THE BIRDS OF NATIVIDAD ISLAND, LOWER CALIFORNIA By CHESTER C. LAMB

ATIVIDAD is a small island off the west coast of Lower California, Mexico. It is just south of the twenty-eighth parallel, and is located four miles northwestward of Point Eugene, being separated from the mainland by Dewey Channel. It lies in a northwest to southeast position, and is about four miles long and from half a mile to a mile and a half in width.

On the southeast side is a wide sandy beach nearly a mile long, and at its northern end is a small pond formed by the high tides. With the exception of a wide level plain above the beach and the low cliffs, the rolling hills of the more southerly end, and a small beach at the southwest side, the island is very rugged and rocky, rising to a height of 491 feet near the center and bordered by rather high cliffs. A large part of the island is covered with ice plant (*Mesembryanthemum*), which was dry at the time of my visit. In some of the ravines two species of small cacti grow, also a small low bush; while on the steep side of the more northern, rugged end, are a few giant cacti. There is no fresh water to be found upon the island.

Natividad Island was no doubt first seen by the Spanish explorers in 1539, when Francisco Ulloa discovered Cedros Island, some few miles to the northward. Since then, Natividad has been visited many times by various naturalists on their way to more southern or northern points; but it is such a formidable, barren and unattractive place that their stay has always been short. I can find no record where any naturalist stayed more than two days, and in consequence the published list of birds is short.

This dreary looking islet was first seen by the present writer from the deck of a steamer some fifteen years ago, and since that time it has always been his ambition to make a protracted stay there. Through the kindness of the Naylor Brothers of San Diego, the opportunity at last came to make the visit. This firm operates a camp for the gathering, by diving, of abalones and seaweed. The abalones are dried and sent to China, where they are considered a great delicacy, while the seaweed goes to Japan for treatment, then back to this country in the form of agar-agar; but now, I believe, a factory has been established in San Diego for the treatment of the seaweed.

On December 17, 1924, I left San Diego bound for Natividad on a little twenty ton fishing boat. The next morning we arrived at Ensenada where the greater part of the day was spent by the captain in securing his clearance papers. In the afternoon we pulled up the "hook" and set out in a calm sea. The next day was spent at sea, and many sea-birds were noted, such as Xantus Murrelets, California Brown Pelicans, Western Gulls, Farallon Cormorants, and Black-vented Shearwaters. That night at 10 P. M. we anchored near the southern end of Cedros Island to deliver some supplies to a lobster camp. The crayfish which are regularly caught for the California market are called lobsters by the fishermen. The next morning we left early for Natividad. In crossing the channel between the two islands large numbers of Xantus Murrelets were seen.

On Natividad Island are some forty Mexican workers, and three or four Russian and Japanese fishermen. Several of the Mexicans have guns, so the birds are not left in undisputed possession. The Mexicans do some damage to the nesting birds, as to them all eggs are edible; and they shoot a few gulls around camp in the way of testing their marksmanship. However, the camp is only temporary, and before long the island will be uninhabited again except for an occasional fisherman.

The period between December 20 and January 13 was spent on the island, and I found bird life there abundant though restricted to a few species. Even on such a

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small island as Natividad, one must spend considerable time, if many of the birds are to be found. For instance, I saw a bird the first day not seen again, and on the last day, one not seen previously. Longer observations at different seasons would certainly on account of the nearness of the mainland, produce several others.

According to Nelson (Memoirs of the National Academy of Sciences, 1921) there were but sixteen species of birds heretofore known from Natividad Island. It is the author's good fortune now to be able to increase this number to forty-nine. Below is an annotated list of the species observed about my camp at the southern end and on other parts of the island. Most of the specimens taken by me are now in the collection of Mr. Donald R. Dickey, and I want to thank him and Mr. Adriaan van Rossem for identifying some of the doubtful races.

Colymbus nigricollis californicus. American Eared Grebe. Several seen daily, swimming about the kelp in quiet coves.

Gavia, sp.? Loons were seen several times, but as none was taken I cannot say to what species they belonged.

Ptychoramphus aleuticus. Cassin Auklet. Seen in the channel between Cedros and Natividad islands. It is well known that they nest upon this latter island.

Brachyramphus hypoleucus. Xantus Murrelet. Numerous between the two islands, generally in pairs. They would allow the boat to come nearly upon them before attempting to escape, and this they would do either by diving or flying. It is quite an effort for them to get launched into the air.

Larus glaucescens. Glaucous-winged Gull. Seen daily in small numbers about the camp. Most of them were immature birds.

Larus occidentalis, subsp.? Western Gull. Very numerous and tame about camp. As no specimens were taken I am unable to say whether they belonged to the race wymani or livens. These birds nest in numbers on the island, I am told by Mr. Naylor.

