. Life histories of North American cardinals, grosbeaks, buntings, towhees, finches, sparrows, and allies. 3 Parts. *U.S. Natl. Mus. Bull.* 237. 1889pp.
- Bond, R. M. 1939. Observations on raptorial birds in the Lava Beds - Tule Lake region of northern California. *Condor* 41:54-61.
- Davis, J. 1957. Comparative foraging behavior of the spotted and brown towhees. *Auk* 74:129-166.
- Davis, J. 1960. Nesting behavior of the rufous-sided towhee in coastal California. *Condor* 62:434-456.
- DeSante, D. F., and D. G. Ainley. 1980. The avifauna of the South Farallon Islands, California. *Studies in Avian Biol. No. 4.* Cooper Ornithol. Soc., Lawrence KA. 104pp.
- Ehrlich, P. R., D. S. Dobkin, and D. Wheye. 1988. *The birder's handbook.* Simon and Schuster, New York. 785pp.
- Fitch, H. S. 1958. Home ranges, territories, and seasonal movements of vertebrates of the Natural History Reservation. *Univ. Kans., Lawrence. Publ. Mus. Nat. Hist.* 11:63-326.
- Friedmann, H. 1963. Host relations of the parasitic cowbirds. *U.S. Natl. Mus. Bull.* 233. 276pp.
- Gaines, D. 1974a. A new look at the nesting riparian avifauna of the Sacramento Valley, California. *West. Bird* 5:61-80.
- Garrett, K., and J. Dunn. 1981. *Birds of southern California.* Los Angeles Audubon Soc. 408pp.
- Greenlaw, J. S. 1969. The importance of food in the breeding system of the rufous-sided towhee, *Pipilo erythrophthalmus* (L.). Ph.D. Thesis, Rutgers Univ., new Brunswick NJ. 228pp.

- Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608pp.
- Harrison, C. 1978. A field guide to the nests, eggs and nestlings of north American birds. W. Collins Sons and Co., Cleveland OH. 416pp.
- Kingery, H. E. 1962. Coastal chaparral. Pages 534-535 in G. A. Hall, ed. Twenty-sixth breeding bird census. Aud. Field Notes 16:518-540.
- Mans, M. L. 1961. Coastal chaparral. Page 514-515 in G. A. Hall, ed. Twenty-fifth breeding bird census. Aud. Field Notes 15:500-524.
- Martin, A. C., H. S. Zim, and A. L. Nelson. 1961. American wildlife and plants, a guide to wildlife food habits. Dover Publ., Inc., New York. 500pp.
- McCarty, D. R. 1975. Wax myrtle forest. Pages 1123-1124 in W. T. Van Velzen, ed. Thiryninth breeding bird census. Am. Birds 29:1080-1145.
- McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. 84pp.
- Miller, A. H. 1942. Shower bathing of a spotted towhee. Condor 44:232.
- Rowley, J. S. 1930. Observations on the dwarf cowbird. Condor 32:130-131.
- Walcheck, K. C. 1970. Nesting bird ecology of four plant communities in the Missouri River Breaks, Montana. Wilson Bull. 82:370-382.
- Williams, P. L., and W. D. Koenig. 1980. Water dependence of birds in a temperate oak woodland. Auk 97:339-350.
- Yeaton, R. I. 1974. An ecological analysis of chaparral and pine forest bird communities on Santa Cruz Island and mainland California. Ecology 55:959-973.