

dark, almost blackish, smoky gray, possibly from continued contact with the dark peaty soil, though I am inclined to believe the change a natural one. In *melania* this down is a shade lighter than in *socorroensis*, which strikes one as rather peculiar considering that in later life *melania* is the darker of the two.

As for the great variation in the amount of white (or total absence of it) to be found on the rump of *socorroensis*, I prefer to leave that point to others infinitely more competent to discuss it than I am. However, it may be mentioned that earlier in the season (late June, 1913) the majority of birds showed at least a trace of white, while of those taken August 13 of the present year only about one in four showed the above mentioned character.

Pasadena, California, September 10, 1914.

BIRDS OF A BERKELEY HILLSIDE

By AMELIA SANBORN ALLEN

WITH FOURTEEN PHOTOGRAPHS ON SEVEN FIGURES

FOR the past three years I have been living in Strawberry Canyon. Our house is in the middle of a dense grove of young live-oak trees, on the southern wall of the canyon opposite the University dairy, and to the



Fig. 29. GENERAL VIEW OF STRAWBERRY CANYON LOOKING EAST, SHOWING THE LOCATION OF THE HOUSE (UPPERMOST) AND ITS SURROUNDINGS

Photo by Amelia S. Allen.

south and west of the swimming pool. The house faces south and up the hill. To the west are three unimproved lots, one of woodland, the others partly open, with several rather large pine trees. To the north and east the oak forest is continuous, interspersed with bay trees; and there is a dense undergrowth of hazel, cascara, poison oak, spiraea, wild rose, snow-berry, wild currant, blackberry and brakes, with thimble-berries and wild parsnip filling the cross ravines. On the eastern side, our lot is bounded by the University cam-

pus, where no shooting is allowed at any season. On the hill-slope above us, to the south, are only a few scattering oak trees, but there is an almost impenetrable thicket of spiraea and hazel brush, protected by a high bank formed by the cut for the road, which makes an ideal nesting site for the birds.

The hill as it slopes to the west, outside the canyon, is covered by an old orchard and some garden shrubs, with one date-palm and a group of pine and cypress trees on the terrace which overlooks the city and the Golden Gate.

From the whole of the region described the English Sparrows are absent except as fall gormandizers. During September, October and November, thousands of them come up from the town below into the old orchard, where they feed on weed seeds and remnants of the scant crop of the diseased trees. Occasional reconnoitering parties have appeared in the spring-time about our house, but they have not met with a hospitable reception.

The birds of this hillside region fall naturally into two groups: (1) those found more commonly in the orchard and on the more or less open slope to

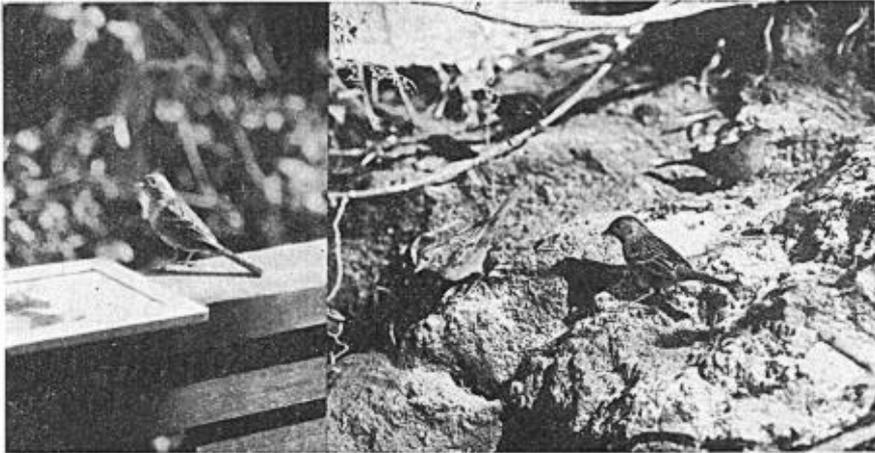


Fig. 30. GOLDEN-CROWNED SPARROWS. AT THE LEFT IS SHOWN ONE ON THE RAILING; AT THE RIGHT THREE GOLDEN-CROWNS AND ONE SONG SPARROW (ABOVE ON TWIG)

Photo at left by Amelia S. Allen; at right by T. I. Storer.

the west; and (2) those which show a decided preference for the closely forested and brush-covered area of the north-facing slope immediately about the house. A small number seem equally at home in both sections, as, for example, the Red-shafted Flicker, California Blue Jay, California Towhee and Hermit Thrush.

