

COOPER ORNITHOLOGICAL CLUB
OF CALIFORNIA.

Pacific Coast Avifauna

No. 2.

A LIST OF THE LAND BIRDS OF SANTA CRUZ
COUNTY, CALIFORNIA.

— BY —

RICHARD C. MCGREGOR.



SANTA CLARA, CALIFORNIA,

PUBLISHED BY THE CLUB,

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. . . NOTE . . .

PACIFIC COAST AVIFAUNA No. 2 is the second of a series of publications issued by the Cooper Ornithological Club of California for the accommodation of papers meriting special consideration or whose length prohibits their appearance in the official organ.

The publications of the Cooper Ornithological Club consist of two series— THE CONDOR, which is the bi-monthly official organ, and the PACIFIC COAST AVIFAUNA.

Both sets of publications are sent free to honorary members, and to active members in good standing.

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A LIST OF THE LAND BIRDS OF SANTA CRUZ COUNTY, CALIFORNIA.

BY RICHARD C. MCGREGOR.

INTRODUCTION.

SOME time ago Mr. W. Otto Emerson prepared for publication a paper under the title of *Some of the Birds of Santa Cruz County, California*, including therein observations made during his several collecting trips through the Santa Cruz Mountains. These trips were in September, 1883, October and November, 1884, and May, 1889. In the introduction he says: "I have gone over this route three different seasons, making not longer than a three weeks outing at one trip. I found that the bird life did not vary greatly from the canyons of the upper Los Gatos, Soquel, Boulder and Bear Creeks to the higher ground of the summit which lies 2100 feet above the sea level. One great cause of abundance of bird life in this range of country is the great variety of timber and brush which furnishes an abundance of food for insectivorous birds as well as for those that feed upon fruits and seeds, and which gives them at the same time shelter during storms and in the nesting season. The timber is composed of live, black, white, and tan-bark oaks, redwood, narrow-cone pine, creek alder, maple, sycamore, laurel, madrone and willow, with an undergrowth of what is known as the wild coffee bush, buckeye and azalea. Chemise, sage, manzanita, and mountain mahogany are found only around the top of Loma Prieta. In the deep, dark canyons not so much bird life was found as I expected nor as was noted in the more open and higher places. As it was the migration season I looked for many stragglers moving southward in September and early November. Of the 118 species here given, 97 were found breeding, leaving only 21 as visitants from other localities and a number of these no doubt would have been found nesting later on."

In 1898 Mr. Henry B. Kaeding spent a month in the Santa Cruz Mountains and presented before the Cooper Ornithological Club a paper on *Some Summer Birds of Santa Cruz County*. Concerning his list Mr. Kaeding says: "The following notes were taken during one month's stay—from May 1 to June 1—upon the top of Ben Lomond Mountain, Santa Cruz County, at an altitude of 2300 feet, and eight miles west of Boulder Creek. No species are recorded except such as came actually under my observation and were positively identified. While undoubtedly many species inhabit this region besides those noted here, the following are all that can be vouched for by the writer. The list comprises sixty-six genera, em-

bracing eighty species and subspecies. No attempt has been made to record other than land birds."

It has been suggested that, for publication, these two lists be combined and this is the part which I have undertaken. In most cases I have quoted in full from the above lists, crediting the author in each instance with his respective notes.

In March, 1898, Mr. T. J. Hoover and I spent two weeks just north of Santa Cruz and in July of the same year Mr. Hoover collected near the same locality. Notes made on these trips are here incorporated.

The original plan was to use only these manuscript notes but I think it desirable to include such published notes as are at hand and I trust the result is a fairly complete list of the land birds of Santa Cruz County. The present list is of local interest only, but it is hoped that it may be of assistance to those engaged in faunal work and form a foundation for a future and more complete exposition of the Santa Cruz avifauna.

Of the published lists, one by Skirm,¹ enumerating eighty-four land and thirteen water birds and one by McGregor and Fiske,² have been used extensively in the present paper. Belding's Land Birds³ has supplied notes on numerous species of the region and a paper by J. G. Cooper⁴ has furnished dates of migration and of nesting.

Any notes in the text of the present paper which are credited to McGregor and Fiske or to either of them are from their published list. While the identifications of the species in that list are reliable, we wish to disclaim all responsibility for the numerous typographical errors, as it was printed without any proof reaching our hands.

Our list included notes made by me at Santa Cruz during the summer and fall of 1888 and the summers of 1889 and 1891, as well as notes collected by Fiske during a continued residence in the county of five years.

The scientific nomenclature of the present paper is that recommended by the American Ornithologists' Union with such additional names as have been published since the date of the last supplement to the A. O. U. checklist. The trivial names are in most instances from the same checklist.

I am greatly indebted to Mr. Joseph Grinnell for assistance on the scientific names of this list, and to Mr. Walter K. Fisher for the following description of the Santa Cruz region.

¹ List of Birds of Santa Cruz Co., Cal. by Joseph Skirm, *Ornithologist and Oologist*, IX: 1884, pp. 149, 150.

² Annotated List of the Land and Water Birds of Santa Cruz County, California by R. C. McGregor and E. H. Fiske. Originally published in the *History of Santa Cruz County* and reprinted in the *Natural History of Santa Cruz County*. Pacific Press Publishing Company, Oakland, Cal. (No date, about 1892.)

³ Land Birds of the Pacific District by Lyman Belding. *Occas. Papers Cal. Acad. Sci.* II: 1890.

⁴ On the Migrations and Nesting Habits of West Coast Birds by J. G. Cooper, M. D. *Proc. U. S. Nat. Mus.*, Jan. 20, 1880, pp. 241-251.

FAUNAL POSITION OF SANTA CRUZ COUNTY.

The greater part of Santa Cruz County lies within the Pacific Coast Transition Faunal Area.¹ This is a humid division of the Transition zone, as defined by Dr. C. Hart Merriam. The belt extends from the Santa Barbara Mountains north as a narrow strip next to the coast to the vicinity of Cape Mendocino, where it merges into the boreal Northwest Coast District. This Humid Transition² belt continues north into the western parts of Oregon and Washington between the coast mountains and the Cascade Range. In California the Humid Transition merges into the Arid Transition on the east and occasionally into the Upper Sonoran.

The Pacific Coast Transition Faunal Area is a region of heavy rainfall and of frequent fogs. In California the latter are especially prevalent during the summer when there is little rain. As a result vegetation is luxuriant beyond any measure to be found elsewhere in California, excepting, of course, the northwest coast.

With this humidity is correlated a peculiarly equable climate. Throughout the summer the mean temperature is low for the latitude, so that boreal species³ of animals and plants are enabled to push southward in low altitudes. On the other hand the season of reproduction is much prolonged on account of this singularly uniform climate. This brings the sum total of summer heat rather high for the region, and many Austral or Warm Temperate types are thus enabled to flourish.⁴

In the Santa Cruz mountains all these conditions exist. The region is characterized by a rather heavy rainfall, particularly that area known as the Big Basin. The climate is temperate, yet frosts occur in the mountain canyons as late as the last of May. But on the other hand the total amount of summer heat is high and thus it is that many forms found in the Sonoran valley to the east and south are likewise familiar residents of the Santa Cruz Mountains.⁴

The Humid Transition portion of the Santa Cruz Mountains merges into the Upper Sonoran on the outlying hills and valleys to the east and southeast. This border land is usually one of great confusion in zone boundaries, for plants characteristic of either zone will frequently be found growing together in perfect amity. As a rule on these outlying ridges, the upper and hotter slopes contain a totality of forms characteristic of the Upper Sonoran zone, while the Transition is confined to the deep canyons. Many mountains are covered with extensive areas of chamiso (*Adenostoma fasciculatum*) which seem often to follow certain rock formations.⁵ Thus it is we find the Upper Sonoran zone ranging up high on these peaks, for the chamiso, which is characteristic of this zone is able to crowd out everything but chaparral plants and shrubs, and a large quantity of heat is let in. The region affords an excellent opportunity to

¹ See Life Zones and Crop Zones of the United States by C. Hart Merriam. Bul. 10, U. S. Dep't Agri. Div. Biol. Surv. 1898, p. 27.

