

## RANGE EXTENSIONS BY THE WESTERN ROBIN IN CALIFORNIA

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THE WESTERN ROBIN (*Planesticus migratorius propinquus*) has a normal breeding range which extends from southeastern British Columbia south to the Valley of Mexico. In California its nesting area involves most of the Boreal region of the state, from the lower edge of the yellow pine and coast redwood belts (Transition Zone) through to the upper limit of forest (Hudsonian Zone) in the Sierra Nevada. Geographically the breeding range extends the entire length of the Sierra Nevada and includes also the ranges of southern California. In the coast ranges the species had, up to 1915, been reported only as far south as Seaview and Cazadero, Sonoma County (Grinnell, Pac. Coast Avifauna, no. 11, 1915, p. 171). There were then no known breeding records for Marin County, the San Francisco peninsula, the adjacent Bay region, or the Transition Zone of Monterey County. It seems very unlikely that the presence of the Robin as a nesting species could have escaped the attention of the numerous keen-eyed observers who have worked those areas during the preceding three decades. The absence of records seems to be, in this instance, a case of dependable negative evidence. However, at the very time this negative statement was being prepared for publication, observations were being made to the contrary.

On May 31, 1915, an adult Robin was seen in San Francisco near the western portal of the Twin Peaks Tunnel, and on June 5 the same year another was observed near Strawberry Hill in Golden Gate Park. In 1916 Robins were seen near Chain of Lakes and near Sutro Heights, a pair with a nest at the latter place being the first definite record of nesting in the city (Squires, Condor, vol. 18, 1916, p. 170).

In April and May, 1916, eight or more nests of the Robin were found in Golden Gate Park. The birds were then stated to have been nesting in the Park since 1913 (Hansen, Condor, vol. 18, 1916, pp. 170-171; Ray, *ibid.*, p. 226). Continuance of the Robin as a breeding species in the Park is indicated by the finding of nests in trees of the Band Concourse there in 1919, 1923 and 1924 (Evermann, Gull, vol. 2, 1920, no. 1, p. 4; Mailliard, *ibid.*, vol. 6, 1924, no. 1, p. 3; vol. 7, 1925, no. 2, p. 3). Robins were noted in the Buffalo Paddocks of the Park on July 13, 1919 (Smith, Gull, vol. 1, 1919, no. 8, p. 4), and by the present writer in another part of San Francisco, namely on a lawn at Clay and Laguna streets, opposite Jefferson Square, on June 30, 1920.

The first record of a nest in Alameda County is by Mrs. Amelia S. Allen (Condor, vol. 19, 1917, p. 185), who found a Robin's nest in a deciduous oak on the grounds of the Claremont Country Club in north Oakland on May 15, 1917.

In 1920 Robins appeared on the University of California campus at Berkeley and remained there through the summer. Dates of record in my own notes range from July 15, when a spotted breasted young bird was seen in Faculty Glade, to August 11 when a female was noted incubating eggs in a nest in a eucalyptus tree at the side of the Greek Theatre. The next year (1921) Robins were seen in Berkeley on a number of occasions. April 30 in Faculty Glade is a date of record for a pair. Songs were heard in the vicinity of Piedmont Avenue and Stuart Street from May 1 to July 17. A brood was reported as having been reared in a streetside tree near the

latter locality. In 1922, the number of birds seemed to have increased both on the campus and in town. July 12 two adults were feeding young in a nest thirty feet above the ground in a California laurel along the north branch of Strawberry Creek on the University campus, near the President's house, while several fully fledged young were seen near-by in olive trees on the same date. Adult birds were then still in song. On May 9, 1922, in the hills three miles southeast of Berkeley, an adult Robin was seen carrying building material, and on June 9 the nest was found, in a Monterey cypress, with an adult feeding two (or three) young. My records for Berkeley in 1923 are imperfect, but the birds were in song on the campus and in town on May 13. In 1924 an isolated observation on June 1 marked the birds as fairly common in town that year. That the Robin may have arrived at Berkeley as a summering species prior to 1920 is suggested by two entries on a classroom migration chart kept at the Museum of Vertebrate Zoology. These records (authority not known) are for August 14, 1917, and September 16, 1918.

