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HISTORY OF A PAIR OF PACIFIC HORNED OWLS

By J. B. DIXON

WITH EIGHT PHOTOS BY THE AUTHOR

TOWARD the east end of the Escondido Valley, San Diego County, California, there arises from the valley floor a steep and rocky ridge. On the eastern slope of this ridge and in the big trees of the creek bottom directly beneath, two Pacific Horned Owls (*Bubo virginianus pacificus*) have made their home for years. This pair of birds was selected for observation because they were close to my home, and their surroundings were typical for this bird in our section.

To the east and south of this location the Escondido valley stretches away, covered with orchards, vineyards, and fields of alfalfa and grain. Two creek bottoms cross this part of the valley, and there are a few small ponds scattered throughout during the spring of the year. To the north and west are rolling, brush-covered hills, with an occasional inland valley of small acreage. The edges of the small valleys and clearings are thickly populated with the smaller mammals which make up the principal diet of the Horned Owl.

Records of nesting dates for this pair of birds are available for the past thirteen years. During this time, to my knowledge, there have been killed in this immediate vicinity four adult Horned Owls, but apparently the remaining bird had very little trouble in securing a mate, as the site has never missed being occupied for a single season.

Glancing over the records we find that this pair has nested in old hawk's nests in trees three times, in an old hawk's or raven's nest in a cliff, twice, and in every other instance has made its home on some rocky ledge on this steep hillside. The variations in nesting dates have been very slight, considering the great variation in the weather of the different seasons during this series of years. The earliest date recorded for a complete set of eggs was January 29 (1911), with two eggs; the latest date was February 14 (1907), when a set of three

eggs, barely commenced in incubation, was taken. In two instances a period of four days elapsed between the laying of the first and the second egg, incubation starting with the deposit of the first egg. In five instances three eggs, and in every other case two, were a complete set. This pair of birds would invariably deposit a second set, and even a third, within twenty-one days from the time the first set was disturbed. During the wet seasons of 1907, 1908 and 1909 three eggs were laid, possibly indicating that the birds were finding food more plentiful than formerly.

For the past several years I have been observing these birds, hoping that some time they would select a site where closer observation of their nesting habits would be possible. For the season of 1912 they chose a site which was on a cliff-face overlooking a deep and narrow canyon. From the opposite wall of this canyon the sitting bird could be observed, but was too far away for photographic purposes. In this nest two lusty youngsters were reared. For some

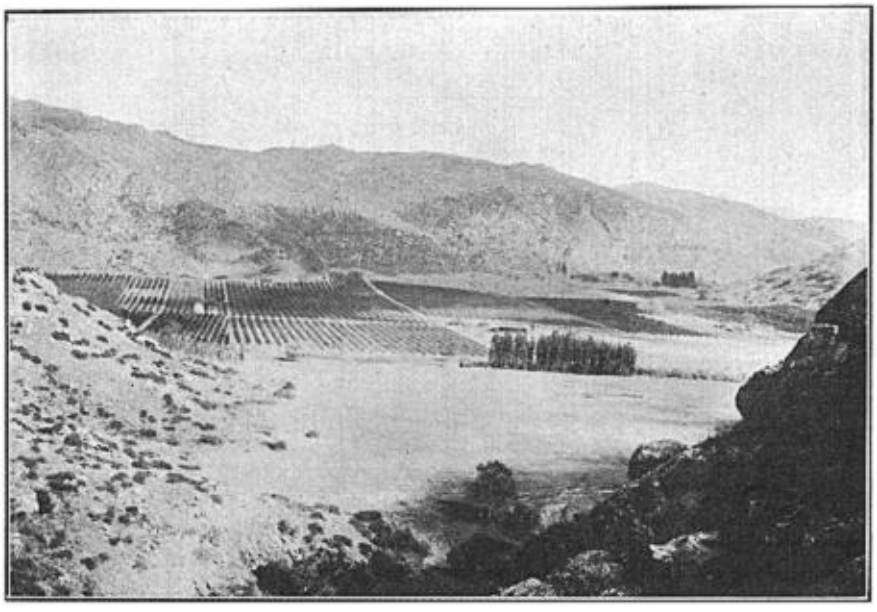

Fig. 17. VIEW FROM NESTING SITE OF PACIFIC HORNED OWL NEAR ESCONDIDO, CALIFORNIA

reason, best known to themselves, the birds left this site at the beginning of the present season, and set up housekeeping about three hundred feet below, in the same canyon, in the most accessible place they had yet used. Here, on the 2nd of February, we located the nest by flushing the bird, after two hours of hitherto fruitless search for her.

