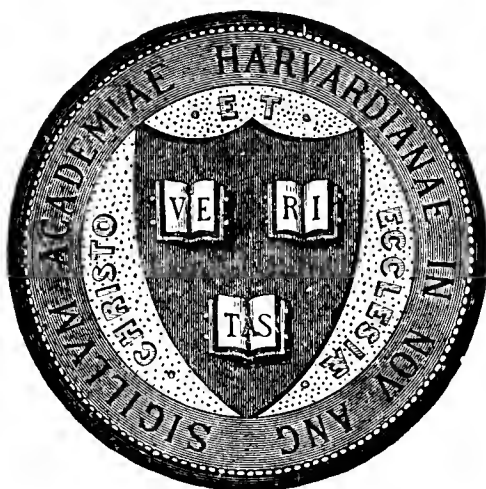


A-G [rinnell, J.]
Santa Barbara
1897

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PASADENA ACADEMY OF SCIENCES.
PUBLICATION NO. I.

REPORT ON THE BIRDS

RECORDED DURING A VISIT TO

The Islands of Santa Barbara, San
Nicolas and San Clemente,

IN THE SPRING OF 1897.

By JOSEPH GRINNELL.

PRESS OF J. W. HART,
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Pasadena Academy of Sciences,

PASADENA, CALIFORNIA.

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Assembly Hall, Throop Polytechnic Institute, first and third Friday evenings of each month.

PREFACE:

Through the generosity of Mr. Hulett C. Merritt, and others of its members, the Pasadena Academy of Sciences was enabled to send a scientific exploring party to the southern Santa Barbara Islands during the past spring.

The party consisted of Joseph Grinnell, who had the immediate charge of the expedition, and gave especial attention to the ornithology and entomology of the islands; Horace Gaylord, who collected mammals; and Harry Gaylord and James Brittan who devoted their time to archæology. The party left San Pedro harbor May 11 in a large fishing schooner, fully equipped for the work previously mapped out, visiting the islands of Santa Barbara, San Nicolas and San Clemente in turn, making as complete investigation and collecting as many specimens as their time would permit.

It is the intention of your Executive Committee to publish, under separate cover, reports on the birds and mammals observed and secured by this party, and in accordance with this plan we append herewith the report of the ornithologist.

To the Executive Committee of the Pasadena Academy of Sciences:

I herewith present my report on the birds recorded during the exploration among the islands the past spring. Our party left San Pedro on May 11, and visited in turn Santa Barbara, San Nicolas and San Clemente Islands, returning on June 9. The notes of an earlier trip which I made to the latter island from March 26 to April 4, are also included.

Each of the party of course helped the others in their line when opportunity afforded, so that the present Bird Report is not the result exclusively of my own efforts. Mr. Horace Gaylord, in particular, obtained many valuable notes on the birds.

Four hundred and fifty birds' skins and many eggs were collected during both trips, and on these, supplemented by full field notes, is based the present report. I have considered it more convenient to treat the birds in four separate lists—of the land-birds observed on each of the the three islands, and of the water birds recorded during the entire trip.

The nomenclature is that of the A. O. U. Checklist of 1895.

Respectfully,

JOSEPH GRINNELL.

Pasadena, California, August 10, 1897.

Land-Birds Observed on Santa Barbara Island.

Santa Barbara Island is thirty-five miles from the mainland of Southern California, and twenty miles west of Santa Catalina Island. It is one and five-sevenths miles across on its greatest diameter, and the highest point, the southernmost of the two hills which occupy the center, is possibly 300 feet in altitude. There are no beaches and the sides of the island are extremely precipitous, worn in places into large caverns and natural bridges. With the exception of the two hills, the top is a smooth mesa, cut on the east side by several short ravines. This mesa supports a rather abundant growth of grass, weeds, and in the eastern part, scattering low bushes. There is considerable cactus among the ravines. On many parts of the island a kind of ice plant forms a thick carpet very disagreeable to walk through. We found no fresh water. We remained on this island from May 13 until May 18, inclusive. Our camp was made on the shelf of a rock at the landing, if it can be called such, on the east side.

1. *Zenaidura macroura*—Mourning Dove.

In all about a dozen were noted. Although three were shot, unfortunately none were saved. Those seen, were feeding in weed patches or flying low over the mesa.

2. *Haliaeetus leucocephalus*—Bald Eagle.

Seen on two occasions flying above the island.

3. *Otocoris alpestris strigata*—Streaked Horned Lark.

Quite numerous over the whole mesa. Full-fledged juveniles were plentiful, and three adult females taken on the morning of May 14, each contained eggs ready to be laid, thus indicating that two broods are reared in a season. A nest was found on May 15; it was in a hollow under a tuft of grass on the ground and contained four small young. Twenty-six specimens of the Streaked Horned Lark were taken on this island.

4. *Corvus corax sinuatus*—American Raven.

Several pairs were seen about the island. A nest containing two nearly-fledged young was situated on a narrow ledge of rock on the face of a cliff on the north side of the island. It was perhaps 150 feet above the surf. The Ravens were evidently subsisting on the eggs and young of the sea-birds which were nesting so numerously on this island.

5. *Sturnella magna neglecta*—Western Meadowlark.

There were about twenty Meadowlarks composing a flock which frequented the southern part of the mesa. Four full-grown juveniles were secured, but the adults were not approachable.

6. *Carpodacus mexicanus frontalis*—House Finch.

Common on the eastern part of the island among the patches of cholla cactus, the fruit of which the linnets were eating. Juveniles were plentiful. A nest was found on the side of a ravine, May 17; it was built between the leaves of a cactus about eighteen inches above the ground, and composed entirely of fine dry grass-blades. It contained four badly-incubated eggs, three of which measure: *.76x.56, .75x.59, .83x.59. Fourteen House Finches were taken on this island.

7. *Melospiza fasciata graminea*—Santa Barbara Song Sparrow.