While passing through the city of Napa on August 27, 1922, several Robins were seen in one of the city parks, and as this date seems too early for migrants or winter visitants it would suggest the presence of the Robin as a breeding species there. In 1924 Robins were heard in song in Pleasant Valley, Solano County, between Winters and Vacaville, on May 22.

The earliest nesting record for the Robin in the San Joaquin Valley is that by van Rossem (Condor, vol. 22, 1920, p. 39) who found many adults and two nests at Visalia in the summer of 1919. Recently, while in the San Joaquin Valley, I heard Robins in song at Tulare and in Roeding Park, Fresno, on May 30, 1916. One adult bird was seen at the latter place. Mr. John G. Tyler informs me that Robins are present permanently (that is, breeding) at several places south of the San Joaquin River. In August, 1925, he encountered a group of Robins, apparently a pair with its brood, in some oak trees in a pasture near an orchard. A nest, evidently used that season, was found in an oak tree. Messrs. Walter and William Richardson of Porterville, Tulare County, inform me that the Robin is a nesting species at Porterville and has been present there as such for "about six years" (thus since 1920 or 1921). Adult birds have been seen foraging for insects on the ground beneath orange trees where the soil is moist as a result of irrigation. According to Mr. Harry J. Snook (MS) the Robin is now present in summer at Stockton, San Joaquin County, in small numbers.

In July, 1924, a visit to Capitol Park, Sacramento, disclosed the presence of Robins in some numbers. To learn the past history of the species there, I consulted Mr. W. Vortriede, chief gardener of the Capitol grounds, who has his office in the park. He stated that Robins were established as breeding birds in the park when he came there in 1911 and that they have nested there every year since that time. Mr. H. G. Carnie of Sacramento told me that Robins were nesting about his residence in the southeastern part of Sacramento in 1925. Possibly Robins nest elsewhere in the Sacramento Valley and in other lowland localities in California, but this remains to be ascertained.

The general summer range of the Robin (as a species, as well as of the western subspecies, *propinquus*) everywhere includes territory where there is moist grassland (or its equivalent) in which this "soft-billed" bird can find soft-bodied insect larvae or earthworms as food for itself and young during nesting time. This seems to be a prime requirement of the Robin. The original "natural" range of the Western Robin in California included only those parts of the State where damp meadows, with short grass in which the adults might seek their forage, persisted during the summer months. These areas vary from a few hundred square feet of grassland, as along the banks of small creeks, to large level tracts in the high Sierra Nevada, sometimes embracing

several square miles of continuous grassland. The number of birds present in any given place usually seems to be proportional to the amount of such forage surface available. Nests may be close together at the margin of a forest bordering an extensive meadow. Territorial rights thus involve forage range rather than actual nesting sites, a condition somewhat akin to that postulated for seabirds by Howard (*Territory in Bird Life*, 1920).

In the natural breeding range of the Robin in California, the moisture (which permits of the persistence of green grass during the summer months) is maintained in several ways. In the higher mountains the meadowlands are chiefly filled lake basins with a high water table. Slopes adjacent to mountain masses out of which water slowly percolates during the summer months constitute another sort of location for permanent grassland. In the northwestern coastal portion of California frequent summer fogs reduce the daily evaporation rate in or close to the redwood belt so that the grassland continues soft and green for most of the summer period. The absence of the Robin from the lowlands and deserts of California during the summer season seems to be conditioned by the ecologic factor of lack of a suitable food supply, and this in turn is evidently controlled by conditions of moisture.