She had selected a ledge in a large rock pile overlooking the canyon and valley below. The two eggs the nest contained appeared to be fresh. This nest was visited at intervals of once a week for the next four weeks, and in every instance one bird flushed from the nest just as I was climbing up over the big rock adjacent, its mate leaving its perch in a small oak tree farther down the hillside when I was yet some distance away. The bird leaving the nest would alight on some nearby rock, and ruffling up its feathers, let out a cat-call or two, but seemed little disturbed by my intrusion, and would immediately resume incuba-

tion if I withdrew a short distance. When nearing the nesting site upon the morning of the second of March, just four weeks after the nest was located, the bird usually perched in the oak was nowhere to be seen, but upon stealthily

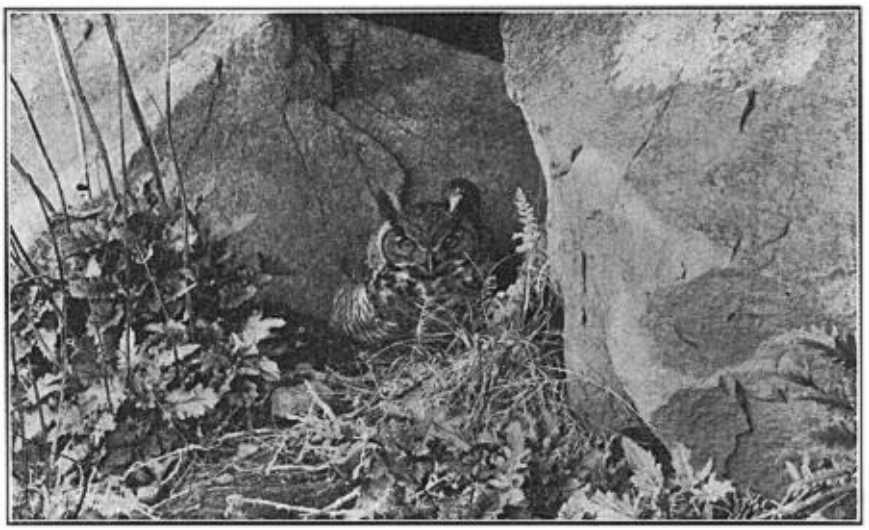

Fig. 18. PACIFIC HORNED OWL ON NEST; FIRST POSITION, FACING OUTWARD

creeping to the crest of the large rock across from the nest, and raising my head just enough to see over, I found myself gazing into the moon-like eyes of one of

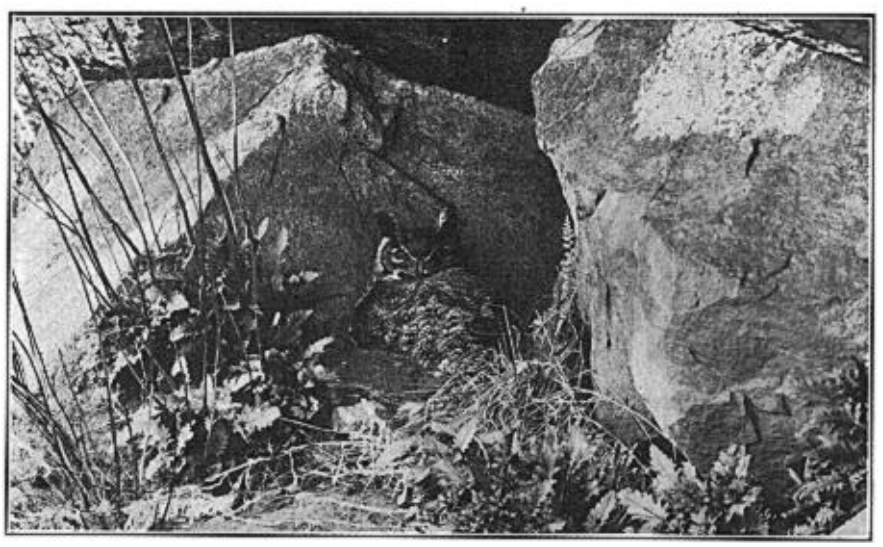

Fig. 19. PACIFIC HORNED OWL ON NEST; SECOND POSITION, TURNED AROUND AND LOOKING OUT OVER HER BACK

the old birds. Beyond a slight ruffling of the feathers over the whole body and especially those of the throat, she paid no attention to me. This being the first time I had succeeded in getting so close, I immediately secured two exposures

Fig. 20. Eggs and Nest of Pacific Horned Owl, showing nature of nesting site

and crept away leaving madam in complete possession. The better of the two negatives is shown in the picture of the sitting bird facing you (fig. 18).