The most abundant bird of Santa Barbara Island. Numerous everywhere, especially on the bush-covered fields on the southeastern portion of the mesa. Their song, notes and action were apparently identical with those of the mainland Song Sparrow. If any different, the song of the island bird is a little weaker and briefer. Full-grown juveniles were numerous, more so than the adults which were all apparently engaged in nest-building or raising the second brood. Mr. Horace Gaylord and myself found five sets of the eggs of this species. The nests are all of practically the same size and composition. A typical one is supported by the obliquely-growing twigs of a bush; it is lined and internally composed of fine yellow grasses, in marked contrast with the larger brown grasses and weed stems of which the nest is basally built. The measurements of this nest are: Inside—diameter, 2.30; depth, 1.30. Outside—diameter, 4.00; depth, 3.30. In detail the sets are as follows:

*All measurements in this Report are in inches and hundredths of an inch.

No. 1. May 14. Nest, 18 inches from the ground in thick sage bush; set, 5, incubation begun. Measurements of eggs: .81x.62, .82x.63, .79x.61, .82x.63, .80x.60.

No. 2. May 14. Nest, 20 inches from ground in sage bush; set, 4, fresh. Eggs measure: .79x.63, .78x.61, .79x.64, .77x.60.

No. 3. May 14. Nest, 10 inches from ground in sage bush; set, 4, incubation advanced. Eggs measure: .80x.60, .79x.62, .80x.61, .80x.62.

No. 4. May 15. Nest, 20 inches from ground in sage bush; set, 3, incubation advanced. Eggs measure: .70x.57, .74x.61, .72x.60.

No. 5. May 15. Nest, 10 inches above ground between leaves of cactus and surrounded by weed stalks; set, 3, slightly incubated. Eggs measure: .78x.59, .77x.60, .77x.62.

This series in color and markings is absolutely indistinguishable from a series of the eggs of *M. f. heermanni* taken in the vicinity of Pasadena. Thirty-one specimens of the Santa Barbara Song Sparrow were secured. Nineteen adults measure: length, 5.50-6.12 (5.80); wing, 2.25-2.50 (2.35); culmen, .40-.46 (.43.)

8. *Dendroica coronata*—Myrtle Warbler.

I shot an adult female May 15, the only one seen. It was flying past the ravine above our camp. A migrant.

9. *Dendroica maculosa*—Magnolia Warbler.

I shot an adult male on May 15, the only one seen. It was busily engaged in searching for insects in a clump of dead weed stalks. I think this is the first record for Southern California, if not for the State.

10. *Dendroica townsendi*—Townsend's Warbler.

Mr. Gaylord and myself each took an adult female of this species on May 16. They were in the weed patch in the ravine above camp. Undoubtedly migrants.

11. *Dendroica occidentalis*—Hermit Warbler.

Mr Gaylord took an adult female of this bird on May 14, and we caught glimpses of three more during that day. They were all in the ravine before mentioned. Migrants.

12. *Sylvania pusilla pileolata*—Pileolated Warbler.

May 14, 15 and 16, several of these warblers were seen each day in the weeds in the ravine above camp. Five specimens were taken, two males and three females. As in the case of the other warblers, these birds were undoubtedly late migrants.

13. *Salpinctes obsoletus*—Rock Wren.

Tolerably common around the rocky margins of the island. Nearly fledged juveniles were taken May 14. Seven Rock Wrens were obtained on this island.

14. *Turdus ustulatus*—Russet-backed Thrush.

Three seen and one specimen, an adult female, taken on May 16. They were on the east side of the island near camp. Probably migrants.



Land-Birds Observed on San Nicolas Island.

San Nicolas is the most remote of the Santa Barbara group, being over sixty miles from the nearest point of the mainland. Santa Barbara Island is nearest it, being twenty-eight miles distant. San Nicolas Island is seven miles long and three miles wide. The central portion consists of a broad plateau or mesa about 800 feet above sea level. This mesa drops abruptly on all sides, leaving a broad interval between its base and the beach. The west end of the island is scarcely more than a huge sand dune, with no vegetation whatever. The summit mesa is sparingly covered with grass, which supports a herd of sheep. Around the lower part of the island is an occasional small thorny bush, with scattering clumps of cactus and a few other plants. There are a few alkaline springs in the largest of the ravines which cut down from the mesa above. This is the most barren island of the group and consequently possesses the least animal life. Our visit extended from May 19 until May 26. We camped at the east end, near the old ranch house, where there was a cistern of rain water.

1. *Zenaidura macroura*—Mourning Dove.

About a dozen doves were noted on this island; they were mostly on the east end. A single specimen, an adult female was secured. It is very much darker than any specimen I have seen from the mainland.

2. *Haliaeetus leucocephalus*—Bald Eagle.

Seen on several occasions along the southeast side of the island.

3. *Pandion haliaetus carolinensis*—American Osprey.

Tolerably common.

4. *Aeronautes melanoleucus*—White-throated Swift.

On May 25, I saw a single bird of this species flying in circles along the beach at the east end. It was shot, but fell into the surf and was lost.

5. *Contopus richardsonii*—Western Wood Pewee.

I took an adult female on May 20, and an adult male on May 23. The former was shot from its perch on a fence wire, from which it was making frequent sallies after flies. The latter specimen was flying along the beach in front of camp early in the morning and lit on a ledge of rock. Both were undoubtedly migrants.

6. *Otocoris alpestris strigata*—Streaked Horned Lark.

The most abundant bird of San Nicolas Island; numerous everywhere, but especially on the grassy mesa at the summit of the island. At the time of our visit the nesting season seemed to have just begun. On May 24, however, a brood of juveniles were noted, but these were the only ones seen. Mr. Gaylord found a nest on May 26. It was on the ground in a depression and consisted of an unusually generous lining of dry grass-blades and stems. The set of three eggs were considerably incubated. They are indistinguishable from eggs of the Mexican Horned Lark, and measure, .86x.65, .79x.63, .86x.63. Another set of three eggs was found by a member of our party, but on revisiting the vicinity it could not be located. Forty-six skins of the Horned Lark were taken from this island. One of the specimens is remarkably deformed. The upper mandible is normal, but the lower manible is three-fourths of an inch long, and curved like the bill of a California Thrasher. It would be puzzling to decide how the bird could manage to pick up anything.

7. *Corvus corax sinuatus*—American Raven.

Common. One specimen taken.