² This name will be used as a more convenient term for the Pacific Coast Transition Faunal Area.

³ Among the birds may be noted *Anorthura hiemalis pacifica*, *Cyanocitta stelleri carbonacea*.

⁴ Such birds as *Aphelocoma californica*, *Pipilo fuscus crissalis*, *Carpodacus purpureus californicus*, *Vireo gilvus swainsoni* are examples.

⁵ For instance those containing much lime seem to be preferred.

study the effects of slope exposure, of prevalent fog currents, of soil, and of relative dryness and humidity, for these are all to be observed within a comparatively small area. It would be beyond the purpose of this outline to enter into these problems.

As stated above, the Humid Transition is a region of luxuriant vegetation though the number of species of plants is not large. Within the Santa Cruz Mountains there is one of the finest small bodies of redwood (*Sequoia sempervirens*) now extant. This forest is in the Big Basin, a region drained by numerous creeks. From this center the forest, elsewhere more or less broken, extends through many canyons and frequently up some distance on the ridges, where sooner or later it is replaced by the Douglas spruce (*Pseudotsuga mucronata*).

The redwoods are thus typically found in the canyons. In this dark still forest bird life is scarce. The boreal nature of these tracts is exhibited by the presence of such plants as *Achlys triphylla*, *Alnus oregana*, *Azalea occidentalis*, *Corylus rostrata californica*, *Gaultheria shallon*, *Myrica californica*, *Oxalis oregana*, *Rhododendron californicum*, *Rubus parviflorus*, *Vaccinium parvifolium*, *Vaccinium ovatum*, and *Whipplea modesta*. The tan-bark oak (*Quercus densiflora*) is also found in this forest, but thrives better upon the drier ridges with the Douglas spruce. Those forms characteristic of the drier ridges, yet undoubtedly Transition, are the Douglas spruce, tan-bark oak, madrone (*Arbutus menziesi*), narrow-cone pine (*Pinus attenuata*), manzanitas (*Arctostaphylos nummularia*, *A. andersoni* et alia), mountain lilac (*Ceanothus thyrsiflorus*), mountain mahogany (*Cercocarpus betulifolius*), and on debatable land *Quercus wislizeni* and *Castanopsis chrysophylla*. Mention should also be made of the Gowen cypress (*Cupressus goveniana*) which is found on Ben Lomond and in other localities.

Among those forms characteristic of the Upper Sonoran zone may be mentioned the buckeye (*Æsculus californica*), pigeon-berry or wild coffee (*Rhamnus californica*), chamiso (*Adenostoma fasciculatum*), sage (*Artemisia californica*), and blue oak (*Quercus douglasi*).

The Santa Cruz Mountain region appears to be the home of a number of characteristic birds which, however, range to the southward, and perhaps somewhat the northward. These are *Junco hyemalis pinosus*, *Chamæa fasciata intermedia*, *Parus rufescens bartowi*. Typical *Thryomanes bewicki spilurus* is found here and in the valleys around, and such birds as *Cyanocitta stelleri carbonacea*, *Zonotrichia leucophrys nuttalli*, *Anorthura hiemalis pacifica*, *Sitta pygmæa* and *Dryobates villosus harrisi*, though of wider distribution give a distinct tone to the region.

WALTER K. FISHER.

LAND BIRDS OF SANTA CRUZ COUNTY.

1. *Oreortyx pictus* (Dougl.). Mountain Partridge.

Fiske.—Rare, occasionally seen in the Santa Cruz mountains. Must breed, as I saw a very young bird in the market here in July, 1888. Emerson.—I am told that in the Ben Lomond region this species is found. *Oreortyx* was not observed by Kaeding nor have I seen it in the county. It is safe to say that if found here it will prove to be a local race, quite distinct from either *pictus* or *plumiferus*.

2. *Lophortyx californicus* (Shaw). California Partridge.

Emerson found it common all over the range. Kaeding considers it common and took fresh eggs May 15, but saw no young birds. Specimens examined by him were rather light colored, but by no means intermediate. McGregor and Fiske found quail common on the coast in suitable localities. Bailey found it common at Boulder Creek in October.¹

3. *Columba fasciata* Say. Band-tailed Pigeon.

Emerson.—Found large numbers congregated in September in the tall sycamores in Soquel canyon. I am told they go to the source of Soquel creek, where they make their nests on the ground in large colonies. Kaeding.—Two or three stragglers seen and may possibly breed in the redwoods. Flocks are reported to be abundant in fall, feeding on madrone berries. Recorded by Fiske as being common in the winter and rare in summer. Coues² quotes Cooper on this species as follows: "I have found them breeding in the Coast Range as far south as Santa Cruz, though I did not succeed in finding any nests. I was told that they built in companies, on low bushes in unfrequented parts of the mountains, but Townsend found their eggs on the ground near the banks of streams in Oregon, numbers congregating together. I have myself found eggs, which I supposed to be of this bird, in a similar situation."

4. *Zenaidura macroura* (Linn.). Mourning Dove.

Emerson found the dove common in all openings, while Kaeding records a few breeding pairs. McGregor and Fiske found it an abundant summer resident along the coast, arriving about April 1. Skirm³ gives it as first seen April 10, 1882, and April 6, 1883.

5. *Gymnogyps californianus* (Shaw). California Condor.

Fiske.—The condor was common a few years ago, when it could be seen feeding with the Turkey Vulture. The last I saw were two in September, 1885. A few still breed in the wild mountains north of Santa Cruz. Breninger records the condor as breeding in the county, having its nest in a huge redwood tree.⁵ Emerson, on the verbal authority of Cooper, records them as common in 1866. Skirm.—Tolerably common. I have seen them in a flock in company with *Cathartes aura*. It journeys along the coast.⁶

1. *N. A. Fauna*, No. 7, 1893, page 27.

2. *Birds of N. W.*, p. 386; also Cooper, *Proc. Nat. Mus.*, 1880, p. 251.

3. *Belding, Ld. Bds., Pac. Dist.*, p. 22.

4. *Richmond, Condor III*, 1901, p. 49.

5. *Nid.*, II, 1895, p. 77.

6. *Belding, op. cit.*, p. 24.

6. *Cathartes aura* (*Linn.*). Turkey Buzzard.

Emerson.—Could be seen sailing high over the ranges every day. Kaeding.—Common, skimming the hilltops in bunches of three or four. An immature, fully fledged male was shot on June 1. McGregor and Fiske.—A common resident, breeding at Santa Cruz.

7. *Elanus leucurus* (*Vieill.*). White-tailed Kite.

Emerson noted one along the shore between Soquel and Santa Cruz. Fiske considers it rare at Santa Cruz, where he knows of but one set of eggs being taken.

8. *Circus hudsonius* (*Linn.*) Marsh Hawk.

Emerson.—Common along open fields and along the bay shores between Soquel and Santa Cruz. Two were seen in gray plumage. McGregor and Fiske.—We have taken the Marsh Hawk near Santa Cruz.