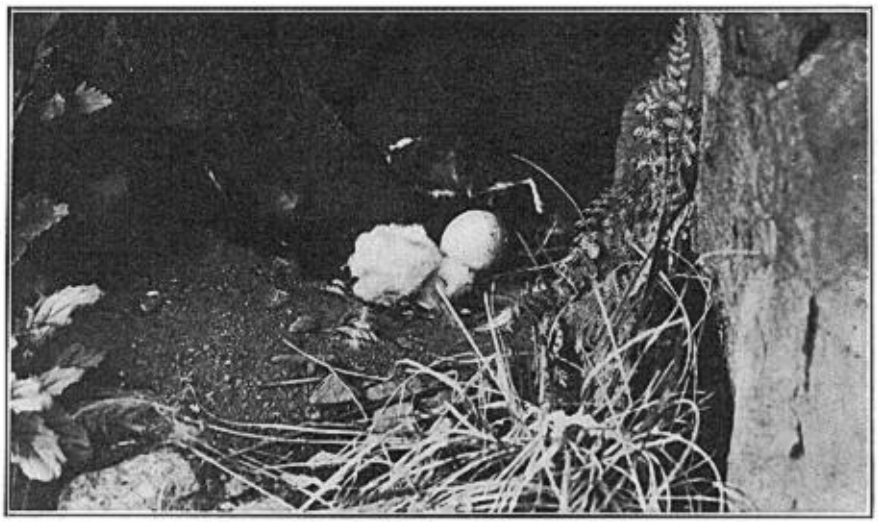

Fig. 21. PACIFIC HORNED OWL'S NEST; EGG AND NEWLY HATCHED YOUNG; BODY OF POCKET RAT IN BACK-GROUND

Hoping to secure something better I returned again after dinner and upon making a cautious ascent of the rockpile, found madam as approachable as ever; she now disdained to honor me with a front view. She had turned completely

Fig. 22. YOUNG PACIFIC HORNED OWLS ONE WEEK OLD; PORTION OF WOOD RAT IN BACK-GROUND

around and was now looking over her back at me, demonstrating that she certainly was in possession of a rubber neck! Using the single combination of my

Turner-Reich lens of eighteen-inch focus, stopping down to 64 U. S., and giving an exposure of ten seconds on a Seed number 30 plate, I secured a negative of her in this position which is the best one of all. Some idea of the value of a good convertible lens in this work may be secured by comparing the picture of the sitting bird with that of the nest and surrounding rocks (fig. 20), both taken from the same spot. The double combination of the lens of six and one-half inch focus was used in the latter picture. A slight movement of the focusing cloth after this exposure was too much for the nerves of the bird, and she was off like a flash, but so quietly as to be unheard even at the short distance I was from the nest.

Both birds put in an appearance after the one left the nest, but beyond cat-

Fig. 23. PACIFIC HORNED OWLS THREE WEEKS OLD; PORTION OF RABBIT IN FOREGROUND

calling and "who-who"-ing around, made no disturbance. The mate of the sitting bird flew out from a small sumac bush on the steep hillside directly above. I had always supposed there was considerable difference in appearance between the male and the female birds, but I could not tell one from the other except for one having an unusually white feather in its "horn". This feather shows up very plainly in the picture of the sitting bird. One was much wilder than the other and could not be approached very closely, indicating that they took turn about in the incubation of the eggs.

The cause of the extreme bravery of the sitting bird was at once apparent upon looking into the nest. One owlet was out of the shell and the remaining egg was pipped. This is conclusive evidence that the period of incubation is

over twenty-eight days for this bird, as the nest, when found exactly four weeks previously, had a complete set of eggs in it. I left the nest at once upon finding out what was in it, as I was afraid the owlets would chill, it being a wet and cloudy day. The little owl just out of the shell kept up a lusty cheeping, and when I withdrew a short distance, the old owl returned to the nest without delay.

On the 5th of March I again visited the nest and found both owlets out of the shell, and both set up a vigorous cheeping upon the old bird's leaving. I wished to secure another negative of the old bird upon the nest, so set up my camera and sat down to wait. The only thing that marred the stillness of the afternoon was the incessant cheeping of the owlets. I had been sitting with my back toward the nest, looking off down into the valley, when all of a sudden the cheeping of the owlets ceased, and upon looking around I found that the old bird had returned so noiselessly that I had not heard her, although I had been intently listening. She proved too wary for further exposures, but after leaving