Larus delawarensis. Ring-billed Gull. Occurred in numbers around camp and near the tidal lagoon.

Larus heermanni. Heermann Gull. One would expect this to be an abundant bird, but I saw only two, both on some outlying rocks.

Sterna maxima. Royal Tern. A common bird, seen daily flying in flocks of fifty or more along the line of the surf at the beach. An outlying rock rather than the sandy beach was a favorite roosting place. Several were shot from time to time in my search for Elegant Terns, which were not found.

Puffinus opisthomelas. Black-vented Shearwater. As is well known, this shearwater nests in crevices and caves, or else makes its own burrow. Practically the entire island is a honeycomb of burrows dug by the birds. It is a strange fact that I never saw a shearwater in the daytime anywhere near the island; but soon after dark one begins to hear their calls, and these are the most curious of bird voices. One might describe the note as somewhat like the bray of a donkey interpolated with a husky snore. In their calling these birds apparently have some system; for sometimes the listener can hear them on all sides, then suddenly all sounds cease and nothing is heard for half an hour or more. They are most noisy just before dawn. On November 10, I stopped at Natividad Island but did not go ashore. At that

On November 10, I stopped at Natividad Island but did not go ashore. At that time Mr. Naylor told me that the shearwaters were visiting their burrows at night, and that his men had caught many. During my visit I caught many at night in and around their nesting holes, but no eggs were found.

Mr. A. W. Anthony states (Auk, XVII, 1900, pp. 247-252) that he found occupied burrows early in March and on April 10. All the burrows he examined at the latter date contained single eggs. He also says that he found young birds in the burrows in July; and he has recently found young in August. From the foregoing it is seen that the birds, but not necessarily the same individuals, occupy burrows ten months of the year, and I would not be certain that they are not there continuously. In digging out the burrows, I often found them occupied by a pair of birds; but more frequently one bird was found, either a male or a female. The adults at this time showed no signs of early nesting.

The Japanese fishermen caught sacks full of these birds, which they used as bait for crayfishes. Before digging out a burrow they would first ascertain whether or not it was occupied. This they would do by blowing smoke down the hole. If the burrow was occupied the birds would give voice. The holes are usually shallow, and from three to seven feet long. As the ground is quite sandy, it only takes a few minutes to dig one out. Often the shearwaters sit beside the burrows and then a man with a flashlight or bright lantern can walk right up to them and pick them up; or, if the bird starts to run he can frequently catch it, for it usually has a hard time to get into the air and can only rise against a good wind or by means of a long run down hill. I have thrown a shearwater over a cliff forty feet high, and it could not get started before it struck the water.

I had several shearwaters in captivity during my stay, but they never got tame. They would sneak along in a rail-like manner and try to hide under whatever seemed to give protection, rather than try to escape by flying. In handling them, they prove savage and can soon make the blood come with either their beaks or claws. Several times I put two on the ground to take their pictures, and if I put them too close together, they would immediately start fighting. The Duck Hawks on this island take great toll of their numbers, as indicated by hundreds of pairs of shearwater wings that can be seen on the ground in every direction.

Phalacrocorax auritus albociliatus. Farallon Cormorant. Many were seen about the island. In the spring they occupy large colonies, building their nests on rocky knolls all about the island. The guano is regularly gathered by a small truck brought down for the purpose. It is curious to see auto tracks in that far-away place.

Phalacrocorax penicillatus. Brandt Cormorant. Seen in numbers daily about the rocky shores.

Pelecanus californicus. California Brown Pelican. Many were always about, and I found places where they had been nesting.

Mergus serrator. Red-breasted Merganser. Four or five were seen during my visit. They were always single and flushed from the rocky pools at low tide.

Branta nigricans. Black Sea Brant. Great flocks were seen daily. They feed at low tide along the line of surf, on a thin flat green sea-grass, and then they come onto the beach to rest and get gravel. They are the wariest of birds and leave the beach before one reaches within three hundred yards of them. By coming towards them down wind in a rough sea one can frequently get in a couple of good shots. I found their flesh real good eating.

Ardea herodias hyperonca. California Blue Heron. One usually seen daily standing on the kelp offshore. A specimen was taken January 2.

Pisobia minutilla. Least Sandpiper. Seen several times on the beach in small flocks.

Ereunetes mauri. Western Sandpiper. Seen occasionally in company with the preceding.

Calidris alba. Sanderling. Common. Large flocks fed on the plain above the beach. Several specimens were obtained.

Limosa fedoa. Marbled Godwit. Seen in small flocks along the beach.

Catoptrophorus semipalmatus inornatus. Western Willet. Always present in numbers on the beach.

Heteroscelus incanus. Wandering Tatler. One secured January 4, on an outlying rock.

Numenius americanus. Long-billed Curlew. A flock of about twenty was seen daily feeding on the plain. One taken January 3.