8. *Carpodacus mexicanus frontalis*—House Finch.

Only about twenty were seen during our stay on the island, so this bird is by no means common. Fully-fledged juveniles were noted, and a nest found May 25. It was in a hole in the sandstone bluff above the beach but could not be reached. The female was seen to leave it on several occasions. Four specimens of the House Finch were taken.

9. *Salpinctes obsoletus*—Rock Wren.

Very common over the whole island, but especially along the banks of the dry water courses. Juveniles, from stubby-tailed fellows just out of the nest, to full-grown ones were more numerous than the adults. The latter were very shy and hard to

approach. Mr. Gaylord found a nest on May 22. It was in a crack in the clayey bank of a gully, two feet from the top and three feet above the bed. The nest was several inches back in the cavity, and the earth had to be broken away to reach it. It is composed of grass stems, lined softly with fine rootlets and a few feathers. The set consists of six considerably incubated eggs. They are creamy white with scattering spots and dots of vinaceous-rufus about the larger ends. Their measurements are, .76x.63, .79x.64, .80x.64, .81x.64, .80x.64, .80x.65. The female was seen to leave the nest only after two persons had stepped across the ditch directly above her. She did not again appear although we waited many minutes for her. Twenty-eight specimens of the Rock Wren were obtained from this island. The Rock Wren of the islands is very distinct from that of the mainland, and certainly deserves to be separated as a new species. This will probably be done by some one in the near future.



Land-Birds Observed on San Clemente Island.

San Clemente Island lies about fifty miles from the nearest mainland and twenty-five miles from Catalina Island. It is seventeen miles long and four wide. Its trend is from northwest to southeast, that is, parallel with the mainland coast. The northeastern side of the island is steep, rising abruptly to the summit ridge which is about 1500 feet in altitude. From this ridge the land slopes gradually through a series of parallel benches or mesas to the southwest coast which in many places has a broad beach. Cutting their way westward transversely through these mesas from the summit ridge, are numerous ravines and canons. Some of the latter are very deep and narrow, resembling miniature Canons of the Colorado. The only water on the island in summer, except at the wind mill, is to be found in holes and recesses in the beds of the deepest gorges. The sheep and goats have worn paths down to the most accessible of these "tanks" as they are called by the herders. Vegetation on this island is not super-abundant. It is mainly composed of cactus of several species and a low thorny bush on the mesas and hillsides; while the canons and ravines generally contain thickets of wild cherry bushes, which in a few places reach a height of fifteen feet or more, and might be called trees. Our stay on this island extended from May 28 until June 7, inclusive. The notes of an earlier visit by myself, from March 28 until April 3, are also included. During both visits camp was made at the windmill at Smuggler's Cove, near the southeast end of the island, and most of the notes pertain to the region immediately surrounding the Cove.

1. *Callipepla californica vallicola*--Valley Partridge.

I found a small number of these birds in a broad canon which reaches the coast a half-mile southeast of China Point. The canon bed was lined with an unusually heavy growth of wild cherry bushes which afforded the only good cover on that part of the island. On May 31 I saw two broods of young scarcely a week old. In all, only about twenty adults were noted. I was told by one of the sheep-herders that twelve dozen "quail" had

been introduced on the island about ten years ago by an old resident named Gallager; but on account of the poor cover, and the abundance of foxes which killed the sitting birds in the spring, they had scarcely been able to hold their own. The six specimens taken agree in being slightly lighter than *vallicola* from Pasadena. The colony may have been obtained from the mainland further south, possibly San Diego, or this slight bleaching may be due to the effects of new food and environments. If the latter is the explanation, it will be interesting to watch developments, in case the change is rapid enough to be perceptible.

2. *Zenaidura macroura*—Mourning Dove.

Mourning Doves were observed in equal numbers during both visits, so they are undoubtedly residents. The familiar notes were heard more often morning and evening, at which time the watering places in the canons and the trough at the windmill were sure to be attended by a pair or more of these graceful birds. A clump of scraggy cherry trees in the ravine a few rods north of the windmill seemed to be a regular roosting place. Just at dusk, every evening, the doves would arrive in pairs and settle in the trees until there were probably twenty or thirty. But they would leave in the morning by daylight, so that we succeeded in obtaining but a few. On June 3, I flushed a dove from its nest, eight feet above the bed of a ravine, on the horizontal branch of a cherry tree. The nest was as usual a flimsy platform of twigs and grass-stems, and contained a single fresh egg. On June 6, I took a set of two fresh eggs from a nest four feet above the ground on a horizontal branch of a cherry bush. The nest was rather bulky for a dove's nest, having been built up among some transverse twigs. The eggs of this set measure: 1.10x.84, 1.14x.86. Three specimens of the Mourning Dove were preserved.

3. *Haliaeetus leucocephalus*—Bald Eagle.

The Bald Eagle was seen rather commonly along the shores of the island, but as usual, quite shy. When an eagle appeared, the Ospreys were generally the first to see it and give the alarm with their mournful whistling cries. However, according to my observations, the Ospreys are not robbed of their fish so persistently as generally believed, the food of the eagle being mainly the dead fish thrown up on the beach. I found a nest of the

Bald Eagle on April 1. It was situated on a shelf of the rock which projected from the top of one of the huge caverns on the steep hillside west of Smuggler's Cove. The nest proper was a saucer-shaped depression in the sand on top of the ledge. But it was lined with downy feathers, and encircled by a considerable mass of large sticks and fagots. The nest contained a single egg, nearly hatched, which is soiled chalky white, and measures, 2.76x2.23. On our second visit several immature or juvenile eagles were noted, that is, birds in the dark plumage.

4. *Pandion haliaetus carolinensis*—American Osprey.

