

LATE AUTUMN OBSERVATIONS OF PELAGIC BIRDS OFF SOUTHERN CALIFORNIA

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The near-shore avifauna of the coast of California is as well known as that of any state. To a large extent, our knowledge is based on the pioneering work of Leverett M. Loomis (1896a, 1896b, 1900a, 1900b and 1918) and, particularly, Rollo H. Beck (1910), who collected large and important series of seabirds in the vicinity of Monterey Bay early in this century and documented the regular occurrence of several species that were not known to be present in California waters. In recent years, offshore birdwatching trips from selected points, but principally from Monterey and San Diego, have provided important supplementary data on migration patterns and abundance, although the data remain to be analyzed in detail. Even the most ambitious of these excursions, however, has had a maximum duration of about 20 hours. Observations more than about 60 miles from shore are almost lacking, and long term observations far offshore remain to be attempted.

In October 1971, I was invited to participate in a research cruise of Scripps Institution of Oceanography aboard the R/V *Alpha Helix* led by Dr. G. H. Kooyman. The major purpose of this expedition was to study the physiology and acoustic behavior of Sperm Whales (*Physeter catodon*). Since these mammals are most frequently observed in deep waters, it was decided to search for them along the 1000 fathom curve. In southern California that depth is attained at distances of 50 to 200 miles off the coast. Thus, the cruise provided an opportunity to determine the status of pelagic birds well beyond the continental shelf, in an area largely unstudied by ornithologists.

Our itinerary is shown in Figure 1. Briefly, we departed San Diego, California on 13 October, laying to at night approximately 20 miles east of Cortes Banks. On the 14th we crossed the banks at noon and continued westward, reaching depths of 1000 fathoms at dusk. Between 15 and 19 October we paralleled the 1000 fathom curve between the approximate latitudes of Ensenada, Baja California, Mexico, and Point Arguello, California. This route passed over the San Juan Seamount late on the 17th and over the Rodriguez Dome at dusk on the 18th. On 20 October we headed southward, laying to at San Miguel Island at night. On the 21st we again crossed the San Juan

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Seamount, then proceeded eastward to San Clemente Island and to San Diego, arriving late on the 22nd.

I made observations throughout the day as work and weather conditions permitted. Census results for pelagic species observed more than 10 miles from shore are presented in Table 1. When possible, observations were continued while the ship was drifting "on station" for prolonged periods. Indeed, birds seemed to be attracted to the ship as soon as its forward progress stopped. For this reason, the census figures cannot be converted to "birds per hour" or "birds per nautical mile," which is usually a more meaningful basis for comparison.

With the exception of 22 October, the ship lay to at night, so that the area traversed could be thoroughly investigated in daylight hours.

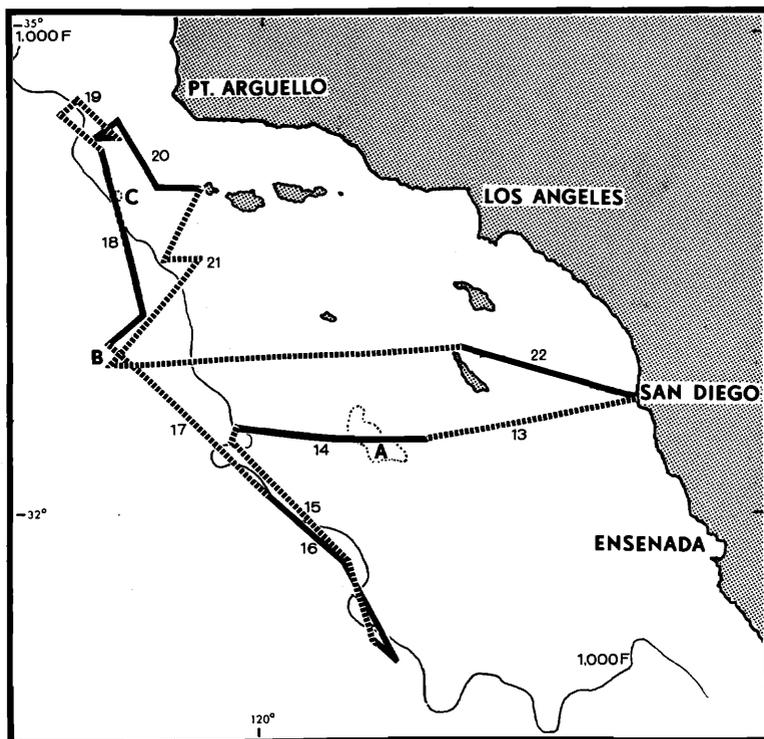


Figure 1. The route of the R/V *Alpha Helix* from 13 to 22 October 1971. In addition to the 1000 fathom curve, the offshore topographic features identified are: A, Cortes Banks; B, San Juan Seamount; C, Rodriguez Dome.