9. *Accipiter velox* (*Wils.*). Sharp-shinned Hawk.

Emerson.—Found all through the oak range. A silent forager on small birds at all times, sailing between the trees like an evil spirit. In September, 1885, Fiske took a specimen which he referred to this species.

10. *Accipiter cooperi* (*Bonap.*). Cooper Hawk.

Kaeding saw an adult female on May 10 and Emerson records a single bird.

11. *Buteo borealis calurus* (*Cass.*). Western Redtail.

McGregor and Fiske found it to be a common resident near Santa Cruz, while Emerson found it common all through the country. Kaeding gives it as breeding but not common.

12. *Buteo lineatus elegans* (*Cass.*). Red-bellied Hawk.

Emerson gives it as having been found breeding by Ingersoll.

13. *Buteo swainsoni* *Bonap.* Swainson Hawk.

McGregor and Fiske.—Occasionally seen at Santa Cruz.

14. *Aquila chrysaetos* (*Linn.*). Golden Eagle.

Skirm¹ records the eagle as a "quite common resident" and Fiske has taken its eggs. Emerson.—At the summit of one range looking down the slope, a tall redwood stood out alone, some 200 feet high. The wind-broken top was the eyrie of this "king of the air," who could be seen floating in circles far down the canyon. Kaeding.—A pair of eagles undoubtedly breeding among lofty cliffs, were said to have been resident there for over ten years.

15. *Haliaeetus leucocephalus* (*Linn.*). Bald Eagle.

Fiske saw two in March, 1885.

16. *Falco mexicanus* *Schleg.* Prairie Falcon.

Recorded by Fiske as breeding each year on a cliff eight miles north of town.

1. Belding, *op. cit.*, p. 39.

17. **Falco peregrinus anatum** (*Bonap.*). Duck Hawk.
Emerson.—A rare falcon. One was seen along the high ranges of Loma Prieta.
18. **Falco columbarius** *Linn.* Pigeon Hawk.
Emerson.—Cooper, in his notes, mentions seeing this species.
19. **Falco sparverius** *Linn.* Sparrow Hawk.
Emerson.—Noted quite commonly all through the mountains. Kaeding.—Common, breeding in the white-oak groves.
20. **Pandion haliaetus carolinensis** (*Gmel.*). American Osprey.
Emerson.—Noticed on one occasion below Santa Cruz beach. Skirm.¹
—A pair have nested here several summers.
21. **Strix pratincola** (*Bonap.*). American Barn Owl.
Fiske² found fresh eggs in a hole on the face of a cliff July 5, 1884. McGregor and Fiske.—The Barn Owl is abundant around Santa Cruz. It nests in hollow trees, old houses and barns, and holes in cliffs. A second set will be deposited if the first is taken. Emerson.—Heard all through the forests at night. Kaeding.—Fairly common, breeding.
22. **Asio wilsonianus** (*Less.*). Long-eared Owl.
Emerson.—One was flushed out of an old gray squirrel's nest in a black oak. Kaeding.—Fairly common, breeding.
23. **Asio accipitrinus** (*Pall.*). Short-eared Owl.
I shot one in March, 1898, from a flock of four or five in a field near Hall's Beach.
24. **Nyctala acadica** (*Gmel.*). Saw-whet Owl.
Emerson.—Cooper tells me that he took this species at Santa Cruz some years ago.
25. **Megascops asio bendirei** (*Brewst.*). California Screech Owl.
This and the following owls breed at Santa Cruz or very near there. Emerson.—Common all through the forests. Kaeding.—Fairly common, breeding.
26. **Bubo virginianus pacificus** *Cassin.* Pacific Horned Owl.
Emerson.—Could be heard at early dusk saluting one another as they came out of their hiding places, *Too-hoo, too-hoo* sounding loud and solemn among the tall redwoods. Kaeding.—A very common breeder. Every night their calls could be heard and often at twilight as many as five or six individuals congregated in a grove to swell the concert. Pending further investigation and the collection of more material, I feel safe in saying that the coast region, from Sonoma county south to San Benito County, is inhabited by forms intermediate between *saturatus* and *pacificus*. The birds from Sonoma county show a decided leaning toward the dark race, with slight increase in size, while those from the southern limit lean toward the other extreme. I hope to have at my disposal before long material enough to map definitely the distribution of these races in California. McGregor and Fiske.—Common resident in the redwoods where it breeds.

1. Belding, *op. cit.*, p. 46.

2. *Young Oologist*, III, 1885, p. 30.

27. **Speotyto cunicularia hypogæa** (*Bonap.*). Burrowing Owl.
McGregor and Fiske.—Fresh eggs can be found at Santa Cruz about April 15. It usually nests in deserted squirrel holes, about four feet deep. Kaeding.—Fairly common, breeding.
28. **Glaucidium gnoma californicum** (*Scl.*). California Pygmy Owl.
Two heavily incubated eggs and the female parent were taken by George H. Ready on June 8, 1876. The eggs were in a deserted woodpecker's hole in a dead poplar two miles from Santa Cruz on the San Lorenzo River.¹ Fiske shot a female at Soquel, September 1, 1882.² In May, 1881, Skirm found a nest with three eggs.³
29. **Geococcyx californianus** (*Less.*). Roadrunner.
Emerson.—Observed only once along an old unused mountain road. Kaeding.—Two seen May 5. McGregor and Fiske.—Rare at Santa Cruz, where we observed them in July and September.
30. **Ceryle alcyon** (*Linn.*). Belted Kingfisher.
Emerson.—I found this fisherman along the streams at all times. Kaeding.—Common along every stream. McGregor and Fiske.—Found breeding along streams in the mountains and taken at tide-water on the San Lorenzo.
31. **Dryobates villosus harrisi** (*Aud.*). Harris Woodpecker.
Emerson.—A male, the only one seen, was shot. Kaeding.—Not common. Eggs taken May 28 were about one-third incubated. McGregor.—I took one at Santa Cruz August 17, 1891.
32. **Dryobates pubescens gairdneri** (*Aud.*). Gairdner Woodpecker.
Collected at Santa Cruz by Fiske and McGregor. Emerson.—Found commonly all through the forests. Kaeding.—Common and undoubtedly breeding.
33. **Dryobates nuttalli** (*Gamb.*). Nuttall Woodpecker.
Emerson.—Seen more particularly among the oak timber. Kaeding.—Common and undoubtedly breeding.
34. **Sphyrapicus varius ruber** (*Gmel.*).⁴ Red-breasted Sapsucker.
Emerson.—This species seemed to be more common about the old apple orchards, where three or four were sure to be seen among the trees.
35. **Sphyrapicus thyroideus** (*Cass.*). Williamson Sapsucker.
This species and *S. ruber* have been taken near Santa Cruz by Vroman and are considered by him to be migrants.
36. **Melanerpes formicivorus bairdi** *Ridgw.* Californian Woodpecker.
Emerson.—Was only seen in the openings among the dead trees. At one place where I camped at the summit of the mountains for ten days, was a slight hollow where there was a small stream. There were here several tall, burnt trees on which a pair of these woodpeckers had their store-house for acorns. Every morning a regular tag game came off be-

1. Cooper, Bull. Nutt. Ornith. Club, IV, 1879, p. 86.

2. Nat. Hist. S. C. Co., p. 56.

3. Belding, *op. cit.*, p. 55.

4. Grinnell, Condor, III, 1901, p. 12.

tween the woodpeckers and a pair or two of California and Blue-fronted Jays. The woodpeckers would go away for acorns; then in would slip a bluejay to steal an acorn, one being left on guard. The guard would screech when he saw the woodpecker coming and off the jays would fly until another chance came for them to slip in. Sometimes a jay was caught in the act and in the fight which followed it would lose a great many feathers. Kaeding found it common and undoubtedly breeding. Fiske records taking *Melanerpes carolinus* at Santa Cruz, but I consider the record very doubtful.

