

SOME MARITIME BIRDS OBSERVED OFF SAN DIEGO, CALIFORNIA

WITH MAP

By LOYE MILLER

During the months of July and August, 1935, I enjoyed certain special advantages for the study of maritime birds along the coast and on the offshore waters of southern California. Part of my good fortune resulted from the cooperative spirit at the Scripps Institution of Oceanography whereby several trips were made possible that at various times sectioned the waters between the Coronados Islands and Tanner Bank on the south, and Catalina Harbor on the north. (See fig. 4.)

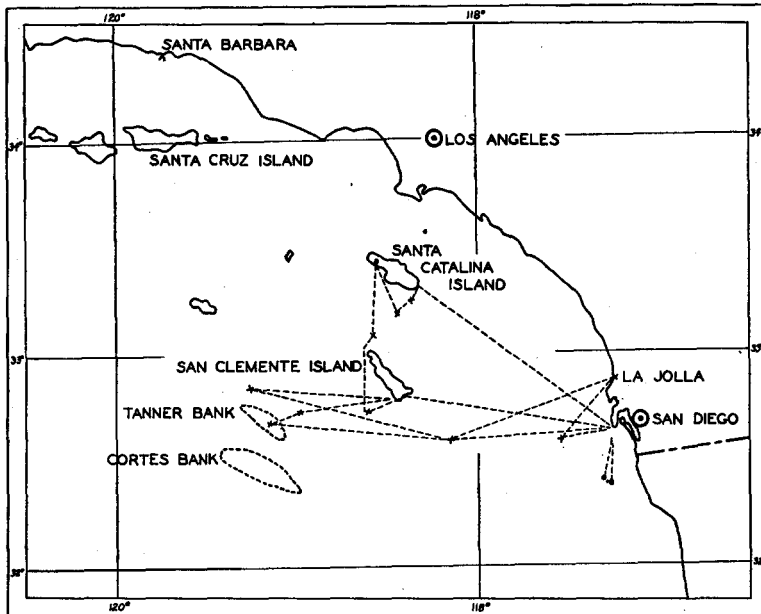


Fig. 4. Sketch map, showing routes traversed during the trip described in the accompanying article.

Thanks are due Director T. Wayland Vaughan, acting Captain Eric Moberg, Oceanographers Richard Flemming and Roger Revelle, and the very obliging engineer and helper of the launch "Scripps", Messrs. Ross and Wilkes. These excursions were made between regular observation "stations" of the program of oceanographic study now under way at the Scripps Institution, but every facility was offered the ornithologist as well. An attempt was made to determine what relation might exist between the physical conditions of the sea waters and the food supply, and which possibly controls the distribution of the birds. Some progress was made in this field, but conclusions should be drawn only after a long period of observation a mere beginning of which has been made. In the meanwhile, many interesting items of information were gained which pertain to the regular movements and the numbers of certain species, items that should be made available to the great host of western bird students as soon as practicable.

Observations began July 12, along the beach from Carpinteria southward through Hueneme, Point Mugu, Malibu Coast, La Jolla, San Diego Bay, Mission Beach,

and Imperial Beach, almost to the Mexican line. All of July 23 was spent in working stations along a line extending fifteen miles west and slightly south of Point Loma. July 29 to August 2, we ran west to Tanner Bank, back to Smuggler Cove at San Clemente, out again to the west and thence north to Catalina Harbor, thence back to the north point of San Clemente and across the channel to Avalon, thence directly to San Diego. In this way the seaward side of the islands, the waters over the bank, the inter-island channel, and the inner channel were sectioned.

Nearly a month later the southern waters were again sectioned as follows: August 22, San Diego to Coronados Islands and return; August 24, the same; August 28, out fourteen miles west and return; August 29 to 31, fifty miles WSW to a point north of Tanner Bank, back to anchor at Smuggler Cove, San Clemente; thence back to San Diego.

The interval of approximately thirty days between visits to the several regions worked the following changes: Red Phalaropes gave place to Northern Phalaropes; adult Western Gulls along the mainland shore were diluted by an influx of young birds; Least Terns became fewer and Forster Terns appeared abundantly. Black Terns were captured offshore; shearwaters decreased in numbers; Brown Pelicans formed flocks of five to twenty individuals, most of them dull plumed birds; shore birds became more numerous; Snowy Herons appeared; migrating land birds were seen far offshore; petrels increased in numbers.