The raptorial birds of the western group include the Sparrow Hawk (*Falco sparverius sparverius*), which is almost always to be found in the winter season surveying the field from the top of one of two telephone poles, upon which it elects to perch. Western Red-tailed Hawks (*Buteo borealis calurus*) soar above in the illimitable blue on wings of strength. While at night the three owls (*Aluco pratincola*, *Otus asio bendirei*, *Bubo virginianus pacificus*) make the darkness visible by their cries.

The Anna Hummingbird (*Calypte anna*) knows everything that happens in the whole area the year around, and every summer the Allen Hummingbird (*Selasphorus alleni*) guards its nest from the same lookout on the same electric-

wire. I suspect the cypress-trees across the way of harboring the tiny nest. If so, I hope that it has been as safe from hawks and jays as from any intrusion on my part.

The only flycatchers I have noticed in the western tract are the Black Phoebe (*Sayornis nigricans*) and the Say Phoebe (*Sayornis sayus*). The Black Phoebe often makes its presence known by its call, but I seldom hear an answering call. One spring day, however, I surprised two indulging in courtship antics. The Say Phoebe was noticed once in the winter of 1912-13, and has been seen repeatedly this winter.

The Flickers (*Colaptes cafer collaris*) and Jays (principally *Aphelocoma californica californica*) are continually flaunting their bright colors in the cypress and red-wood trees. Occasionally a Varied Thrush (*Ixoreus naevius naevius*), in its quiet dignity, puts them both to shame.

A few Meadowlarks (*Sturnella neglecta*) still nest in the old orchard, but encroaching civilization has driven most of them to the other side of the canyon.

Many of the members of the sparrow family seem to choose the western area, either for winter feeding or summer breeding. In the winter of 1912-13, Mosswood Road was being graded and macadamized. This of course meant that men and horses were taking their noonday meal there; and afterward a feast of bread-crumbs and grain was left for the birds to enjoy. The little Rufous-crowned Sparrows (*Aimophila ruficeps*) from the canyon to the south joined the Intermediate (*Zonotrichia leucophrys gambeli*) and Nuttall Sparrows (*Z. l. nuttalli*) at mealtime. Add to these three species a stray Harris Sparrow (*Z. querula*), which seems to have come with his cousins from the north to enjoy a California winter—could a bird-lover ask for a more interesting group to study? In the old orchard trees, the Linnets (*Carpodacus mexicanus frontalis*), Green-backed Goldfinches (*Astragalinus psaltria hesperophilus*), Black-headed Grosbeaks (*Zamelodia melanocephala capitalis*), and a Lazuli Bunting (*Passerina amoena*) fill the summer air with rapturous song. A few ornamental olive trees with fruit ungarnered assure Purple Finches (*Carpodacus purpureus californicus*) all the year. Their spring sunset song, from the top of the tallest cypress tree, certainly evens up the account for the whole olive crop. Flocks of Pine Siskins (*Spinus pinus pinus*) circle from weed patches to pine trees, while Sierra Juncos (*Junco oreganus thurberi*) feed on the rag-weed under the cypress trees and the chick-weed under the oaks. Both the California and San Francisco Towhees (*Pipilo crissalis crissalis* and *P. maculatus falcifer*) range over the whole hillside, the latter being more numerous in the oak forest.

One of the few remaining colonies of Cliff Swallows (*Petrochelidon lunifrons lunifrons*) in Berkeley still nests at the top of the western slope. Their main source for nest-building material has been destroyed this winter; and unless another unknown base can be developed or an artificial one substituted, we may miss their circling flight next summer.

During the winter months Audubon Warblers (*Dendroica auduboni auduboni*) abound in the old orchard, Nuthatches (*Sitta canadensis*) sound their reeds in the pines and oaks, Ruby-crowned Kinglets (*Regulus calendula cinereus*) chatter and sing and glean through the trees, and the Hermit Thrush (*Hylocichla guttata nanus*) makes himself a familiar garden companion.

In the summer-time two pairs of House Wrens (*Troglodytes aedon parkmani*) do enthusiastic housekeeping behind the shingles of hillside cottages. Vigors Wrens (*Thryomanes bewicki spilurus*), Bush-tits (*Psaltriparus minimus minimus*), and Wren-tits (*Chamaea fasciata fasciata*) are permanent residents.

The second group of hillside birds, those which choose the environment of the dense oak forest in the midst of which we built our house, have been the source of great pleasure to us and to our friends. A very little effort on our part has brought abundant returns, as the following paragraphs will prove.