37. **Colaptes auratus** (*Linn.*). Flicker.

One taken in April, 1885, by Fiske.

38. **Colaptes cafer collaris** (*Vig.*). Red-shafted Flicker.

Emerson.—Common all over the ranges. Several of the yellow form were seen. Kaeding.—Very abundant. Fresh eggs were taken June 1. Skirm.—Common; after breeding it frequents orchards and feeds on fruit. A clutch of eggs is five or six, rarely seven.¹

39. **Phalænoptilus nuttalli californicus** *Ridgw.* Dusky Poor-will.

Emerson.—The lonely note of this sprite was heard in the openings in the spring months. Kaeding.—Not common, only one noted. Skirm.—Very rare in this vicinity. I have seen but five individuals since I came here. Ingersoll found the eggs in 1883; they were on the bare ground; color, pure white.²

40. **Chordeiles** *sp?* Nighthawk.

Kaeding.—Nighthawks were seen often but none secured. I am not prepared to name the form upon authentic grounds; very probably it will prove to be *C. a. texensis*.

41. **Chætura vauxi** (*Towns.*). Vaux Swift.

August 30, 1891, I saw a number of swifts flying over the river near town, which I supposed to be of this variety.³ Emerson.—Was noticed in large numbers in September and October, always at dusk, through the Soquel canyon. I believe they breed there. Kaeding.—For the first two weeks in May hardly a day passed without one or two flocks of these swifts being seen. On May 14, for about three hours, the air was full of feeding swifts, passing due north. Ovaries and testes were undeveloped as late as May 18. Cooper.—Arrives May 4; leaves October 5.⁴

42. **Aeronautes melanoleucus** (*Baird*). White-throated Swift.

Emerson saw this swift with *C. vauxi*, but in less numbers, and Kaeding noted a breeding colony.

43. **Calypte anna** (*Less.*). Anna Hummer.

This species is abundant about the town of Santa Cruz. Both Emerson and Kaeding record it as common.

1. Belding, *op. cit.*, p. 74.

2. *Ibid.*, p. 75.

3. Nat. Hist. Santa Cruz Co., p. 57.

4. Proc. Nat. Mus., 1880, p. 230.

44. *Selasphorus rufus* (*Gmel.*). Rufous Hummer.
Emerson.—Seen here and there, more particularly in the openings, where flowers were plentiful. Upon Loma Prieta among the sage and mountain lilac, they were common. Kaeding.—A few were taken June 1.
45. *Selasphorus alleni* *Hensh.* Allen Hummer.
Emerson.—Found along the river and creek banks. As the males shot by, they seemed to leave a flame of fire from their bright, jewelled throats. Kaeding.—A few taken June 1.
46. *Tyrannus verticalis* *Say.* Arkansas Kingbird.
Emerson considers this species not common and Kaeding found it not uncommon and breeding. Fiske gives it as not common, arriving about April 1.
47. *Tyrannus vociferans* *Swains.* Cassin Kingbird.
Fiske gives this bird as rare. Cooper says that they winter in small flocks at Santa Cruz.¹
48. *Myiarchus cinerascens* (*Lawr.*). Ash-throated Flycatcher.
Emerson found them around old woodpecker holes. Kaeding found them to be one of the commonest breeding birds, inhabiting open glades of oak timber and nesting as usual in the hollows of trees. Fiske gives its date of arrival at Santa Cruz as May 1.
49. *Sayornis saya* (*Bonap.*). Say Phœbe.
Emerson and Kaeding give this species as occasionally seen, but not common. Skirm gives it as quite common in fall and winter.²
50. *Sayornis nigricans semiatra* (*Vigors*).³ Black Phœbe.
Emerson.—Seen at every bridge. Kaeding.—Fairly common, breeds. McGregor and Fiske.—We found this an abundant resident.
51. *Nuttallornis*⁴ *borealis* (*Swains.*). Olive-sided Flycatcher.
Emerson.—I have a set of eggs in my collection taken by Ready on the San Lorenzo River, between Felton and Santa Cruz. Kaeding.—Common; breeds in tall firs and redwoods along the ridges. McGregor and Fiske.—We found this large pewee a rather rare summer resident.
52. *Horizopus richardsoni* (*Swains.*).⁵ Western Wood Pewee.
Emerson.—Seen all through the mountains. Kaeding.—Scarce; breeding late in May.
53. *Empidonax difficilis* *Baird.* Western Flycatcher.
Emerson.—Not common at any place through the mountains. Kaeding.—Scarce; breeding late in May. Skirm.—Breeds at Santa Cruz.
54. *Otocoris alpestris chrysolæma* (*Wagl.*). Mexican Horned Lark.
This lark nests in the vicinity of Santa Cruz. In fall old and young collect in immense flocks, from which I have killed thirty at one shot. Emerson.—Seen on several occasions in open fields or flats along the river.

1. Belding, *op. cit.*, p. 92.

2. Belding, *op. cit.*, p. 95.

3. Nelson, *Auk*, XVII, 1900, p. 125.

4. Oberholser, *Auk*, XVI, 1899, p. 331.

5. Oberholser, *Auk*, XVI, 1899, p. 333.

55. *Pica nuttalli* Aud. Yellow-billed Magpie.

Regarding this species, Dr. C. L. Anderson of Santa Cruz writes me: "Has not been seen in this county, as far as I know, for twenty-five years. I saw a few myself the first year of my residence here about 1870. I cannot say it resides here now." The magpie probably occurs within the county on the San Benito River, below Sargents.

56. *Cyanocitta stelleri carbonacea* Grinnell.¹ Coast Jay.

This form has been recorded usually as *frontalis*, though Kaeding was inclined to refer it to *stelleri* and Fisher gives it as *stelleri* from Monterey.² I have long considered it distinct, but had no good examples of *stelleri* for comparison. Fortunately Grinnell has been able to point out the differences and name the race. Fiske.—The Coast Jay is a resident of the redwoods. A nest with three eggs found May 21, 1890, was very large, built in the fork of a tan-bark oak, fifteen feet from the ground. The exterior of the nest was of twigs and small roots, intermixed with mud; the lining was of root fibres. Kaeding.—Common; breeds. A comparison between the jays of the Coast Range and of the Sierra Nevada show the birds of the coast to be decidedly referable to the form *stelleri*, and not *frontalis* as is commonly supposed. While far from typical of *C. stelleri*, the prevailing characters are of that race and are more pronounced in birds from Marin county than in those from Monterey county. Emerson.—Common all through the forest ranges. Very shy; has a habit of alighting on the lower limbs of the trees, then gradually going to the top from one limb to another.

57. *Apelocoma californica* (Vig.). California Jay.

Emerson.—Not as common in the forest as the preceding, but like them great robbers of woodpeckers' store of acorns. Kaeding.—Very common; young out of the nest May 10.

58. *Corvus corax sinuatus* (Wagl.). Raven.

Emerson gives the raven as rarely seen and Skirm gives it as rare.³

59. *Corvus americanus* Aud. Crow.

Recorded from the southeastern part of the county by Fiske. Kaeding saw but one. It was seen but once by Emerson, who says, on the authority of Cooper, that it was quite common at Santa Cruz in 1866 in the willows along the river bottoms.