The Ospreys were quite abundant about the south end of the island, and there was hardly a rocky promontory or pinnacle which was not used as a nesting site. The nests were all either on pillars of rock standing directly in the surf, or on over-hanging ledges close above the water. As usual they were bulky affairs of course sticks, lined with sea-weed and grasses. One nest I climbed to appeared at first sight to contain nothing, but on picking over a hummock of grass in the center, I discovered the set of eggs. The grass formed a felted mat or lid which was attached to the nest on one side, and when closed over the nest, perfectly concealed the eggs and protected them from cold. When lifted, the lid laid up on the side of the nest, leaving the eggs exposed. This is of course quite unusual; all the other nests examined were without any such adjunct. Five sets of fresh eggs were taken from March 29 to April 3. Eleven eggs average 2.48x1.86. Three eggs constituted a full set. On June 7, nests contained young from a few days old to nearly full-fledged. Four specimens of the American Osprey were taken—two adult males and two young.

5. *Ceryle alcyon*—Belted Kingfisher.

Several seen during my first visit from March 28 to April 3. An adult female was taken March 30. They were always seen along the rockiest part of the shore, where they fished mostly in the tide pools.

6. *Phalacroptilus nuttallii californicus*—Dusky Poor-will.

Heard each evening from March 30 to April 2; a female was shot March 31. They were on the hillsides back of the Cove. None were seen or heard during the second visit, so this bird was probably only a migrant.

7. *Aeronautes melanoleucus*—White-throated Swift.

During the first visit, White-throated Swifts were seen frequently flying along the hillsides. I saw them entering crevices in the roof of one of the caverns west of the Cove, on April 2. They were probably nesting. Two were shot on April 2, but fell in cholla cactus thickets and were not secured.

8. *Calypte costa*—Costa's Hummingbird.

I saw a single adult male poising among some flowers on March 30. It was undoubtedly a migrant.

9. *Selasphorus alleni*—Allen's Hummingbird.

Quite numerous along the ravines, where the metallic rattle of its wings gave notice of its presence long before it could be distinguished among the bright-colored flowers. I found a nest on March 28, which contained two incubated eggs. It was built at the forks of a cherry twig, five feet above the ground, in a canon. The nest is composed mostly of sheep's wool, with spiders' web and a few downy feathers. On the outside, it is covered with green lichens, and bits of plant fibers. The inside measurements are: diameter, .90; depth, .75. Outside: diameter, 1.90; depth, 1.50. The eggs measure: .54x.35, .55x.36. On May 31 and June 3, I saw fully-fledged juveniles. They had a shrill squeak, which they uttered frequently, especially when the parent bird was approaching to feed them. Four specimens of the Allen's Hummer were secured.

10. *Contopus richardsonii*—Western Wood Pewee.

I saw a single individual of this species in a canon on June 3. I am sure it was a migrant, though late.

11. *Empidonax insulicola*—*Island Flycatcher.

On June 5, I secured a pair of these birds. They were in a deep, dark gorge, flitting about the face of a mossy wall where there was probably a nest, though I failed to find it. Along the precipitous north side of the island in the vicinity of Mosquito Harbor, several were noted on June 7. As far as I could judge, the notes and mien of the Island Flycatcher were in no way different from those of the mainland bird. As I did not observe any of these birds on my first visit, it may be presumed that they are only summer visitants, as is *E. difficilis* on the mainland.

*New species, described in *Auk*, July, 1897, by Harry C. Oberholser.

12. *Otocoris alpestris strigata*—Streaked Horned Lark.

A common bird on the barren mesas. There were a few about Smuggler's Cove, but it was most numerous on the broad, elevated prairie in the interior of the island. I found a nest on June 3; it was on the ground in a depression under the broad, obliquely-inclined leaf of a cactus. It was thus well-protected, as no fox could reach the contents without encountering the stiff spines. The nest consisted of a scanty lining of dry grasses, and contained three slightly-incubated eggs. These do not differ from eggs of *O. a. chrysolæma*. Their measurements are, .80x.60, .81x.62, .82x.62. No juveniles were noted even during the last visit, so that the breeding season is apparently later than on the other islands. The notes and actions of this bird were identical with those of the mainland form. Eleven specimens of the Streaked Horned Lark were obtained on this island.

13. *Corvus corax sinuatus*—American Raven.

Ravens were quite numerous and were nesting commonly on the cliffs and ledges on the canon sides. The nests were always placed in cavities or crevices in the face of the rock, and were composed of course sticks, lined with wool. As the occupied nests were inaccessible, no eggs were secured. Two skins of the Raven were taken on this island.

14. *Sturnella magna neglecta*—Western Meadowlark.

During my first visit there were several pairs of Meadowlarks in the vicinity of Smuggler's Cove. A male and two females were taken. The condition of the skin on the breasts of the latter showed them to be sitting. No larks were observed on the last visit; they had probably raised broods of young and repaired to better feeding grounds on the higher mesas. On comparison with specimens from Pasadena, in corresponding plumage, I find the male bird from the island, as might be expected, to be very much darker, with much larger feet.

15. *Carpodacus mexicanus frontalis*—House Finch.

The most abundant bird of San Clemente Island. Common everywhere, but most numerous in the deep gorges, whose walls are broken by dark caverns and festooned with cactus. In such places, especially in the vicinity of the water "tanks", the linnets fairly swarmed, and their full rollicking songs reverberated.

incessantly. Their food appeared to be mainly composed of the fleshy cactus fruits, of which there was certainly an abundant supply. The nests are built either in cactus, or in niches in the roofs and walls of the caverns. In the latter places the nests vary much in bulk, being fitted to the cavities in which they are built. A large cavity is nearly filled with a mass of fine grasses, weed stems and wool, with only a narrow aperture left at the top. Nests in cactus are built in the center of a clump of spiny stems, from one to three feet above the ground. These can seldom be reached except by breaking down the cactus. They are more compact than those in the rocks, but made of the same materials. Two to five eggs form a full set. They are similar to those of the mainland bird except in size, being decidedly larger. A fresh set taken March 30, measure, .84x.60, .80x.63, .82x.62, .80x.63. A partially incubated set of five, taken March 31, measure, .80x.56, .80x.59, .82x.57, .85x.56, .86x.58. The nesting season begins early, as nearly-fledged young were noted on March 28. On June 5, incubated eggs were taken. The House Finches on San Clemente Island average larger and brighter colored than those of the mainland. This case well illustrates the tendency of the insular birds to acquire larger proportions of the bill or feet. In this genus, the extremes are reached further south in *C. mcgregori* and *C. amplus*. The following are the average measurements of the bills of a series each of the San Clemente and mainland House Finches:

	GONYS.	CULMEN.	DEPTH OF BILL AT BASE.	WIDTH OF UPPER MANDIBLE.
San Clemente Is....	.32	.43	.35	.30
Pasadena29	.40	.33	.28

Forty-seven specimens of the House Finch were obtained on this island.