Outstanding items include: Red-billed Tropic-bird thrice seen at widely separated stations, one of them in Mexican waters near Los Coronados Islands; two Frigate Birds were seen soaring over La Jolla; one Least Petrel and one Wilson Petrel were collected and Black Petrels were seen "rafting" by the thousand; Black-footed Albatrosses were seen on each trip outside the channel waters and once within twelve miles of Point Loma.

The following list of species includes only those which were considered worthy of note because of date or locality.

Diomedea nigripes. Black-footed Albatross. From 1894 to 1899, this species was a familiar companion of my journeys by steamer to and from San Francisco. We never saw them in the Santa Barbara channel, but they picked up our vessel as soon as we reached open water at Point Conception. Numbers were always in sight especially in the wake of the ship as the galley refuse was hove overboard. The plumage showing whitish upper tail coverts seemed to be the dominant one and I supposed it to be normal for the adult. Later, I found from Loomis' studies (Proc. Calif. Acad. Sci., ser. 4, 2, pt. 2, 1918, pp. 1-187) that such was not necessarily the case, though the final word was not pronounced.

All four birds collected this summer, and all others coming sufficiently close to the ship, were of the dark phase. All collected were females, and three of the four had post-breeding ovaries.

During the month of March, 1904, an excursion was made on the U. S. Fisheries vessel, "Albatross", to the continental shelf west of San Diego on the meridian of Point Conception. Here the Black-footed Albatross was found to be common both night and day. On deck at ten o'clock at night one could look out over the faintly lighted water and see the birds at their endless circling. My notes at that time bear the question, "Do they feed on phosphorescent forms?" The presence of squid beaks in all four stomachs examined (in 1935) would support such a possibility.

My next contact with this species was twenty years later. In 1925, en route from San Pedro to Central America, we were followed by the species as far as Mag-

dalena Bay. Rarely were there as many as two birds in sight at one time. The contacts of last summer, ten years still later, indicate a greater abundance than in 1925, but far less than in 1904. As many as three birds were in sight at one time and there was no concentration of numbers due to galley waste. Curiosity may have prompted them to come near the launch, but they did not follow us. We hove to, for oceanographic work, sometimes for hours at a time. On one such occasion, I manned the skiff and repeatedly rowed to within a boat's length of birds sitting on the water; they would flush if approached more closely. During the following day only four Albatrosses were seen. We were then on the seaward side of San Clemente, though perhaps too close inshore.

On August 2 we took a direct route from Avalon Bay to San Diego. In the first sixteen miles three Albatrosses were seen and none the remainder of the way. The greatest number seen on any one day was seven, all in the general region of Tanner Bank, southwest of San Clemente.

Birds were repeatedly seen to settle on the water and pick up some sort of food not derived from our launch. Stomach examinations showed beaks and eye lenses of squid, great masses of fish eggs, bones of some good-sized fish, and sizable bits of brown seaweed. These latter may have been torn off in feeding upon fish eggs that were held together in strings of tough secretion; but one kelp mass was the growing end of a plant, and could not have been the anchorage of an egg cluster. There appears to me no reason why these omnivorous birds should not pick off kelp fronds; for one of them had swallowed a quantity of boiled cauliflower thrown out from the galley. Its stomach was crammed with fish eggs too, indicating that it was not driven by acute hunger. The fish bones probably came from floating carrion, since it seems doubtful if the bird could capture a healthy fish of such size.

Much has been said of the degree to which birds of the genus *Diomedea* are dependent on brisk winds for their flight. The species under discussion does not appear so to be. During our exploration, the wind was almost negligible, but the birds came bowling across the sea, close to the surface, flapping and soaring like gigantic shearwaters, but with, of course, a slower wingbeat.

The four individuals collected were measured while warm. The wings extended 82, 81, 81 and 77 inches. The virgin female measured 81 inches and the smallest bird showed signs of having produced eggs.