60. *Agelaius gubernator californicus* Nelson. Bicolored Blackbird.

Kaeding found the red-wing not common but breeding. Skirm gives it as a common resident. Cooper says: "According to my observations this species inhabits chiefly the interior of the State, Santa Cruz being the only point on the coast where I have seen them."⁴

61. *Agelaius tricolor* (Aud.). Tricolored Blackbird.

Emerson.—This and the preceding are common about swamp holes

1. *Condor*, II; 1900, p. 127.

2. *N. A. Fauna*, No. 7, p. 68.

3. Belding, *op. cit.*, p. 112.

4. Belding, *op. cit.*, p. 121.

and the mouth of the San Lorenzo River. Skirm.—Common summer resident.¹

62. *Sturnella magna neglecta* (Aud.). Western Meadowlark.

Emerson.—Common about the clearings and meadows. Kaeding.—Common in grain fields; breeds.

63. *Icterus bullocki* (Swains.). Bullock Oriole.

Seen about the ranches and clearings, where there were scattered live oaks. Kaeding.—Breeds commonly. Fiske.—Abundant summer resident arriving about April 1. Skirm gives the following dates of first arrivals: April 3, 1881; April 17, 1882; April 16, 1883.²

64. *Scolecophagus cyanocephalus* (Wagl.). Brewer Blackbird.

Emerson.—Seen only about gardens and ranches. Kaeding.—Breeds commonly. Skirm.—Very common.³

65. *Coccothraustes vespertinus montanus* (Ridgw.). Western Evening Grosbeak.

Recorded by McGregor and Fiske as a rare winter visitant, very irregular in appearance. Ingersoll.—November 5, 1885, eight or ten seen, and Ready tells me he saw a large flock on San Lorenzo River, Nov. 1.⁴

66. *Carpodacus purpureus californicus* Baird. California Purple Finch.

Emerson.—Is found only along the river banks. Its loud whistling note easily distinguishes it from the house finch. Kaeding.—The purple finch is by far the more abundant of the two *Carpodaci*, breeding commonly, and being very much in evidence with its loud, sweet song. Skirm.—Tolerably common summer resident.⁵ Wm. A. Cooper⁶ found this finch breeding in the wooded river bottoms and hills back of the town. Two sets, of four and five eggs respectively, found May 30, 1875, were incubated a few days. May 3, 1876, a nest with four fresh eggs was found.

67. *Carpodacus mexicanus obscurus* (McCall).⁷ House Finch.

In March Hoover and I found this bird in great flocks near Santa Cruz. Emerson.—This is a common, cheery fellow heard everywhere. Kaeding.—Very common; breeding.

68. *Loxia curvirostra stricklandi* Ridgw. Mexican Crossbill.

Emerson.—This bird is rarely seen and then but three or four together. In skins taken by Mr. Geo. Ready I saw so difference from those taken in the high Sierra.

69. *Astragalinus tristis salicamans* (Grinnell). Willow Goldfinch.

Emerson.—Not common at any time. Seen in scattered flocks about the clearings with the following. Kaeding.—Not common.

70. *Astragalinus psaltria* (Say). Arkansas Goldfinch.

Emerson.—Noted more about the gardens than other places. Kaeding.—Not common. Skirm.—Common summer resident.⁸

1. Belding *op. cit.*, p. 122.

2. *Ibid.*, p. 126.

3. *Ibid.*, p. 129.

4. *Ibid.*, p. 130.

5. *Ibid.*, p. 131.

6. Bull. Nutt. Ornith. Club, III; 1878, pp. 8-10.

7. Oberholser, *Auk.*, XVI; 1899, p. 186.

8. Belding, *op. cit.*, p. 137.

71. *Astragalinus lawrencei* (Cass.). Lawrence Goldfinch.
Emerson.—Noticed one near the Big Tree Grove at Felton. Nesting in live oaks May 18, 1889. McGregor and Fiske.—Abundant summer resident about Santa Cruz.
72. *Spinus pinus* (Wils.). Pine Siskin.
A pair of siskins was taken in March by Hoover and I. Kaeding.—Throughout all of May siskins were abundant in small flocks. The ovaries were developed. Emerson.—On reaching the large pine grove at the top of the ridge up from the river bottom of the San Lorenzo near Felton, my companion and I noticed a siskin near the roadside gathering bits of dead, dry grass. Soon it flew, with its mate following, to the end of a long pine limb where there was a nest some forty feet up and ten feet or more from the body of the tree.
73. *Ammodramus sandwichensis alaudinus* (Bonap.). Western Savanna Sparrow.
Kaeding.—A few seen June 1.
74. *Ammodramus sandwichensis bryanti* Ridgw. Bryant Marsh Sparrow.
In March Hoover and I found this bird in flocks with the Western Savanna Sparrow and I have taken numerous specimens in late summer, from the marshes along the San Lorenzo River where it undoubtedly breeds as both young and worn adults were secured. Emerson.—Not uncommon about the fields south of Santa Cruz.
75. *Chondestes grammacus strigatus* (Swains.). Western Lark Sparrow.
Found breeding near Santa Cruz by McGregor and Fiske. Emerson.—Noticed near Felton, around habitations. Kaeding—Not common; breeds.
76. *Zonotrichia leucophrys nuttalli* Ridgw.¹ Nuttall Sparrow.
This and the golden-crown we found abundant in March. The species breeds about Santa Cruz. Emerson—Noticed sparingly all through the mountains, but it was more plentiful near the coast about thick bushes. Skirm—Common; stays the whole year in the low brush along the beach; begins to breed about April 25; eggs from three to four; raises two, possibly three broods in a season.²
77. *Zonotrichia coronata* (Pall.). Golden-crowned Sparrow.
Emerson observed this species once in November, 1884, at Wright Station.
78. *Zonotrichia albicollis* (Gmel.). White-throated Sparrow.
Breninger records taking a male peabody at Santa Cruz on January 1, 1894, and seeing another later.³
79. *Spizella socialis arizonæ* Coues. Western Chipping Sparrow.
Emerson.—Observed only about the gardens and small orchards near the mountain residences. Kaeding,—Fairly common; breeds. Skirm.—Tolerably common summer resident.⁴

1. Ridgway, *Auk XVI*, 1899, p. 36.

2. Belding, *op cit.*, p. 151.

3. Bull. Cooper Ornith. Club, I, 1899, p. 493.

4. Belding, *op. cit.*, p. 155.

80. *Junco hyemalis pinosus* (Loomis). Point Pinos Junco.

I believe the authority for this race should stand in parentheses as above and a line be added to the reference in the check-list:

Junco hyemalis pinosus A. O. U. COMM. 6TH SUP.

Fiske took a nest containing four fresh eggs on May 17, 1891, which was placed on the ground under a vine. The nest was of dry grass, lined with hair and a few feathers. Hoover and I saw several juncos late in March above the Big Creek power house and about the dam. Hoover took the species at Santa Cruz in July. Emerson.—I take this to be the breeding Junco of this range of mountains. I see no difference between these birds and those from the type locality. It is not a common bird at any place in the mountains. Downy and fully feathered young were seen on May 13, 1889, and a nest of three well incubated eggs taken was placed on the ground in a slight hollow at the foot of a bunch of grass. The nesting site was on a steep hillside above an old logging road. The nest was composed of redwood and other leaves, lined with fine dead grass and a few cow hairs and compactly built. Both birds came close about me, the female being very much concerned about her treasures, and coming within two feet of my hand. The eggs are similar to others of this genus in color, being greenish-white, marked all over with reddish-brown, much like eggs of the Field Sparrow. I have shot at Haywards in early July young in nesting plumage, but know of no place nearer than twenty-five miles where they are likely to be found breeding. Kaeding.—Very common. Young birds were flying by May 25 and fresh eggs were found on June 1. All my specimens and some taken by Slevin below Monterey are undoubtedly referable to *pinosus*. Cooper.—Resident in mountains. Nests at foot of Santa Cruz Mountains, May 1; at 3000 feet altitude nested May 30, 1864.¹

81. *Amphispiza belli* (Cass.). Bell Sparrow.