16. *Anemodramus sandwichensis alaudinus*—Western Savanna Sparrow.

- One specimen was secured and several others seen along the grassy margins of a slough at the mouth of a canon, on March 30. Evidently only a winter visitant.

17. *Zonotrichia leucophrys intermedia*—Intermediate Sparrow.

At the time of my first visit, these sparrows were very common among the weeds and cherry brush in the ravines. One specimen taken.

18. *Zonotrichia coronata*—Golden-crowned Sparrow.

A specimen was taken March 31, and several others seen in a bushy ravine. This bird and the last were undoubtedly winter visitants.

19. *Spizella socialis arizonæ*—Western Chipping Sparrow.

Probably a resident bird as it was noted on both visits. The only specimen secured was an adult male on March 30. Another, probably a female, was seen at the same time, and from their actions I thought that there was a nest in the vicinity; it must have been in cactus as there was no other vegetation at hand. On June 3, a pair was noted, and on June 5, another. In all these cases the Chipping Sparrows were high on the steep canon sides toward the interior of the island, and were very shy.

20. *Amphispiza belli*—Bell's Sparrow.

Quite common on the hillsides and lower mesas where there is a low thorny bush growing in clumps and patches interspersed with cactus. At the time of my first visit, the males were in full song, and dissection of females showed that eggs in most instances had already been laid. During the second visit, full-grown juveniles were plentiful. The notes and habits of this bird were substantially the same as of those about Pasadena. Twenty-six specimens were secured.

21. *Melospiza fasciata clementæ*—San Clemente Song Sparrow.

Common along the ravines and lower mesas near the coast, as well as scatteringly along the canons higher up. Its favorite haunts appeared to be the weed patches and low brush on the sides of the shallow ravines which cut the first mesa above the beach. Here their songs and call-notes, which were seemingly identical with those of the adjacent mainland race, *M. f. heermanni*, were continually heard. At the time of my first visit, nidification was in progress, and during the second visit many full-fledged juveniles were taken. Unfortunately no nests were discovered. Seventeen adult specimens of *M. f. clementæ* measure as follows: length, 6.00–6.50 (6.26); wing, 2.37–2.68 (2.56), culmen, .42–.46 (.44.) Thirty-five specimens of the San Clemente Song Sparrow were secured.

22. *Melospiza lincolnii*—Lincoln's Sparrow.

A single specimen was taken March 30 and another seen. They were in the rank weeds growing about the watering-trough at the windmill. A winter visitant.

23. *Pipilo clementæ*—*San Clemente Towhee.

Not uncommon along the larger ravines and canons, wherever there is a thick growth of wild cherry bushes; but on account of their silence and secretive habits they were not easy to locate. A Towhee might be heard scratching among the dead leaves in a thicket, but he would not be easy to drive out, and even if he did finally vacate, it would only be to dive into the next bush on the opposite side of the would-be collector. However, when the males sang, or rather repeated their "(tow)hee", they generally mounted to the highest twig of a bush, and were there quite conspicuous. They usually appeared thus in the early morning and evening. The "catbird" call, which is so characteristic of *P. m. megalonyx*, seems to be unknown to this bird. Six specimens, the type series, were taken during the first visit, and ten during the last. The latter are typical in every respect. Especially noticeable, when compared with *P. m. megalonyx*, is the long bill, which averages in the ten specimens: culmen, .58; gonys, .42. Although the birds taken were evidently breeding, no nests were found nor juveniles observed.

24. *Ampelis cedrorum*—Cedar Waxwing.

In the forenoon of May 31, I saw a single specimen of this bird in the canon near China Point. It flew past me down the canon and a minute later returned. Its note, manner of flight and plumage were characteristic and unmistakable.

25. *Lanius ludovicianus gambeli*—California Shrike.

This bird was without question the shyest and hardest to be secured of any on the island. Indeed it was as shy as any hawk I ever saw. It was tolerably common; that is, two or three could be generally seen during an hour's walk. There was a pair in the neighborhood of the windmill where we were camping, and nearly every morning a little after daybreak the male would perch either on the windmill or on the topmost twig of a brush pile on the opposite side of the ravine, and utter its defiant

*New species, described by me in *Auk*, July, 1897.

shrike notes. The rustle of the tent door or the click of a gun lock, however, was sufficient to send him up over the ridge, not to appear again for hours. On April 2, I found a nest and succeeded, after lying in ambush for a long time, in securing the female bird. The nest was in a small bush growing out from the side of a canon, and was composed mostly of sheep wool, with an admixture of weed stems and grasses. Five slightly incubated eggs constituted the set. They are not different from eggs of true *L. l. gambeli* of the mainland, and measure: .97x.72, .96x.72, .95x.71, .95x.73, .96x.72. During our last visit, Mr. Horace Gaylord secured another adult female and a juvenile, and I took another juvenile, making four specimens in all obtained. This Shrike is not exactly referable to *L. l. gambeli*, but appears to be nearer that than either of the other U. S. forms.

26. *Helminthophila celata sordida*—Dusky Warbler.

At the time of my first visit, the Dusky Warblers were quite numerous in the weed-patches and brush along the ravines nearly to the beaches. But later when most of the plants were dry and dead, they were confined to the cherry thickets along the canons. Their song and habits were similar to those of the Lutescent Warbler of the mainland. Seventeen specimens of the Dusky Warbler were taken.

27. *Dendroica auduboni*—Audubon's Warbler.

I took a single specimen on March 28; it was at the windmill and was evidently a winter visitant.

28. *Mimus polyglottos*—Mockingbird.

Not uncommon among the cactus patches on the higher mesas, but very shy. Two adult males were secured; these agree in being dorsally lighter than mainland specimens. No nests were discovered, but full-fledged juveniles were seen on June 3.

29. *Salpinctes obsoletus*—Rock Wren.