Numenius hudsonicus. Hudsonian Curlew. Seen several times in small numbers upon the beach.

Squatarola squatarola cynosurae. American Black-bellied Plover. Often frequented the plains in company with other shore birds; several taken.

Oxyechus vociferus. Killdeer. A flock of eight birds was seen daily on the plain near camp.

Charadrius semipalmatus. Semipalmated Plover. Only one was seen, December 20. Charadrius nivosa. Snowy Plover. An abundant bird on the beach and plain. Several were taken.

Eupoda montana. Mountain Plover. A flock of about twelve was seen feeding on the plain, December 22, when a few were secured. A single bird was seen January 9. As far as I can find, this constitutes a southernmost record in Lower California, and a new record for the islands off the Peninsula. The species has been taken some 300 miles farther north, near Tijuana. These birds were not associating with the other shore birds, though they did feed among the members of a flock of horned larks.

Arenaria interpres. Common Turnstone. One was usually seen in each large flock of Black Turnstones. They could be readily distinguished by their reddish legs. One was taken December 29, and another January 8.

Arenaria melanocephala. Black Turnstone. An abundant bird on the island, feeding in large flocks, on the rocks and kelp strewn shores.

Haematopus palliatus frazari. Frazar Oyster-catcher. Generally one or two pairs were seen daily, flying over the water or standing on outlying rocks. One day, while lying in a blind waiting for Black Brant, I saw a mixed flock of Frazar and Black oyster-catchers alight on the sand beach. But, as a rule, these birds love the detached rocks, and this was the only time I saw them on the beach. The two species intermingle and I have often seen a Frazar and a Black oyster-catcher standing together on a small rock, or else flying together. I have seen statements that they interbreed, but my visit was too early for their nesting season.

Haematopus bachmani. Black Oyster-catcher. The above statements apply also to this bird, equal numbers of the two species being present. Several specimens of each were taken.

Cathartes aura septentrionalis. Turkey Vulture. One or more birds seen daily flying above the island.

Circus hudsonius. Marsh Hawk. A single bird was seen in this unusual association, flying over, December 22.

Buteo borealis calurus. Western Red-tailed Hawk. Four were seen during my visit; two immature females were secured December 29.

Falco peregrinus anatum. Duck Hawk. I judged there were about six pairs resident on the island. One pair had a nest on a ledge in a large cavern on an outlying rock. Later, Mr. Naylor reported three eggs in this nest. The Duck Hawk here, it appears, lives largely on the Black-vented Shearwaters. Many freshly killed shearwaters indicated this, though I shot a Duck Hawk in the act of grasping a Mountain Plover. This falcon disposes of the shearwater bodies in such a way that the wings are usually attached in pairs. I have often seen the Duck Hawk fly straight out to sea and disappear, and this must be when they catch the shearwaters, for, as I mentioned before, none of the latter was seen daytimes in the vicinity of the island.

Falco sparverius, subsp.? Sparrow Hawk. One seen December 26. As no specimen was taken I am unable to say to which of the races it belonged.

Pandion haliaëtus carolinensis. American Osprey. For a hawk, this bird is common on the island. I knew of eight nests within a half mile walk of camp. These are built on the ground and are easily accessible, except for the ones standing on the outlying rocks. At the time of my visit, all the birds were paired and busily remaking their nests. A set of three eggs was taken January 12. All the nests examined were made partly of Black-vented Shearwater wings, and of one nest seen, all except a part of the foundation was entirely made of wings.

Tyto alba pratincola. American Barn Owl. The only evidence of the presence of this bird is a wing picked up near the center of the island.

Speotyto cunicularia hypugaea. Burrowing Owl. One seen January 12 standing in front of a shearwater burrow.

Ceryle alcyon caurina. Western Belted Kingfisher. A single bird seen December 21, flying along the base of the cliffs.

Sayornis saya saya. Say Phoebe. One was seen sitting on a rock on the plain December 20.

Otocoris alpestris enertera. Lower California Horned Lark. Abundant among the dry ice plant on the plain; in flocks of twenty or more.

Otocoris alpestris insularis. Island Horned Lark. One of the several specimens of horned lark taken proved to be of this race, thus extending its winter range some 400 miles south.

Corvus corax clarionensis. Clarion Island Raven. Abundant and very tame. There were always a few around camp.

Passerculus rostratus guttatus. San Lucas Marsh Sparrow. Abundant on the rocks among the cast-up seaweed at the base of the cliffs.

Amphispiza bilineata deserticola. Desert Black-throated Sparrow. Common in the low shrubbery in the ravines. Two specimens were obtained. Dendroica auduboni auduboni. Audubon Warbler. Very common, often seen flit-

ting about the faces of the high cliffs.

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