Emerson.—Seen once around the summit of Loma Prieta in the thick chemise. No doubt it nests there.

82. *Melospiza melodia samuelis* (Baird). Samuels Song Sparrow.

Rather abundant near the coast in the marshy localities where it is resident, I think. Secured by myself and Mr. Hoover. Emerson.—Met with near the coast. The species of this genus will always be difficult to separate, for no defined line can be laid down on account of the peculiar formation of the coast country. Typical *samuelis* is found only on the salt marshes, while inland and higher up it approaches *heermanni*.²

83. *Melospiza melodia rufina* (Bonap.). Sooty Song Sparrow.

"Mr. Bailey took a specimen of this subspecies at Boulder Creek, California, on October 13, 1891, and stated that it was common there."³

1. Proc. Nat. Mus., 1889, p. 246.

2. Some of the winter song sparrows found in the Santa Cruz Mountains may best be referred to *heermanni*. My series from the coast, however, show no approach to that race. In reply to my request that he again examine his birds, Emerson says: "I find that the Santa Cruz bird is var. *samuelis*, and believe all from that county may be considered the same until more material is in hand."

3. N. A. Fauna, No. 7, p. 100.

84. *Melospiza melodia morphna* Oberh.¹ Rusty Song Sparrow.

Emerson—I saw one in October, 1884 at the summit of the mountains above Los Gatos creek.

85. *Passerella iliaca unalaschcensis* (Gmel.). Gmelin Sparrow.

Emerson.—I met several of these silent sparrows scratching in the dead leaves among the thick brush. They were very tame, coming around where we ate our meals.

86. *Pipilo maculatus falcifer* McGregor.²

Emerson records *oregonus* as not often seen among the timber, but as common on the edge of brambles. Fiske and I record *megalonyx* as an abundant resident. Skirm.—Clutch usually four eggs; common; their first clutch is laid in the latter part of April on the ground; their second clutch invariably in bushes from six inches to three feet from the ground.³ Cooper—Nested in the Santa Cruz Mountains at 3000 feet altitude on May 28, 1864.⁴

A series of seventy-five spotted Pipilos from nearly the whole length of California shows great variation. Many examples with very short tail spots are taken around San Francisco Bay and are usually referred to *oregonus*. I am inclined to think that a more careful examination will show this identification to be erroneous. The tail spots of four Oregon male birds average .77 of an inch. This is a little less than the average of California coast birds, seven of which from Palo Alto average .85 of an inch. The chestnut in Oregon birds is darker than in our birds and this is especially noticeable on the under tail coverts. The most striking and constant difference, however, is in the claws, those of *oregonus* being short and weak, the chord of hind claw measuring but about .40 of an inch. In Palo Alto birds the same measurement reaches .50 or .55 of an inch, one extreme example being .62. Neither can San Francisco Bay birds be correlated with *megalonyx*, as the white tail blotch of the latter measures about 1.14 inches. Consideration of these facts led me to give the San Francisco Bay form a new name, which will include in all probability the Santa Cruz birds.

87. *Pipilo fuscus crissalis* (Vig.). California Towhee.

From examination of fall brown towhees recently collected at Palo Alto it appears that my Battle Creek birds were in the fresh fall plumage, then unknown to me. Therefore the name *carolæ*⁵ should be relegated to synonymy. Emerson.—Like the former variety it keeps more to the brush and clearings about habitations; always noticed in pairs. Kaeding.—The two towhees are common and both breed. Fresh eggs were taken up to May 22. Cooper.—Nests from March 17 to May 8.⁶

88. *Zamelodia melanocephala capitalis* (Ridgw.).⁷ Black-headed Grosbeak.

Emerson.—Common about all the streams. Seems to prefer the wil-

1. Oberholser, *Auk*, XVI, 1899, p. 183.

2. *Condor*, II, 1900, p. 43.

3. *Ornith. and Ool.*, IX, 1884, p. 149.

4. *Proc. Nat. Mus.*, 1880, p. 248.

5. *Pipilo fuscus carolæ* McGregor. *Bull. Cooper Ornith. Club*, I, 1899, p. 11.

6. *Proc. Nat. Mus.*, 1880, p. 249.

7. McGregor, *Condor*, III, 1901, p. 41. Grinnell, *Ibid.*, p. 44.

lows. Eggs were taken May 11, 1889. In October, 1889, one came to drink at a brooklet at the summit before sun-up. No doubt it was migrating, as during that month many other summer resident birds were noted only in the higher ranges, such as swallows, flycatchers, warblers, vireos, hummingbirds, sparrows, kinglets and Russet-backed Thrush. Kaeding.—Not common; breeds. Cooper.—Arrives April 12.¹

89. *Guiraca cærulea lazula* (Lesson). Western Blue Grosbeak.

Emerson.—One was noted along the San Lorenzo river, where I am told it nests. Cooper.—Arrives April 12.²

90. *Cyanospiza amœna* (Say). Lazuli Bunting.

Emerson.—Seen all along the clearings on the edge of the brush and brambles—its favorite nesting site. Kaeding.—Not common; breeds. McGregor and Fiske.—Abundant summer resident near Santa Cruz, nesting from June to the middle of August. Cooper.—Arrives April 12; nests May 2; leaves in October.³

91. *Piranga ludoviciana* (Wils.). Western Tanager.

Emerson.—One was seen on September 12, 1884, a male, at the summit of the range; two more on May 11, 1889, male and female, same locality. Kaeding.—Seen off and on during May; not common but probably breeds. McGregor and Fiske.—An irregular summer resident.

92. *Progne subis hesperia* Brewst. Western Martin.

Kaeding.—Common, breeding in dead oaks. Fiske.—A common summer visitor near Santa Cruz.

93. *Petrochelidon lunifrons* (Say). Cliff Swallow.

Fiske and I collected numerous specimens from a colony which plastered their nests on the sea cliff near the light-house. Kaeding found them breeding very abundantly and Emerson says they were common about all barn-yards. Skirm.—Common summer resident. First seen March 28, 1881; March 17, 1882; April 1, 1883.⁴ Cooper.—Arrives April 10; nests April 20 to July 5.⁵

94. *Hirundo erythrogaster* Bodd. Barn Swallow.

Both Emerson and Kaeding found this species common and breeding. Skirm gives it as a common summer resident. First arrivals: March 26, 1881; March 14, 1882; March 20, 1883.⁶ Cooper.—Arrives March 21; leaves September 15.⁷

95. *Tachycineta bicolor* (Vieill.). Tree Swallow.

Emerson.—Nesting, as well as the violet-green, among the black oaks on May 11, 1889. Skirm.—Common summer resident.⁸

96. *Tachycineta thalassina* (Swains.). Violet-green Swallow.

Cooper saw a large flock at Santa Cruz October 5.⁹ Emerson.—Not so common as the former. Kaeding.—Common, moving north in small

1. Proc. Nat. Mus., 1880; p. 248.

2 & 3. Proc. Nat. Mus., 1880, p. 248.

4. Belding, *op. cit.*, p. 185.

6. *Ibid.*, p. 187.