No other bird of the albatross group was seen during the summer. In fact, during the forty odd years of my acquaintance with *D. nigripes* along the California coast, no other species has been recognized. Willett gives an excellent paragraph on the Short-tailed Albatross (Pac. Coast Avifauna no. 21, 1923, p. 14) in which he expresses the fear that it is now an extinct species. I am inclined to feel the same way regarding it. I have personally collected many bones of *D. albatrus* in kitchen middens of the coast Indians, but never have I seen the bird in life. On the other hand, *D. nigripes* is, I believe, increasing in numbers from a low ebb of a decade or so past.

Puffinus griseus. Sooty Shearwater. This species was the dominant shearwater, as was to be expected. Only one concentration of numbers was seen. On July 31, just west of San Clemente Island, a loose raft of perhaps two hundred birds was encountered as they sat quietly on the surface of the water in early afternoon. At other times during July, birds were well scattered and in all cases were flying north-west along the Catalina channel. On August 1, in the channel between San Clemente and Catalina islands, we passed for some miles through schools of small fish that broke surface to right and left of us like small grasshoppers, but not a shearwater was seen in the region.

Puffinus creatopus was seen much less frequently. A fresh carcass of this species was picked up July 12, at Hueneme Beach. Other shearwaters were not recognized.

Fulmarus glacialis rogersii. Pacific Fulmar. Both light and dark phases of this bird were seen at Tanner Bank. One of them was harried for a moment by a Parasitic Jaeger.

Oceanodroma melania. Black Petrel. During the entire summer, petrels were subjected to careful observation, and constant watch was kept to see if any environmental factor could be discovered that had a controlling influence upon their distribution. Altogether insignificant results must be confessed. It is true that we never met them within four miles of the mainland, although a colleague reported seeing one off the end of the pier at Scripps Institution at La Jolla. Again there was some evidence that colder waters were more favorable. On two occasions at least, we passed from water of a surface temperature of 14.5 C. to 19.5 C., and the number of birds decreased markedly. These cold areas are presumably due to upwelling of deeper waters, and in one case that we tested, a greater concentration of zoöplankton in the cold water was reported by Dr. Martin Johnson of the Scripps staff. In other places this factor failed to be effective. On the run from Avalon Bay to San Diego, petrels all at once became abundant when we got into the current around the south end of the island. During a run of eight miles in this region, forty-three petrels and twenty other offshore birds were seen. Then suddenly we were without birds and in the next hour a run of eight miles produced only ten petrels and five other birds. Apparently we had passed out of the swirl about the end of the island.

Like the albatrosses, petrels kept on the wing at least as long as the light was sufficient to see them and, while we rode at anchor at San Clemente, they were about the ship at various hours of the night—a phase of behavior well known to those who have met petrels in life.

Birds were repeatedly seen to settle and feed on the surface, but in only a few stomachs could I see other than the pinkish, oily fluid which is so readily ejected by a captured bird. Tiny fish scales and what appeared to be parts of small squid were the only tangible objects observed.

The Black Petrel was the species most in evidence, though one white-rumped bird was seen ten miles north of Tanner Bank. Occasional birds observed seemed to have a quicker wing beat and probably were the smaller Ashy Petrel. Constant effort was made during the summer to collect petrels for identification as well as for specimens, but none was obtained until the last twenty-four hours, when four species and thirty-nine individuals were taken.

The most surprising observation made on the petrels during the entire summer was that they sometimes raft, like shearwaters, in countless numbers. This was discovered on the last day out, August 31, twenty-five miles off San Diego on the direct run from San Clemente Island. My notes on the subject run as follows: "About mid-channel petrels became slightly more numerous and we hove to for a try at 'chumming', for I wanted to identify the birds. One or two came to our 'chum', of suet, but would not allow us to approach. Birds became more numerous still at about thirty miles when six were seen on the water in a compact group. We put the ship over toward them and they left. Soon thirty birds were noted in another group, but they also left.