Tolerably common on the rocky canon sides, but excessively shy. On March 30, a male, the only one noted during the first visit, was heard singing, and finally secured. Its song was remarkably beautiful, resembling closest that of a Thrasher, yet with the sad cadence of a Hermit Thrush. During our second visit, an adult female and a juvenile were taken.

30. *Thryothorus leucophrys*—San Clemente Wren.

Very common in the vicinity of Smuggler's Cove on the lower mesas. The thickest beds of cactus are its favorite resorts, although the cherry brush along the canons is but little less frequented. The song of this wren is short but vivacious and often repeated; it, of course, resembles closely the song of the Vigor's Wren on the mainland. At the time of my first visit, the San Clemente Wrens were undoubtedly nesting, and I suspect even had young as early as March 28, for I repeatedly saw the old birds fly into cactus patches with insects in their bills. However, I failed to find any nests, as the parents invariably disappeared among the interlaced stems in the center of the cactus beds. In such situations, nests are not generally sought after even by foxes, and the wrens seemed to have taken advantage of the fact. During our second visit, the fully-fledged juveniles far exceeded the adults both in noise and numbers. The curiosity of these birds is easily aroused. If once they realize that a person is hunting them, they will dive to the depths of a thicket, and any amount of racket will not drive them out; but if the collector sits down quietly and makes any low squeaking noise, such as hissing, he soon has a small series of bowing, inquisitive wrens to select from. Thirty-three specimens of the San Clemente Wren were taken.

31. *Turdus aonalaschkæ*—Dwarf Hermit Thrush.

At the time of my first visit, this bird was common along the canons among the cherry bushes. It was probably only a winter visitant. One specimen was taken.

Entire List of Water-Birds Observed.

This list comprises the notes of both trips to the islands, the first from March 26 until April 4, and the second from May 11 until June 9. It includes all the water-birds positively identified from the time we left San Pedro until our return. A few others were seen, such as ducks and waders, which were not with certainty identifiable.

1. *Lunda cirrhata*—Tufted Puffin.

About a dozen of these birds were probably breeding on Santa Barbara Island. They were seen flying about a bluff on the north side of that island on several occasions during our stay there—May 13 to 18. They were shy and none were obtained.

2. *Ptychoramphus aleuticus*—Cassin's Auklet.

This bird was breeding in large numbers on Santa Barbara Island. The southwest side of the mesa from the top of the bluff to the summit of the hill was crowded with their burrows. On the evening of May 16, Mr. Gaylord and I went over to this colony. Not a single bird was to be seen above ground during the day, nor even until quite dark; but by 8 o'clock the Auklets began one by one to arrive from out to sea. They would alight among the weeds with a thud and shuffle through the stalks in a very uncertain manner, but each one seemed to know where his respective burrow was. When leaving, they generally had a hard time to gain their flight, flopping among the weeds in a most awkward way. We caught quite a number besides digging out several. The gullets of those arriving were distended with a quantity of partly digested fish for feeding the young. Out of eleven occupied burrows dug into, four contained each a badly incubated egg with the old bird, and the other burrows young of various sizes. The burrows were two to four feet long with an elliptical nest cavity at the end, four inches in diameter. Nineteen specimens of the Cassin's Auklet were preserved.

Large numbers of these birds were seen during the day off San Nicolas Island, between it and Santa Barbara Island, but no breeding colony was discovered on the former.

3. *Brachyramphus hypoleucus*—Xantus's Murrelet.

Common out in the channel between San Pedro and Catalina Island. A specimen was secured May 13, near Santa Barbara Island, and others seen.

4. *Cephus columba*—Pigeon Guillemot.

Very common along the precipitous rocky shores of Santa Barbara Island, where they were breeding. Mr. Gaylord and myself found four slightly-incubated sets, three of two eggs, and one of one egg, on May 15. They were in a large cave on the north side of the island. This cave had evidently been hollowed out by the surf which thundered far back into the narrow chasm. On one side was a shelf extending for some distance into the cave just above tide mark. On this bench were strewn large boulders. As we entered the cave, several Guillemots flew out past us, and a careful search in the crevices and under the boulders, by the scanty light of matches, disclosed the eggs. They were laid on the bare gravel, usually far under some slab of rock, where they were hard to reach. The birds did not come back while we were in the vicinity of the cave. Two specimens of the Pigeon Guillemot were taken.

5. *Larus occidentalis*—Western Gull.

This bird was noted nearly everywhere we went. A small colony were breeding on San Nicolas Island, and immense numbers on Santa Barbara Island. On the latter they were nesting on the outer margins of the mesa, nearly the whole way around the Island. A good many were nesting on the sides of the hills in the center of the island. Full sets were of three. On May 18, about twenty sets of fresh eggs were collected, but as yet only few of the nests contained full sets. The nests were slight depressions among the weeds and grass, with a scanty lining of dry plant stems and grasses. One Western Gull from Santa Barbara Island was preserved.

6. *Larus californicus*—California Gull.

Immature birds of this species were always seen about San Pedro harbor, and even far out in the channel. One was noted May 12 off Catalina Island.

7. *Larus heermanni*—Heermann's Gull.

During my first visit to San Clemente Island, these gulls, mostly immature birds, were common along the beach at Smuggler's Cove. Two specimens were taken. Seen also commonly in the channel near San Pedro harbor. They were noted there May 11, the last observed.

8. *Larus philadelphia*—Bonaparte's Gull.

We saw a pair of these small gulls in San Pedro harbor just as we were leaving, May 11.

9. *Sterna maxima*—Royal Tern.

Seen commonly about San Pedro and in the channel. One was seen off the south end of Catalina Island on June 9.

10. *Diomedea nigripes*—Black-footed Albatross.

One was seen on May 27, between San Nicolas and San Clemente Islands, and another between San Clemente and Catalina Islands on June 8. These were identified by Mr. Gaylord.

11. *Puffinus creatopus*—Pink-footed Shearwater.

Several Shearwaters seen between Catalina and Santa Barbara Islands, were identified by Mr. Gaylord as of this species.

12. *Puffinus opisthomelas*—Black-vented Shearwater.