The hill slopes in a very convenient way in front of a large window, and there we have built a rough drinking-fountain with a few bricks and cement-mortar. This was accidentally made quite after the approved plan, being off level just enough so that the water varies in depth from half an inch to two inches. On the ground between the drinking-fountain and the window, during the winter months, I throw out crumbs and apple-skins, and on the porch-railing, which is about four feet from the window, I scatter canary-seed and crumbs. I would limit the feeding-space to the railing, were it not for the rabbits which watch the birds with longing eyes when there is no food on the ground. I have not yet made a practice of putting out food to attract the

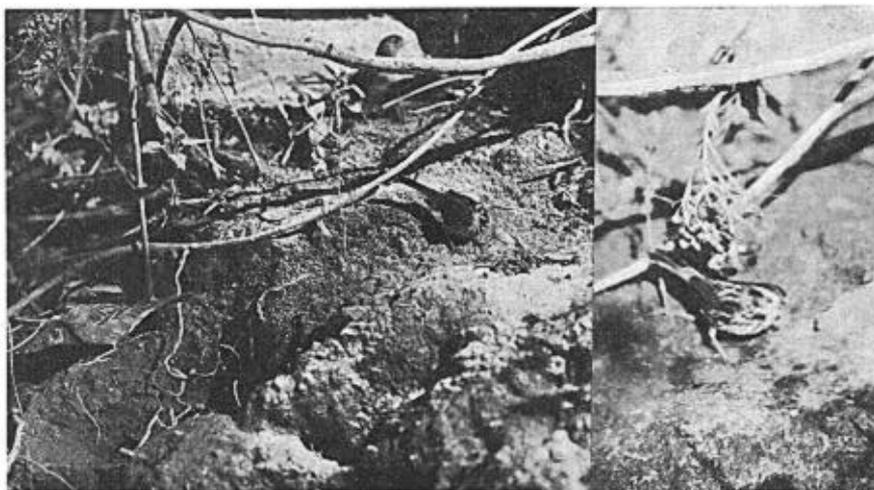


Fig. 31. SANTA CRUZ SONG SPARROWS FEEDING ON CANARY SEED. THE STRIPES ON THE HEAD AND SPOTS ON THE BREAST, AS WELL AS THEIR SMALLER SIZE, DISTINGUISH THEM FROM THE GOLDEN-CROWNED SPARROW WHICH APPEARS IN THE LEFT-HAND PICTURE

Photo at left by T. I. Storer; at right by Amelia S. Allen.

insect-eating birds. In 1911 the trees were suffering terribly from the ravages of the green cut-worm. The University sprayed a few of the trees; a long-handled broom destroyed the myriad cocoons, which were formed under the edges of the shingles and on the tree-trunks; and the birds did the rest. This winter the trees are in excellent condition.

Quail (*Lophortyx californica californica*), of course, are very abundant, and very tame. One of their favorite roosts in the summer-time is in a tree which had to be cut away in part to make room for the house. In the hot October days an entire brood took their noonday siesta in and about the drinking fountain.

One evening we were surprised by a visit from a Barn Owl which came down through the chimney, Santa Claus fashion. He attempted to alight on some oak branches which adorned the mantel, but found that they would not support his weight. He then chose the top of a door, flew from that on to a

curtain-rod, then to a window-sill on the opposite side of the room, and out to freedom through an open door, all without breaking any of the bric-a-brac.

With the exception of the Red-shafted Flicker, woodpeckers are not abundant, one each of the Nuttall (*Dryobates nuttalli*) and the California (*Melanerpes formicivorus bairdi*) having been seen from the window.

Of the flycatcher group, the Black Phoebe makes itself heard constantly from the direction of the swimming pool; the Western Flycatcher (*Empidonax difficilis difficilis*) is present from the first of April until after the first of October; the Olive-sided Flycatcher (*Nuttallornis borealis*) was often heard from a favorite perch at the end of the road during the summer of 1913, but did not return to us last year.

I anticipated that the California Blue Jays would give some trouble about the feeding ground, but their behavior so far has not been very objectionable. They appear only when I put out rather large pieces of bread, which they carry off and bury. They seldom attack the other birds, perhaps because it is not necessary; for they are so noisy and blustering that the smaller birds



Fig. 32. YAKUTAT FOX SPARROWS ON THE PORCH RAILING. THE PECTORAL BLOTCH SHOWS DISTINCTLY IN THE LEFT-HAND PICTURE. THE SHORT, THICK BILL, SHORT LEGS, STOCKY BUILD, AND GENERAL BELLIGERENT ATTITUDE DISTINGUISH IT FROM THE THRUSH
Photos by Amelia S. Allen.

naturally make way for them. The rabbits and the Thrashers, however, hold their own with them, the former even coming to blows with the jays at times. The Steller Jays (*Cyanocitta stelleri carbonacea*) make themselves heard constantly from the neighborhood of the dairy, but I have seen them from the window only twice.