5 & 7. Proc. Nat. Mus., 1880; p. 246.

8. Belding, *op. cit.*, p. 189.

9. *Ibid.*, p. 192.

flocks. Skirm.—Common summer resident, arriving March 28, 1881, and March 21, 1882.¹ Cooper.—Arrives March 19; leaves October 5.²

97. *Stelgidopteryx serripennis* (*Aud.*). Rough-winged Swallow.

McGregor and Fiske.—Recorded by us as a rare summer resident found in company with the Bank Swallow. Ingersoll.—Eggs taken at Santa Cruz.³

98. *Clivicola riparia* (*Linn.*). Bank Swallow.

In 1891 Fiske and I took eggs of this swallow near Seabright. Eggs have also been collected by Ingersoll.⁴ Emerson noticed it along the high banks of Soquel Creek.

99. *Ampelis cedrorum* (*Vieill.*). Cedar Waxwing.

Emerson.—Has been seen around Santa Cruz. I believe that it may breed in the mountains, as young have been taken in Sonoma county. It is common about Haywards every spring, feeding on the pepper berries and in time there is no question but that it will nest near habitation as the country becomes more settled. McGregor and Fiske.—The waxwing is an irregular fall and winter visitant about Santa Cruz. Skirm.—Large flocks sometimes come here, but stay only a short time.⁵

100. *Lanius ludovicianus gambeli* *Ridgw.* California Shrike.

Emerson.—Noticed only about farm places. Kaeding.—Fairly common, breeding. Skirm.—Common.⁶

101. *Vireo gilvus* (*Vieill.*). Warbling Vireo.

Emerson.—One was seen September 12, 1884, at the summit of the mountains. Common along the Soquel and San Lorenzo streams. Kaeding.—Quite common, breeding. Skirm.—Common summer resident.⁷

102. *Vireo solitarius cassini* (*Xantus*). Cassin Vireo.

Emerson.—One was seen September 12, 1884, at the summit of the mountains along the willows in the early morning. McGregor and Fiske.—Not uncommon in summer.

103. *Vireo huttoni* *Cass.* Hutton Vireo.

Hoover collected specimens of these three vireos in early summer. Ingersoll tells me he took eggs of this species near Santa Cruz. Emerson.—I found this species quite common wherever there was oak timber. Kaeding.—Quite common, breeding. W. A. Cooper records a nest found April 7, 1874, placed ten feet from the ground containing three eggs incubated about five days. March 30, 1875, he took another nest eight feet from the ground containing four eggs. Two more nests were respectively twenty-five and thirty feet from the ground.⁸

1. Belding, *op. cit.*, p. 191.

2. Proc. Nat. Mus., 1880, p. 246.

3. Belding, *op. cit.*, p. 193.

4. *Ibid.*, p. 194.

5. *Ibid.*, p. 196.

6. *Ibid.*, p. 198.

7. *Ibid.*, p. 200.

8. Bull. Nutt. Ornith. Club, III: 1878, p. 68.

104. *Helminthophila celata lutescens* (Ridgw.). Lutescent Warbler.

Kaeding.—Fairly common, breeding in cavities of banks or in ferns along small streams. Fresh eggs were taken May 6 and June 1. Emerson.—Noticed all through the mountains and canyons. Skirm.—A common summer resident on the San Lorenzo River, where they nest in wild blackberry bushes.¹

105. *Dendroica æstiva Morcomi Coale*. Yellow Warbler.

Taken at Santa Cruz by Hoover. Kaeding.—Very common, breeding. Emerson.—One was seen in a migration wave September 12, 1884, with the three species next following. Cooper.—First seen April 12, 1865.²

106. *Dendroica auduboni* (Townsend). Audubon Warbler.

Emerson.—Common in the fall and spring migrations. Kaeding.—A few were seen throughout the month, undoubtedly late migrants. Ingersoll records a flock seen October 1, 1885.³ Cooper.—Arrives September 25; leaves April 15.⁴

107. *Dendroica nigrescens* (Townsend). Black-throated Gray Warbler.108. *Dendroica townsendi* (Townsend). Townsend Warbler.

In a letter to Coues, Wm. A. Cooper writing from Santa Cruz, says of this species: "My first specimen, taken November 3, 1878, was feeding in company with *Parus rufescens*, *Vireo huttoni*, *Psaltriparus minimus*, and *Regulus*, in willows, alders, and sycamores on the bank of a river. November 14 I shot eight specimens, and could readily have obtained thrice the number, as I saw fully a hundred feeding in a similar location. * * * January 1, 1879, I shot my last specimen, not having been out since."⁵

109. *Dendroica occidentalis* (Townsend). Hermit Warbler.

Fiske records taking the eggs of this warbler from a nest in blackberry vines on May 20, 1890. I consider this a mistake in identification. Emerson.—This and the two next preceding species were seen in the oaks feeding as they moved along.

110. *Seiurus noveboracensis notabilis* Ridgw. Grinnell Water-Thrush.

Ingersoll. September 25, 1885, I took a female at Santa Cruz and I have another female that was taken by Mr. J. R. Chalker who was with me hunting a few days before I shot mine.⁶

111. *Geothlypis tolmiei* (Townsend). Tolmie Warbler.

Emerson noted this form once at the summit on May 11, 1889.

112. *Geothlypis trichas arizela* Oberh.⁷

Emerson.—Seen at Santa Cruz among the rushes along the river in May, 1889. McGregor and Fiske.—Rare summer resident.

113. *Icteria virens longicauda* (Lawr.). Long-tailed Chat.

McGregor and Fiske.—Common summer resident near Santa Cruz.

1. Belding, *op. cit.*, p. 207.

2. Proc. Nat. Mus., 1880, p. 245.

3. Belding *op. cit.* p. 212.

4. Proc. Nat. Mus., 1880, p. 245.

5. Bull. Nutt. Ornith. Club, IV, 1879, p. 117.

6. Belding, *op. cit.*, p. 216.

7. Oberholser, *Auk.*, XVI, 1899, p. 256.

Fiske took three incubated eggs July 9, 1891. Ingersoll reports it as a summer resident.¹ Kaeding considers it rare. Emerson.—Seen only once, May 12, 1889, near Boulder along the creek.

114. **Wilsonia pusilla pileolata** (*Pall.*). Pileolated Warbler.

Emerson noted this form in the migration wave of September 12, 1884, and Hoover took it in July. The Pileolated Warbler is recorded by Skirm as a quite common summer resident.²

115. **Anthus pensilvanicus** (*Lath.*). American Pipit.

This species is common about Santa Cruz in fall and spring. Emerson.—Common on the summit flats May 16, 1889.

116. **Cinclus mexicanus Swains.** American Dipper.

Emerson.—Common all down the Soquel canyon and on Boulder and Bear creeks. This bird is an interesting study. While under water its body looks as if covered with silver drops, like dew on a fuzzy mullein leaf. The bird seems to be able to cling to the rocks and to feed while under water and I noticed that they use their wings in moving beneath the water, as well as their feet. Their song notes are rather low, silvery and clear and very plaintive. Kaeding.—Common along streams. May 28, on a stream a mile and a quarter long, I found two nests just completed, one nest with eggs half incubated, one nest of very small young and one nest of young ready to fly. McGregor and Fiske.—The dipper is a common resident along the streams near Santa Cruz.

117. **Harporhynchus redivivus** (*Gamb.*). California Thrasher.

Emerson.—Common all through the higher ranges, more about Loma Prieta summit. Half fledged young were seen May 13, 1889. Kaeding.—The most abundant (sic) bird of the region; evidently breeds late in April, as all nests examined contained young. McGregor and Fiske.—The thrasher is a common resident about Santa Cruz.