Immense numbers of these birds were observed May 11, resting on the water in beds, a mile out in the channel from San Pedro harbor. They were so gorged with small fish that they could scarcely fly. Ten specimens were secured. They all, male as well as females, had bare spaces on their breasts, and the state of the reproductive organs showed that they must have recently bred. This species was also observed in the same locality, but in much less numbers, on March 26, and again on June 9. A few were noted off Catalina Island on May 12. Although we searched carefully on Santa Barbara Island, where these birds are said to have formerly bred, we failed to find any trace of them.

13. *Puffinus griseus*—Dark-bodied Shearwater.

There were quite a number of this species seen along with the Black-vented Shearwaters on May 11, and one was taken. I also saw several in the channel on April 4, and on June 9.

14. *Oceanodroma melania*—Black Petrel.

A large dark colored Petrel seen in small numbers on several occasions, was identified by Mr. Gaylord as of this species. It was seen between Catalina and Santa Barbara Islands on May 12; between San Nicolas and San Clemente on May 27; and between San Clemente and Catalina, on June 8.

Small Petrels of some kind were heard at night on the east end of San Nicolas, and at Mosquito Harbor on San Clemente, but no trace of them were to be found by day. We searched diligently for their burrows, but failed entirely. As Mr. Gaylord suggested, Petrels may have bred later in the Auklet burrows on Santa Barbara Island.

15. *Phalacrocorax dilophus albociliatus*—Farallone Cormorant.

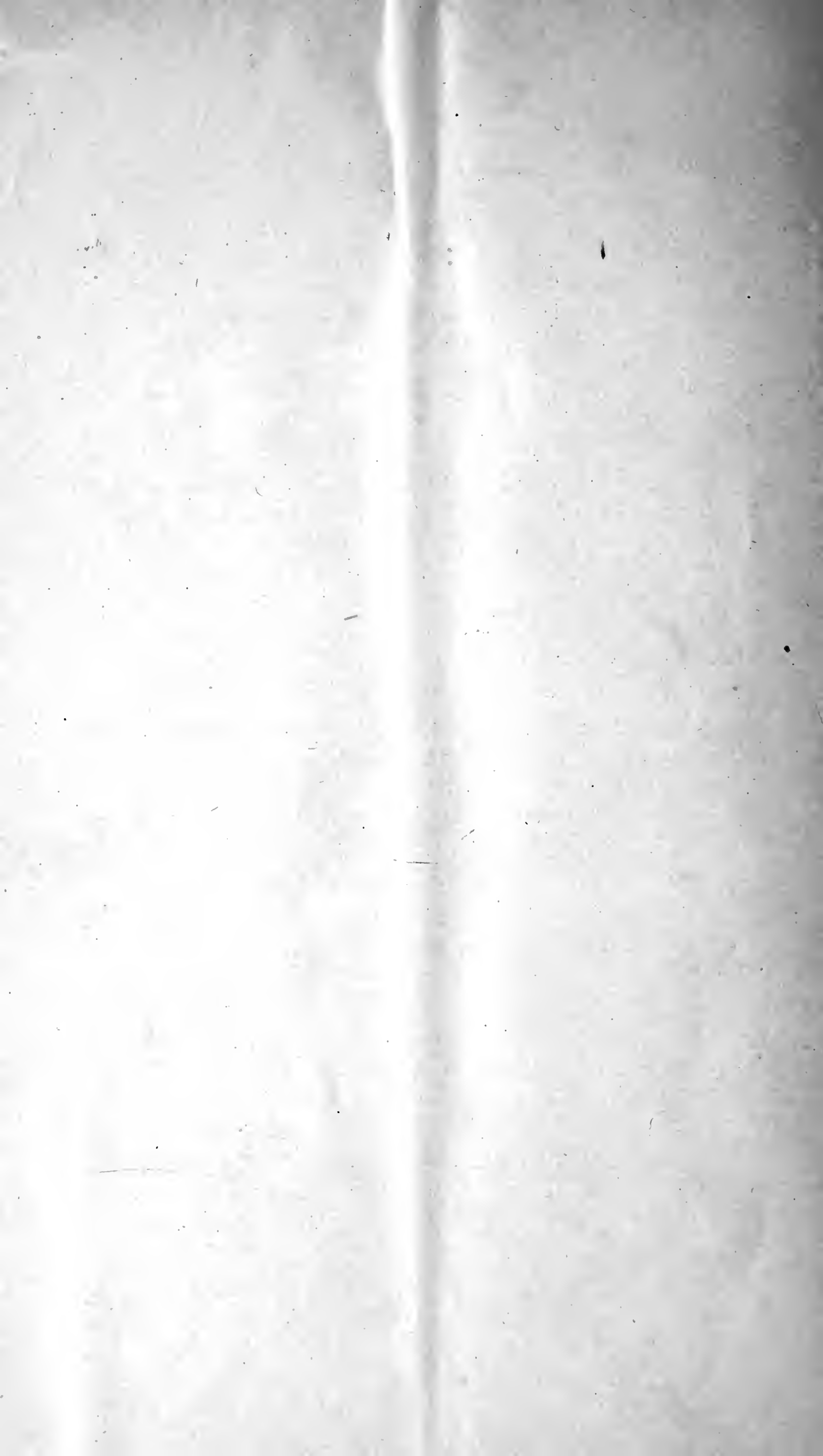
Immature birds were seen commonly about San Nicolas Island, but none were found breeding. On Santa Barbara Island, however, this Cormorant was breeding in large numbers. Most of the birds were nest-building, and but two sets, of three and four fresh eggs were found—May 15. Their nests were made of coarse sticks and seaweeds, and built usually on the ground on the sloping sides of the island above the rocks; several nests were built in bushes from one to three feet above the ground. The nests of this species of Cormorant were never in close colonies, but scattered promiscuously wherever the birds fancied. Single nests were frequently found by themselves a long distance from any others. One specimen of the Farallone Cormorant was saved.