The Golden-crowned Sparrows (*Zonotrichia coronata*) take the prize for percentage of increase on the feeding-ground. The first winter (1911) only one appeared daily. This year seven come regularly, four being birds of the year. The Sierra Juncos in other seasons have been commonly seen about the garden, especially in the patches of chickweed under the trees. They seemingly are not attracted by the bill of fare offered on the feeding-ground, but often come to bathe. The Santa Cruz Song Sparrow (*Melospiza melodia sanctaerucis*) is an ever-present guest. It eats as long as there is a crumb to be found, and bathes repeatedly as long as the supply of water lasts. Recently a Rusty Song Sparrow (*Melospiza melodia morphna*) has appeared daily. The Fox Sparrow (*Passerella iliaca meruloides*) is a regular and rather belligerent patron of the lunch-counter. Either crumbs or seeds suit its taste, and it

shows no more fear than do the other sparrows about coming to the porch railing for food. The habit of scratching for its food seems to be so firmly fixed that it usually scratches among the crumbs before picking them up. The California Brown Towhee is never missing at meal-time, and is ready with a protest, if meals are not on time. Of the Brown Towhees there are seldom more than two on the feeding-ground, while of the San Francisco Towhees there are more often four. In the late summer, the San Francisco Towhees brought their young up onto the railing to feed. But they are still the wild birds of the species, and take alarm at the slightest movement of a window or curtain.

I often see Hutton Vireos (*Vireo huttoni huttoni*) in the oak trees and occasionally about the drinking fountain, particularly in October and November. The Warbling Vireo (*Vireosylva gilva swainsoni*) nests down nearer the bottom of the canyon. The Lutescent Warblers (*Vermivora celata lutescens*) are very abundant during the summer. There must be from four to six pairs nesting within a hundred yards of the house each year. It would be difficult

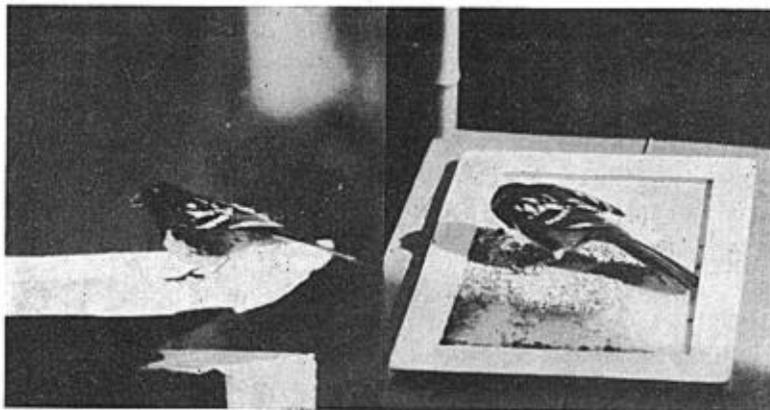


Fig. 33. THE SAN FRANCISCO TOWHEE FEEDING ON CANARY SEED. NOTE THE BLACK CHEST CONTRASTING WITH THE GRAY BREAST. THE LEFT HAND PICTURE SHOWS THE IRIS RING, WHICH WAS BRIGHT RED IN COLOR

Photos by Amelia S. Allen.

to calculate their value. Five cut-worms in five minutes was the estimate I made as I watched one last summer. A flock of Black-throated Gray Warblers (*Dendroica nigrescens*) was seen in the fall of 1912 in company with many warbling vireos. They remained for several days. The Townsend Warblers (*Dendroica townsendi*) I see only occasionally from the windows. Just before they migrated last spring, they were present in numbers in the oaks on the hillside above us, and were in full song. With them were kinglets and juncos. The MacGillivray Warbler (*Oporornis tolmiei*) was seen and heard just beyond the end of Mosswood Road last summer. One pair of Pileolated Warblers (*Wilsonia pusilla pileolata*) has nested each season about a hundred yards east of the house.

The California Thrasher (*Toxostoma redivivum redivivum*) has been one of the most interesting of the birds that have come regularly to the feeding-ground. There is nothing leisurely about him, and he is certainly not a "Fletcherite". I felt quite triumphant when he, too, came to the railing for

food. He is so fond of California holly-berries, that he flew against the window twice one morning, in his effort to reach a bunch in a vase within.