"Shortly afterward, we saw ahead of us great rafts of birds on the water, much as shearwaters raft. In fact they were supposed at the distance to be shearwaters. They made black patches like kelp flies so close together as to be inseparable to

the eye. Some rafts were 100 yards long and several rafts were visible at once. They allowed no near approach with the ship, but one white-rumped bird flew near enough to us to be collected by Dr. Richard Flemming. Finally I proposed trying an approach in the skiff. We thus came close enough to a small raft for a double barrel discharge with too great success; we picked up thirty-seven birds." All but one of these were of the one species *O. melania*. All were adult birds with gonads showing quite recent activity. Testes were large, white and translucent. Ova were very distinct and in one bird a single ovule had a diameter of two millimeters. The species breeds only south of the California coast waters, so these individuals represented a post-nuptial surge to the northward, quite free of juvenile influence. They were quite fat, but not of the excessive fatness found in many sea birds. Mouth linings and tongue were chrome yellow; eyes and feet entirely black.

I have nowhere found mention of rafting among the petrels; hence this great assemblage which must have aggregated many thousands proved quite a surprise. Surface thermometers and surface plankton nets were put out in the immediate area, but no unusual conditions were evident. Dawson (Birds of California, 4, 1923, p. 2003) ascribes the congregating of Sooty Shearwaters to local food supply, but no such factor was detected here.

Oceanodroma homochroa. Ashy Petrel. On the nights of July 29, 30, 31, August 1, and 30, while at anchor near San Clemente or Catalina Island, flood lighting for petrels was tried. No birds of any sort came to the light until August 30, when quite a number of species including the Ashy Petrel were attracted to the ship.

Petrels were the only ones that actually came on board, and only two were captured. In late March, 1904, while anchored at Santa Barbara Island, we were visited by dozens of Ashy Petrels. They came into the ward room and into the engine room, flapping bat-like down into the very depths of the ship "Albatross." We were probably quite near a colony preparing to nest. The several efforts of the late summer of the present year probably yielded so little result because of the remoteness from any such colony. The meager success of August 30, when several other species were identified, may have been due to post-nuptial dispersal that brought them to Smuggler's Cove, San Clemente Island.

Halocyptena microsoma. Least Petrel. A single specimen of this species was picked up with the great number of Black Petrels discussed above. The locality was twenty-five miles WNW of Point Loma on a direct line from the southern end of San Clemente Island. It is an adult female. The locality given for the Sefton specimen in the San Diego Society of Natural History collection is, "500 yards north of the whistling buoy, San Diego." Our specimen is, then, the northernmost record of the species for California.

Oceanites oceanicus. Wilson Petrel. The single white-rumped bird collected from the general petrel swarm after flushing one or two rafts was of this species. The extremely long legs were at once striking. The yellow webs between the toes, brown irides, and white dashes on the upper secondary coverts complete the identification. Whether the white-rumped bird seen off Tanner Bank on July 30 was of this species is doubtful. The date was a month earlier and the locality farther out to sea on about the same parallel of latitude. It was more probably a Keading or a Socorro Petrel. The record specimen of Keading Petrel from California was taken in 1904 close to that point.

Phaethon aethereus. Red-billed Tropic-bird. Willett finds but one record of this species from California waters (Law, Condor, 21, 1919, p. 88) from about

midway between Catalina Island and Long Beach (specimen taken). Our party saw the species at three rather widely separated localities, two of which were in California waters. All were sight records, but the identity is to me unquestionable. On one occasion, between San Clemente and Catalina islands, the bird flew directly over the ship. The flowing tail feathers, postocular dark area, and heavy tern-like bill were plainly visible.

On another occasion, a month later, an individual was resting on the water and the man at the helm nearly ran it down. I was on the afterdeck and saw it come into view as it flew almost from under the bilge of the ship. Specific identification was unquestionable. The third time, I was occupied with a basking sun fish and did not see the bird as it flew over; but Dr. Flemming, who had met the species in Central America, described it accurately.

Bancroft implies that the Tropic-bird is not able to rise from the water and take wing (Condor, 29, 1927, p. 191), but this last bird did so in foggy calm weather with the least perceptible breeze only. My experience with the Yellow-billed Tropic-birds in Hawaii was that they repeatedly settled and rose again from the water. There, however, a brisk trade wind blows almost constantly.

Fregata magnificens. Man-o'-war-bird. There are numerous records of these birds from our coast and even, rarely, from the interior, but my own first record from American waters was of two birds sailing high over Scripps Institution, La Jolla, on August 29. They were not near enough for recognition of the plumage phase.