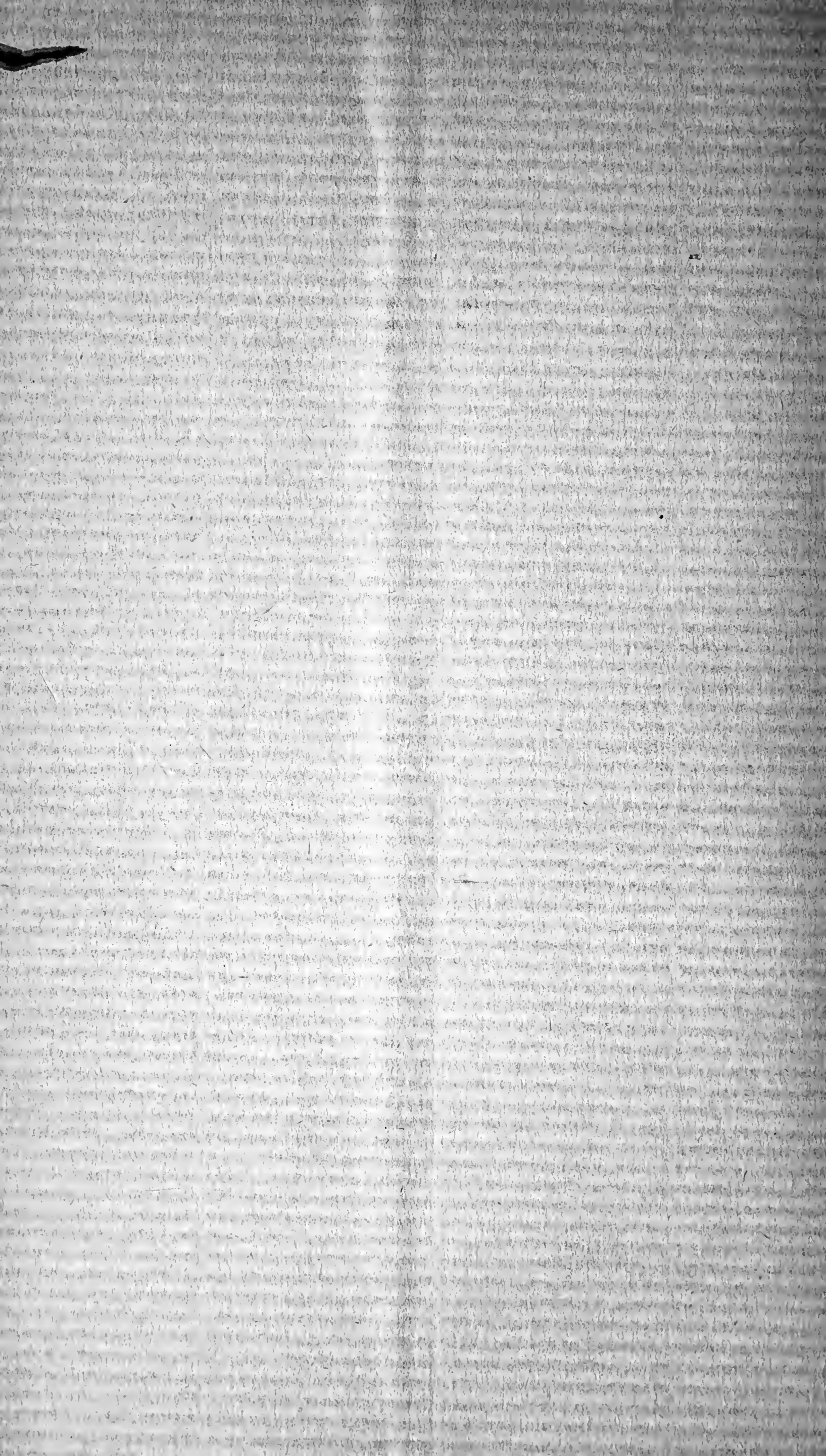
16. *Phalacrocorax penicillatus*—Brandt's Cormorant.

Seen commonly everywhere we went. Mr. Gaylord found a small colony nesting on the north side of San Nicolas Island. On Santa Barbara Island this bird was nesting in large rookeries. These rookeries were generally situated nearly to the base of the precipitous sides of the island, often but a few feet above water line. A sloping shelf of rock or heap of fallen boulders was usually preferred. The nests were built as close as they could rest. They were made of turf and seaweed, and were filthy with excrement, so different from the neat-looking nests of the Farallone Cormorant. On May 15, we took about 30 sets of three and four eggs each. They were in all stages of incubation, and several nests contained young just hatched. One specimen of this Cormorant was taken.

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17. *Phalacrocorax pelagicus resplendens*—Baird's Cormorant.
This Cormorant was seen only at Santa Barbara Island, where it was nesting in smaller numbers than either of the other species. The nests were unique, in always being inaccessible. They were built either on a narrow projection of rock, or in a niche on the face of a cliff. Seldom more than two or three nests were seen in any one place. The birds were apparently incubating. Two specimens of the Baird's Cormorant were taken.
18. *Pelecanus californicus*—California Brown Pelican.
Common at San Pedro harbor, and for several miles out into the channel. Mr. Gaylord saw a flock of fifteen at San Nicolas Island on May 25. A few were seen near Santa Barbara Island on May 13. No signs of nesting were found anywhere.
19. *Ardea herodias*—Great Blue Heron.
One was seen on the southeast end of San Clemente Island on March 28, and another on San Nicolas Island on May 24.
20. *Himantopus mexicanus*—Black-necked Stilt.
I took a male Black-necked Stilt on San Nicolas Island on May 25. It was alone on the margin of a tide pool.
21. *Heteractitis incanus*—Wandering Tattler.
I took a male Wandering Tattler on the southeast end of San Clemente Island on March 29. It was alone on a rocky beach.
22. *Actitis macularia*—Spotted Sandpiper.
I took a female Spotted Sandpiper on San Nicolas Island on May 25. It was alone flying along the beach. Undoubtedly a migrant.
23. *Ægialitis nivosa*—Snowy Plover.
This bird was common along the sandy beaches at San Nicolas Island, and was undoubtedly breeding. Two specimens were taken May 20.
24. *Arenaria melanocephala*—Black Turnstone.
During my first visit to San Clemente Island, these birds were not uncommon along the rocky shores. An adult male was secured on March 28.







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