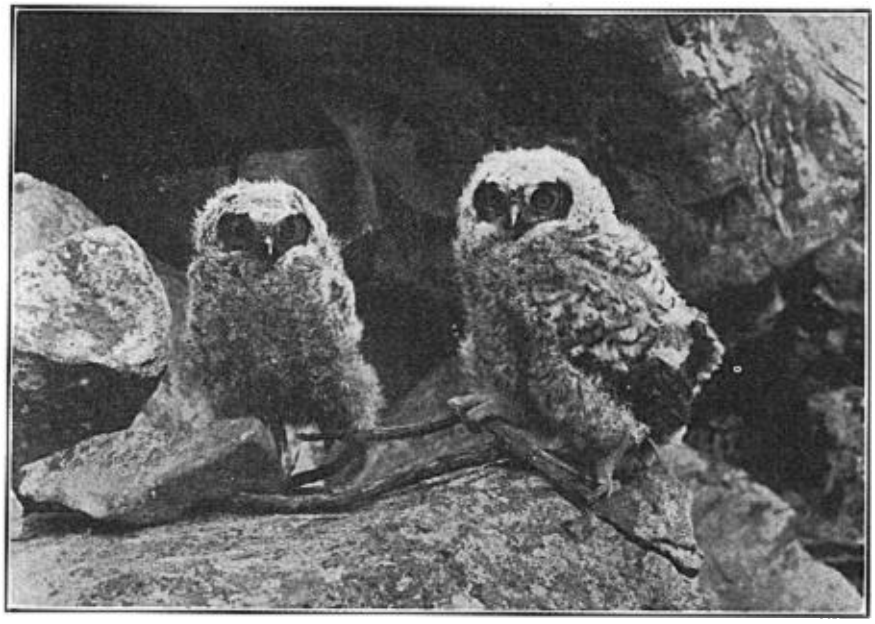

Fig. 24. PACIFIC HORNED OWLS FIVE WEEKS OLD

the nest would always return, floating down from the steep hillside above like a small boy's kite, both wings extended, and would light on the nest-ledge as noiselessly as a bit of thistle down. The way she could travel through the air so noiselessly was absolutely uncanny. Upon settling on her young she made a short hissing noise, not unlike that of a goose but more subdued, and the youngsters would immediately cease their complaint. Three or four times she did this and I at first thought it was directed at me, but finally concluded that it was directed at the youngsters, as they then always became quiet.

As the owlets grew older the parent birds became wilder, never again allowing the intimacy shown during the hatching period. The young owls developed rather slowly until they were three weeks old, but from then on made a marvelous growth. Photographs of the young birds at their different ages give a better idea of the growth than mere words. Seven weeks from the time of hatching the two young owls left their nest for good, taking up their abode in

the brush and rocks of the steep hillside. They were still unable to fly more than a short distance, but were safe from further handling on account of their large, sharp claws, and their ability to fly and scramble over the rough surface faster than one could easily follow.

This pair of birds did considerable flying about and hunting on cloudy days. Their hearing was extremely good and their sight in the daytime was much better than I expected. An accurate account of food found in the nest at the time of the various visits gives us the following: parts of two brush rabbits, three wood rats, and five pocket rats. On only one occasion was there any indication of these owls feeding upon other birds, that being a small bunch of quail feathers at the base of the cliff, and I am sure that birds form but a very small percentage of their food. Otherwise we would undoubtedly have found some evidence in the line of feathers in or around the nest.

From all my observations of this pair of birds, extending over a long series of years, I would say that they were far more a benefit to the farmer and orchardist than a menace, in spite of the unfavorable reputation this species generally bears.

Escondido, California, December 26, 1913.

DESTRUCTION OF BIRDS IN CALIFORNIA BY FUMIGATION OF TREES

By A. BRAZIER HOWELL

FEW people realize, I imagine, to what a great extent certain passerine birds are destroyed by the fumigation of citrus trees in California. Probably more birds of this group are killed each year in the state by this, than by any other agency of human operation. From time to time articles have appeared registering a protest against the use of poisons in sprays because a few birds have been killed by eating the fruit or insects with which the poison has come in contact, but no one seems to have pointed in print to the destruction caused by fumigation practice.

For those not familiar with the sight, it is necessary to explain that in order to kill the black scale, the greatest and most widespread citrus pest that we have, the trees are treated with hydrocyanic acid gas. As a covering to confine the gas the sheet tent is the type most often used. To one end of a long light pole is permanently tied a rope, and here is affixed a corner of the tent. Two men working in unison and each with such a pole, brace the free end with their feet and pulling hard on the rope, hoist the tent sailing over the tree in but a few seconds, hardly touching it during the process. Beneath the tent is then placed a jug containing a mixture of water, sulphuric acid and potassium cyanide, and by this is generated the deadly gas. The whole outfit is allowed to remain in position for forty or fifty minutes. This is done only between sunset and sunrise because if attempted in the daytime, certain burning of the fruit and foliage would result. Fumigation is carried on from August until January. As the tree is not disturbed in any way until the tent falls in place, any bird roosting therein is sure to be killed.

The exact location of a grove has much to do with the numbers of birds