

13 March 1949 (Kelly and Bailey, Gull, 31:11, 1949) and two near Venice, Los Angeles County, between 16 January and 12 February 1944 (Cogswell, Condor, 46:204, 1944).

Stallcup saw one near the Dumbarton Bridge, Santa Clara County, on 22 May 1963, and he, DeBenedictis, and many others saw one there on 1 December 1963. McCaskie collected an immature female (SDNHM no. 30788) at Imperial Beach, San Diego County, on 2 November 1963. All specimens and probably all sight records from California are of the western race *nelsoni*. This secretive marsh-dwelling sparrow is probably a rare but regular winter visitor to California.

Spizella pallida. Clay-colored Sparrow. McCaskie found an immature female near Imperial Beach, San Diego County, on 24 September 1963 and collected it (SDNHM no. 30790) the following day. McCaskie and DeBenedictis saw three others in the same area on 29 September 1963, and McCaskie saw one or two there between 20 and 25 September 1964 and two on 30 October 1965. These are the first records of this species from California, but its presence there is not surprising since it breeds in British Columbia and winters in Baja California.

Melospiza georgiana. Swamp Sparrow. California specimens of this species are from: near Sebastopol, Sonoma County, 31 December 1956 (MVZ no. 134783); Daly City, San Mateo County, 21 October 1923 (Grinnell, Condor, 27:247, 1925); Keeler, Inyo County, 1 November 1921 (Dickey, Condor, 24:136, 1922); Morro Bay, San Luis Obispo County, 31 December 1952 (Munro, Condor, 56:108, 1954); near Riverside, Riverside County, 13 November 1948 (Cardiff, Condor, 51:150, 1949); the Salton Sea, Imperial County, 1 February 1953 (Cardiff, Condor, 56:54, 1954) and 22 and 25 April 1953 (Cardiff, Condor, 63:183, 1961); and Sweetwater Reservoir, San Diego County, 4 November 1943 (Huey, Condor, 46:201, 1944). Sight records are from near Sebastopol, Sonoma County, 30 December 1959 to 2 January 1960 (AFN, 14:339, 1960); Tomales Bay, Marin County, 18 April 1964 (AFN, 18:485, 1964); near Mecca, Riverside County, 12 March 1955 (AFN, 9:289, 1955); and Lakeside, San Diego County, 13 October 1954 (AFN, 12:60, 1958).

Stallcup saw one at Conn Lake, Napa County, on 7 March 1965 and another near Dillon's Beach, Marin County, on 2 January 1961. McCaskie saw one in Monterey, Monterey County, on 31 January 1961; it remained there until at least 25 February. Stallcup saw one near Carmel, same county, on 18 January 1964, and McCaskie saw one there on 2 October 1965. In San Diego County McCaskie saw one along the San Diego River in San Diego on 17 February 1965; one at Bonita on 7 December 1962 and two there between 11 January and 4 April 1964; two near San Ysidro between 12 February and 4 April 1964; and at least four (together) near Imperial Beach between 23 December 1963 and 12 February 1964, when he collected a male (SDNHM no. 35800). He saw one at the north end of the Salton Sea, Riverside County, on 9 May 1964 and two at the south end, Imperial County, on 22 February 1963.

All California specimens, save one of the nominate race collected by Cardiff on 1 February 1953, have been *M. g. ericrypta*. Over 30 individuals of this easily overlooked sparrow have been found in California, where, as in Arizona (Phillips, Marshall, and Monson, *op. cit.*, p. 209), it is probably a rare winter visitor.—R. GUY McCASKIE, *San Diego, California*, RICHARD STALLCUP, *Oakland, California*, and PAUL DEBENEDICTIS, *University of Michigan Museum of Zoology, Ann Arbor, Michigan, 15 August 1966*.

Role of Song in Territoriality of Black-throated Sparrows.—In the spring and summer of 1965 a study was undertaken to examine the relative roles of visual and vocal communication in territorial defense in Black-throated Sparrows (*Amphispiza bilineata*). The study was done with a breeding population living in creosote-bush scrub in the Rio Grande Valley near Las Cruces, New Mexico. It was noticed during field observations that Black-throated Sparrows were not readily observable when singing. Among field notes stating the site from which a bird sang, 29 per cent of the notations (7 of 24) specifically mention that the bird sang from a prominent position, while the remaining 71 per cent mention positions down in the bush, on the ground, or otherwise hidden.

Other quantitative data were taken on an individual territorial male sparrow that was observed singing and foraging. Singing sites were classified as either prominent (in the upper,

bare branches of a bush) or not prominent (in the middle of the bush or on the ground), and delivered songs were tabulated by site. During the period of observation, songs delivered from prominent positions amounted to only 12.7 per cent of the total (7 of 55).

In mid-June 1965 experimental confirmation of field observations was sought, using techniques similar to Dilger's (*Auk*, 73:313-353, 1956) procedures. Papier mâché models were prepared; two were painted dull gray ("blanks"), and another was painted as a facsimile of a Black-throated Sparrow. During a trial, two posts 1.5 meters tall were placed 10 meters apart within the boundaries of a known territory, and a model was fastened to the top of each post. Songs from outside the study population were played, using the regular playback system of a Nagra IIBH tape recorder. The experimenter sat with the recorder under a tarpaulin blind beneath the model with which the song was paired. After an initial song burst of 45 seconds' duration to attract the territory holder, the song was played for the last 15 seconds of every minute for 10 minutes, which was the total duration of a trial. Responses to models and song were categorized according to orientation (facing toward singing model, silent model, or neither) and intensity (circle trial site, sing near site, or attack model). Eleven birds were tested; they were distributed among possible trial situations as: three blank with song, facsimile without song; two blank with song, blank without song; and six facsimile with song, blank without song.

Singing was the most intense reaction that could be elicited. Responses reaching attack intensity were not observed. In several trials, birds responded from a distance but did not approach the immediate location of the trial, and in two trials, two birds responded in what had previously been the middle of one bird's territory. The first brood was at or near completion at this time, and some slight shifts in territorial boundaries may have taken place.

The orientation of the birds to the models differed and may be of importance. The only three cases in which the birds appeared to orient toward the singing model were in trial situations of facsimile with song, blank without song. The only instance of apparent orientation to the silent model was in a trial situation of blank with song, facsimile without song. In all other trials the birds showed no particular orientation to either model, but circled the experiment location as a whole.

It is concluded that physical and visual contact are subordinate to vocal signals in territorial defense in the Black-throated Sparrow. The slight orientation toward the facsimile indicates, however, that visual contact has some importance. The role of visual signals may have more significance than is apparent from the experiment; earlier in the spring (22 May 1965) a male bird made an apparent supplanting attack on his mate in response to song playback from the tape recorder. However, this was the only attack witnessed during a total of about nine months of field observation.

It is not surprising that song plays a role dominant to visual display in territoriality in this species. Territories in the population were relatively large, about 120 to 150 meters in diameter, and visibility in the desert scrub habitat was remarkably limited. Thus, territorial defense mechanisms involving visual signals would not seem particularly effective or adaptive, and selection for vocal defense signals could be expected.

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An Additional Specimen of Coues' Flycatcher in California.—A male Coues' Flycatcher, *Contopus pertinax*, was collected on 29 September 1965 at the Imperial Irrigation District Experimental Farm No. 2, about 20 miles east of Holtville, Imperial County, California. This farm, about one mile north of the Mexican border, is an isolated eastern outpost of the vast agricultural lands of the Imperial Valley. It is essentially an oasis, with ornamental trees, groves,