Ardea herodias hyperonca. California Blue Heron. On July 12 these birds had not yet arrived at Point Mugu where they later became so abundant. A month later they were common along the several coastal areas.

Egretta thula brewsteri. Western Snowy Heron. These little egrets first appeared at San Diego Bay on July 25.

Melanitta perspicillata. Surf Scoter. One raft of these ducks in high plumage was seen at Point Mugu on July 15.

Squatarola squatarola. Black-bellied Plover. On July 22 at La Jolla, the first two birds were seen. One in full summer plumage was being persistently followed from stone to stone by a slightly smaller bird with dashes of black on the belly. Was this a persistent sex reaction? Numbers increased but slowly. However, on September 21, the beach of Hyperion, Los Angeles County, was swarming with the birds; literally hundreds of them were seen along the strand for some miles. All were in complete dull plumage.

Arenaria interpres morinella. Ruddy Turnstone. A single bird came on board, but soon left us, at San Clemente Island, July 31.

Arenaria melanocephala. Black Turnstone. This species suddenly became abundant at La Jolla on August 25.

Phalaropus fulicarius. Red Phalarope. From July 23 to August 1, this species was the only phalarope noted. It was abundant offshore as far out as we went. On August 22, when I returned after a two weeks absence, they had seemingly all passed onward. Quite in contrast was the migration of 1934 when this species was very abundant along the southern California coast, well into October. Sick birds and emaciated bodies were cast up in numbers along the strand.

Lobipes lobatus. Northern Phalarope. On August 2 three birds of this species were seen off Point Loma. Two weeks later they had replaced the Red Phalaropes on the open ocean and they continued abundant through the two more weeks that I was able to spend in observation.

Larus occidentalis wymani. Wyman Gull. Comment has been made earlier in this paper on the almost complete absence from the mainland, of first year birds during July. The young of the year began coming in during late August. My greatest surprise was to find the species breeding on the cliffs at La Jolla. I was counting Brandt Cormorants in the well established breeding colony over the famous La Jolla caves. I had just made a count of 110 birds perched at one time on the cliffs when I saw an adult Wyman Gull fly up to a ledge and begin feeding a half-fledged nestling. The nest was located near the west end of the rookery of cormorants, and the young bird was easily seen with the field glasses. The body plumage was still largely down and the wing quills about half grown.

Another pair of gulls kept flying up to the cliff, but no other nest was located. The date was July 21.

Larus heermanni. Heermann Gull. The first Heermann Gulls of the season were seen on July 12 along the beach below Carpinteria; about fifteen individuals, all in full summer plumage, made up the group. One other flock of adults was seen along the Malibu coast on the same day, but the species was not met again until late in August when young birds, and those in full winter plumage only, were seen. During the last week of August, birds of this species were repeatedly watched harrying Forster Terns almost in the style of Jaegers. The terns were, however, always able to outfly the clumsy gulls. Pelicans were repeatedly worried, but in no case did I see the gull obtain a fish. The Pelican would keep his beak half submerged and turn quickly away from the importunate gull until the fish was in a position to be swallowed by a quick jerk of the head.

Sterna maxima. Royal Tern. These terns surprised me by appearing in San Diego as early as July 21. They kept well inshore at Pacific Beach and La Jolla, and did not go beyond the kelp beds at the harbor mouth. On our out-bound movements we found them fairly abundant till we got into the swell of the outside waters when they dropped away from us only to be met about the same place on our return. Even the crowded inner harbor with all the naval traffic of large and small craft, all the hydroplanes from Spanish Bight, in addition to the commercial traffic, seemed much to their liking; for they were fairly abundant even there.

Sterna antillarum. Least Tern. At the San Diego Yacht Club where our vessel generally lay while in port, birds of this species were feeding their brown-backed young during the week of August 20 to 27. They seemingly had nested on the narrow spit that had been thrown up by dredges in the region of Beacon 3 Shoal of my earlier experiences. This area is now permanently above water and is beginning to support beach vegetation. The Least Terns were carrying fish to this spot in late July, though no nests were discovered by me.