A pair of Vigors Wrens (*Thryomanes bewicki spilurus*) have nested about the house each year. This year the nest was under the edge of a tarpaulin which covered the water-tank. They raised five young. I sat down at the bottom of the tank one day when the young were being fed, to see if they would become accustomed to my presence. The female readily adapted herself to the situation, but she had to give very peremptory orders to her spouse, before he could be induced to bring his worms to the door-way and deliver them to her.

The Plain Titmouse (*Baeolophus inornatus inornatus*) I see and hear very often. The Wren-tit is perhaps the least suspicious bird on the feeding-ground. While the other birds wait at a distance for me to close the door after putting out the food, he comes chattering through the bushes and begins his meal. He seems ill at ease on the railing, but I believe that this is due not so much to his proximity to the window as to the fact that he has no twig to cling to. He



Fig. 34. INTERMEDIATE WREN-TITS. THE LONG, UP-TILTED TAIL AND THE COMPARATIVELY SHORT STRAIGHT BILL, AS WELL AS LARGER SIZE, ASSURES ONE THAT IT IS NOT A WREN

Photos by T. I. Storer.

always approaches the feeding-ground making the noise which Dr. Grinnell has likened to the sound made by rubbing together two sticks. Bush-tits are all about us. During the hot days in the fall, it is a treat to watch them about the drinking fountain. As many as can do so get into the water; the others sit in the nearest bushes awaiting their turn.

Ruby-crowned Kinglets are frequently seen and heard. Two of them come often to the drinking fountain to bathe or drink. The Golden-crowned Kinglets (*Regulus satrapa olivaceus*) appear occasionally. For three winters I have found the Western Gnatcatcher (*Poliophtila caerulea obscura*), but this year I have not heard its note.

We enjoy the song of the Russet-backed Thrush (*Hylocichla ustulata ustulata*) through the summer, while the Hermit Thrush makes itself very much at home about the house during the winter. The first year I was a little vexed when I found the Christmas wreath on the front door minus all of its

red berries, but since then I have been very careful to see that no red berries are burned. This year a kindly florist has helped out by donating several quarts of loose berries. The Robins (*Planesticus migratorius propinquus*) are never about in numbers, but I often hear their calls from the tops of neighboring trees. The Varied Thrushes were quite numerous during the winter of 1911, a flock of them feeding daily in the wood-lot to the west of us. Since then I have seen only stragglers until this winter, when they have been more numerous.

This finishes the list, and I will add only one or two notes as to the number of birds that come regularly to feed. The best results have been obtained

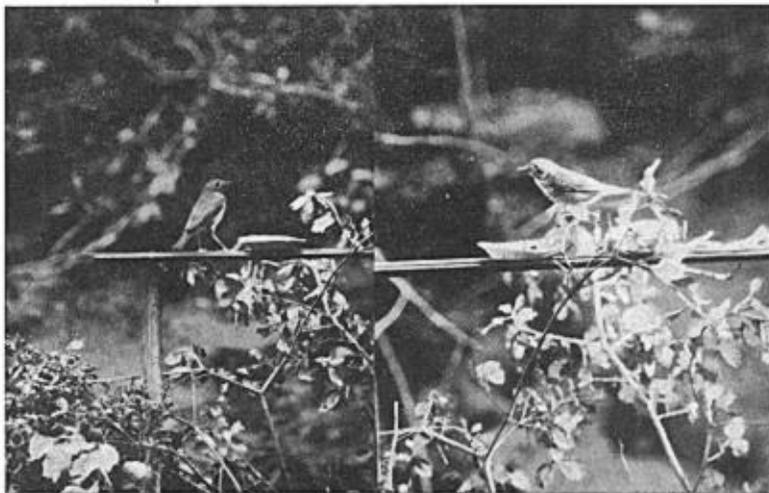


Fig. 35. DWARF HERMIT THRUSH, FEEDING ON LOOSE CALIFORNIA HOLLY BERRIES IN A SAUCER. NOTE THE LONG, SLENDER LEGS, LARGE EYES, AND SLENDER BILL

Photos by Amelia S. Allen.

when they have been fed regularly about eight in the morning. The numbers increase from October to January. The maximum flocks last year consisted of two Blue Jays, two California Towhees, four San Francisco Towhees, four Song Sparrows, two to four Fox Sparrows, three Thrashers, two Wren-tits,—and three to four Brush Rabbits. This winter the totals are about as follows: two Blue Jays, two California Towhees, five San Francisco Towhees, four Fox Sparrows, four Santa Cruz Song Sparrows, one rusty Song Sparrow, seven Golden-crowned Sparrows, three Wren-tits, one Thrasher, one Hermit Thrush—and one to four Brush Rabbits.

Berkeley, California, February 11, 1915.