The several places mentioned above as new localities for the nesting of the Robin have been made suitable for the bird by the work of man and most of them will continue to be suitable only so long as human effort continues to add a bounteous summer supply of water to the scant natural moisture of that season. Originally, Golden Gate Park was an area of shifting sand, with scattered lupine bushes and low sand-inhabiting plants, suited chiefly to the needs of Nuttall Sparrows, ere human effort bound down the sand with grass and planted trees as windbreaks, bringing in at the same time an additional supply of water to keep the soil moist (and hence the lawns green) during the summer season. The lower hill slopes of Berkeley and Oakland originally supported a cover of grass, dry during the long summer months, and then inhabited, in the neighborhood of trees, by California Jays and Brown Towhees. The flat plains lands on which the cities of Napa, Sacramento, Fresno and Visalia now stand once were covered in summer with parched grasses in which lived Meadowlarks, Horned Larks and Burrowing Owls. No "soft-billed" bird like the Robin, accustomed to a diet of soft-bodied insects and worms, could have found food for itself and young during the midsummer period of scanty moisture in any of these areas. In that season of the year, most ground-dwelling insects are in the drought-resistant adult stage, less likely to fall victim to the stalking Robin. But with the development of lawns, with continued moisture supply and "green feed", various species of insects are able to persist there as larvae during the summer season. With irrigation, earthworms also are able to live up near the surface of the soil when normally they would be aestivating in deep burrows to avoid desiccation.

An interesting side issue of the Robin situation in Capitol Park was told to me by Mr. Vortriede. The Robins there frequently use palm trees (!) as nesting sites, and in the earlier years they brought off their broods successfully, without interference by cats from the adjacent city, as the cats could not or did not climb the palms. But about 1921 some Fox Squirrels were brought in by the Superintendent of Grounds and liberated in the Park. The squirrels were able to negotiate the palm trees, with the result that the Robins (and other birds as well) suffered a diminution in numbers through attacks at nesting time. Now (1925) the squirrels are overfed (by visitors) and are believed not to be breeding; furthermore, the squirrels wander off into the city, the many large streetside trees of Sacramento facilitating such movement by an arboreal

species, and such squirrels are apt to be killed by various agencies. Thus a return to former conditions, so far as the Robins and other birds are concerned, may take place provided no additional introductions of squirrels are made.

The Robin, then, is extending its range locally in California, as man provides new areas suitable for the summer forage habits of the species. The actual temperature cycle of the summer months seems to have little to do with this spread, as the heat cycle of Sacramento and Visalia is very different from that of San Francisco and Berkeley. It might be thought that the extensive area of lawn in Capitol Park, Sacramento, had resulted in a material decrease in temperature and that this, of itself, would form an environment more suited to the Robin. But a comparison of daily temperature records taken right *in* the Park with a thermometer located not over five feet above the actual lawns on which the Robins forage, compared with a similar record at Davis, Yolo County, fifteen miles to the west, where there is much less greenery and fewer trees (and where Robins do not now nest) shows no significant departure in favor of the Park.

Other species than the Robin are profiting by man's alteration of the region about San Francisco Bay. Of course some species, unsuited to continuance in a thickly settled region, have retired, but there has been a compensating increase or arrival of others. The Point Pinos (?) Junco at Oakland and Berkeley, the Tawny (?) Creeper at Berkeley, and the Olive-sided Flycatcher at Berkeley are all believed to be species which have moved in and occupied territory not previously held by those birds. The change in these cases is undoubtedly due to afforestation. Several species in Golden Gate Park have increased greatly in numbers as a result of the development of the lawns, shrubbery and trees in the Park, but these species were, in all probability, present either in the Park proper or close by and have merely moved in by the slow spread resulting from the annual increment of young. The California Quail, Allen Hummingbird, Nuttall Sparrow and Santa Cruz Chickadee belong in this category. It seems not unlikely that other species in the category of the Robin may arrive subsequently and some of these should be watched for. At Berkeley the Chipping Sparrow and Santa Cruz Chickadee are likely candidates.

*Davis, California, June 1, 1926.*