My collecting experiences with Mr. George Willett off the San Pedro Harbor mouth caused me to keep close lookout for Arctic Terns outside San Diego Bay, but no terns of any sort were seen outside except one flock of Black Terns (*Chlidonias nigra surinamensis*) from which a bird of the year was collected August 28, nine miles off Point Loma. The birds acted like petrels, flying within three or four feet of the water. In fact, they were mistaken for petrels at first.

Brachyramphus hypoleucus. Xantus Murrelet. I was disappointed that so few of these birds were seen. We were certainly in their territory about the islands and in the channels. Their feeding time at sea is the daylight period; still we saw very few considering the amount of sea surface patrolled. Just as noted by Dawson (Birds of California, 3, 1923, p. 1491), they generally occur in pairs and they take wing before being closely approached. The only specimen collected was not

feeding upon invertebrates, a habit suggested by Dawson, but it contained several small fish. The beak of the species seems hardly that of a fish-eating bird.

Zenaidura macroura marginella. Western Mourning Dove. Great was my surprise to find this species on three occasions far offshore. Fifteen miles south of San Clemente Island, at dawn on August 30, two of these birds were discovered circling our boat, apparently attracted by our riding lights. They did not come on board, but remained about till the light increased, when they resumed their journey, presumably toward the Mexican shore. The following day they twice visited us near mid-channel, between San Clemente and San Diego. One bird nearly came to my hand as I stood at the bow, but lost courage and veered off.

Icterus bullockii. Bullock Oriole. While southwest of San Clemente, headed for Tanner Bank, August 30, a juvenal female Bullock Oriole came aboard ship. It appeared to be confused as to its directions.

Other land birds that came near us while in this same general region were two sparrows, with notes not distinguishable from those of the Savannah Sparrow, and another species that, in the dull light, appeared to be a thrush comparable to the Russet-backed Thrush. There appeared good evidence of a migration route from the north possibly leaving the mainland in the region of Santa Barbara or Point Conception, passing the channel islands and striking the mainland somewhere south of the Mexican border. I was greatly surprised also to see several groups of Willets and Godwits high above the sea surface while we were in the region of Tanner Bank.

University of California at Los Angeles, October 20, 1935.

SOME NOTABLE RECORDS OF BIRDS FOR CALIFORNIA

By DONALD D. McLEAN

The following notes are some of the results of rather extensive field work and travel for the California Division of Fish and Game. The varied types of territory covered while driving some 300,000 miles or more within the State have furnished a wealth of interesting data and specimens. On long trips I have made it a point to watch roadside trees, bushes, fences and fields for things of ornithological interest. I have been well repaid with specimens and observations on many species.

Mycteria americana. Wood Ibis. On June 29, 1930, on the Salinas River, 4 miles west of Gonzales, Monterey County, I collected an adult male of this species. Two of the birds were feeding in a shallow pool.

Lophodytes cucullatus. Hooded Merganser. A female adult was obtained 5 miles northeast of Los Banos, Merced County, on December 14, 1930. It was accompanied by another one apparently in the same plumage.

Buteo lagopus s. johannis. American Rough-legged Hawk. A female adult was obtained on February 5, 1934, at Canby, Modoc County. This appears to be the first definitely recorded specimen from this county although I have seen a number of living individuals in that region.

Falco peregrinus pealei. Peale Falcon. On November 10, 1933, Mr. Nathan Moran, of San Francisco, shot an adult female while hunting ducks on Tubbs Island, Sonoma County. Mr. Moran very kindly gave the bird to me.

Falco columbarius suckleyi. Black Pigeon Hawk. An adult female was shot at Cold Flats, 16 miles southeast of Mount Hamilton, Santa Clara County, on April 11, 1933. This is a typical black female. Another individual was found dead on the bank of Guadalupe Creek, 1½ miles northwest of San Jose, Santa Clara County, on March 3, 1933. This specimen is a "mummy" now in the collection of the Museum of Vertebrate Zoology. A male adult, intergrade between this race and the Western Pigeon Hawk (*Falco columbarius bendirei*), was taken 4½ miles southwest of Gonzales, Monterey County, on February 12, 1933.

Falco columbarius richardsonii. Richardson Pigeon Hawk. A female adult was collected 3