118. **Salpinctes obsoletus** (*Say*). Rock Wren.

Emerson.—Seen only on a bare, rocky ridge-side above Bear Creek grade. Kaeding.—Two noted May 7.

119. **Catherpes mexicanus punctulatus Ridgw.** Dotted Canyon Wren.

Kaeding observed a few pairs breeding.

120. **Thryomanes bewicki spilurus** (*Vig.*). Vigor Wren.

Emerson.—Seen on several occasions among the thick brush and bramble heaps. Recorded as common by Skirm.³

121. **Troglodytes aedon parkmani** (*Aud.*). Parkman Wren.

Emerson.—Common among the oaks in May through the mountains and canyons.

122. **Anorthura hiemalis pacifica** (*Baird*). Western Winter Wren.

Emerson.—Rarely seen, then only in the deep, wet canyon and creek banks. A constant resident. Eggs have been taken by G. A. Ready of Santa Cruz. Its song is similar to that of the Water Ouzel in beauty.

1. Belding, *op. cit.*, p. 219.

2. *Ibid* p. 221.

3. *Ibid*, p. 231.

McGregor and Fiske.—The winter wren is a resident about Santa Cruz where we took an example.

123. *Cistothorus palustris paludicola* Baird. Tule Wren.

A rare summer resident. Fiske collected five well incubated eggs on July 8, 1891. No false nests were observed.

124. *Certhia familiaris occidentalis* Ridgw. California Creeper.

Hoover took a specimen near Santa Cruz in June and I shot at a creeper on Big Creek late in March. Kaeding records the creeper as not common. Emerson.—Rarely seen at any time throughout the range. Two specimens were taken Sept. 12, 1884, and others seen at the summit. An old nest was found behind a slit of bark of a redwood tree, some five feet from the ground, near the summit between Soquel and Wright's. The nest was composed of shredded redwood bark, soft and silky, lined with birds' feathers. Ready has taken their eggs near Santa Cruz.

125. *Sitta carolinensis aculeata* (Cass.). Slender billed Nuthatch.

Emerson.—Not common at any time. Noticed more in the oaks than in other trees.

126. *Sitta pygmæa* Vig. Pygmy Nuthatch.

Emerson.—This species is not as common throughout the locality situated as in the Monterey range, where it can be seen associating with the warblers, titmice, and chickadees. Ingersoll.—I saw about a dozen here. It is quite rare.¹

127. *Parus inornatus* Gamb. Plain Titmouse.

W. A. Cooper found a set of four eggs, incubated about five days, in a hollow oak limb, five feet from the ground. This set was taken near Watsonville April 4, 1877.² Emerson.—Seen in the vicinity of oaks, rain or shine.

128. *Parus rufescens barlowi* Grinnell.³ Barlow Chickadee.

The chickadee is an abundant resident near Santa Cruz where Fiske took fresh eggs April 12. Kaeding found it abundant about Ben Lomond where eggs collected May 6 were two-thirds incubated.

129. *Chamæa fasciata intermedia* Grinnell.⁴ Intermediate Wren-Tit.

Hoover found the wren-tit fairly common at Santa Cruz in July, and Kaeding reports it as breeding abundantly on Ben Lomond in May. Emerson saw it but rarely and then only in the thick bramble and bush.

130. *Psaltriparus minimus californicus* Ridgw. California Bush-Tit.

Fiske and I found the bush-tit to be an abundant summer resident about Santa Cruz where I have taken it in March, 1898. Kaeding found it very common on Ben Lomond. Emerson speaks of the species as common among the willow and wild lilac bushes, going in large flocks in the fall.

1. Belding, *op. cit.*, p. 239.

2. Bull. Nutt. Ornith. Club, III; 1878, p. 69.

3. *Condor*, II; 1900, p. 227.

4. *Ibid.*, p. 85.

131. *Regulus satrapa olivaceus* *Baird*. Western Golden-crowned Kinglet.
Emerson.—One was seen on Sept. 14, 1884, at the summit above the Soquel canyon among some willows.

132. *Regulus calendula* (*Linn.*). Ruby-crowned Kinglet.
Emerson.—Common at the summit after a hard frost in October, 1884.
Kaeding.—Quite a number seen all through May; reproductive organs of those examined were large.

133. *Hylocichla ustulata œdica* *Oberh.*
Fiske says this bird comes to Santa Cruz about April 20 and commences to nest about May 25. The young in first plumage was described by Oberholser from a specimen (No. 153944 U. S. Nat. Mus.) taken by me at Santa Cruz, July 27, 1891.¹ Kaeding found it common everywhere and eggs which he took on June 1 were three-fourths incubated. Emerson.—Seen several times at the summit between Sept. 12 and 20, 1884. On May 18, 1889, while going up to Bear Creek from Boulder a thrush was heard, in notes entirely different from *ustulatus*, and I have yet to hear anything like its song from any thrush in California. Just at dusk on the still evening air came a deep, whistling note. This may have been the Dwarf Hermit Thrush that W. A. Cooper has mentioned as breeding in the redwoods of Santa Cruz county.² Skirm.—Commenced nesting about May 15, 1884; three or four eggs, the latter the most I have found in any one of about one hundred and fifty nests.³ Ray.—June 11, 1895, *five* fresh eggs. Nest made almost entirely of redwood bark and placed among the out-growth of a redwood stump. Boulder Creek, Santa Cruz Co., Cal.⁴

134. *Hylocichla aonalaschkæ* (*Gmel.*). Dwarf Hermit Thrush.
Emerson.—One was seen on October 28, 1884. Kaeding.—A few seen during the first week of May.

135. *Merula migratoria propinqua* *Ridgw.* Western Robin.
The robin is a rare winter visitant at Santa Cruz. Kaeding saw a few early in May. Of this bird Emerson says: "Seen in the pines at the summit fourteen miles from Santa Cruz May 18, 1889, when it was heard in full song. I believe that it will be found nesting in these mountains."

136. *Hesperocichla nævia* (*Gmel.*). Varied Thrush.
The Oregon Robin is found at Santa Cruz some winters, there being no regularity in its appearance. Emerson saw one in the redwoods at the summit on October 28, 1884. Ingersoll reports it as first seen October 30, 1885.⁵ Cooper.—Arrives in October, leaves April 1.⁶ Bailey found it common at Boulder Creek in October.⁷

137. *Sialia mexicana occidentalis* (*Towns.*) Western Bluebird.
Emerson.—Not common on the mountains in the fall, but in May, 1889, it was seen about the oak trees, busy building and hunting for nest-

1. *Auk*, XVI; 1899, p. 24.

2. Belding. Proc. Cal. Acad. Sci. 2d. Ser., II, p. 65.

3. Belding, Ld. Bds. Pac. Dist., p. 252.

4. *Condor*, II; 1900, p. 126.

5. Belding, *op cit.*, p. 260.

6. Proc. Nat. Mus., 1880, p. 245.

7. *N. A. Fauna*, No. 7, p. 147.

ing sites. Kaeding.—Very common; fresh eggs taken every week in May. Cooper.—Nested in Santa Cruz Mountains, at 3000 feet, April 20, 1874.¹

138. *Sialia arctica Swains.* Mountain Bluebird.

Emerson.—Rarely seen. Observed once on the bare ridge-side at the summit of Bear Creek canyon grade.

139. *Passer domesticus (Linn.)*. House Sparrow.

Common resident in all towns.

1. Proc. Nat. Mus., 1880, p. 245.

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