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Table 1. Pelagic birds observed more than 10 miles off the southern California coast, 13 to 22 October 1971.

Species	October										
	13	14	15	16	17	18	19	20	21	22	
Black-footed Albatross	—	—	8	5	11	7	1	4	2	—	
Northern Fulmar	—	3	3	4	7	20	10	12	7	8	
Pink-footed Shearwater	87	2	—	—	—	—	93	—	9	3	
Flesh-footed Shearwater	—	—	—	—	—	—	—	—	1	—	
New Zealand Shearwater	—	—	1?	—	—	—	12	2	—	2	
Sooty Shearwater	—	3	—	—	1	—	99	4	14	—	
Manx Shearwater	—	—	—	—	—	—	—	1	—	—	
Leach's Petrel	1	6	9	2	8	—	—	—	—	—	
Ashy Petrel	—	—	3	—	—	—	—	1	—	—	
Least Petrel	—	—	1	—	—	—	—	—	—	—	
Red Phalarope	—	6	—	—	—	55	1	1	—	2	
Pomarine Jaeger	18	26	2	1	1	4	8	8	18	14	
Long-tailed Jaeger	9	3	1	2(3?)	—	1	—	—	—	—	
Skua	1	1	1	—	—	—	1	1	2	—	
Sabine's Gull	4	—	—	—	—	—	—	—	—	1	
Arctic Tern	—	—	—	—	—	3	—	—	—	—	
Xantus' Murrelet	—	—	—	—	—	1	2	3	—	—	
Craveri's Murrelet	2(4?)	—	—	—	—	—	—	—	—	—	
Cassin's Auklet	—	2	—	—	—	—	—	1	—	—	
Hours of Observation	5.0	7.5	7.0	5.8	4.5	8.7	9.3	11.7	7.5	8.5	

Thus, the census results are a fairly accurate index to the size of avian populations in the region at that time.

Water temperatures were not taken regularly but ranged from approximately 15.6°C (60°F) from the San Juan Seamount northward to 18.9°C (66°F) from Cortes Banks southward.

SPECIES ACCOUNTS

Black-footed Albatross (*Diomedea nigripes*).—Uncommon but regular in waters deeper than 1000 fathoms; virtually absent from shallower waters. More than 30 birds were closely scrutinized as they sat on the water near the boat. Only one was banded, and efforts to catch it on a fishline were unsuccessful.

Northern Fulmar (*Fulmarus glacialis*).—Regular from San Diego Bay offshore to a distance of 200 miles; commonest in northern part of survey area. All birds were in the gray phase. This species was far commoner than expected and subsequent observations indicated that 1971 was a light year.

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Pink-footed Shearwater (*Puffinus creatopus*).—Rare. The birds seen on 13 October were about 20 miles offshore and were migrating. The only other concentration included several small flocks over the Arguello Canyon on 19 October.

Flesh-footed Shearwater (*Puffinus carneipes*).—One observation, a single bird 40 miles west of San Miguel Island on 21 October was associated with a feeding flock of pelicans, gulls, and other shearwaters.

New Zealand Shearwater (*Puffinus bulleri*).—This species is almost unknown from waters south of Monterey Bay. We found it in small numbers off Point Arguello and Point Conception on 19-20 October. Two birds were seen between San Clemente Island and San Diego on 22 October, one of which was only 13 miles offshore. A shearwater with bright white underparts at 32° 20' N, 119° 55' W on 15 October was too far away for certain identification.

Sooty Shearwater (*Puffinus griseus*).—Virtually absent, except for small flocks off Point Conception on the 19th.

Manx Shearwater (*Puffinus puffinus*).—One observation, 2 miles off San Miguel Island. This species, which prefers near-shore waters, was also encountered fairly commonly near the mouth of San Diego Bay on 22 October (numbers not included in table).

Leach's Petrel (*Oceanodroma leucorhoa*).—All of our few observations of this species were south of the latitude of San Clemente Island. Approximately half of the birds had white rumps.

Ashy Petrel (*Oceanodroma homochroa*).—Three birds 60 miles W of Cortes Banks, where it is very rarely observed, on 15 October and three more 2 miles off San Miguel Island on 20 October.

Least Petrel (*Halocypetna microsoma*).—One bird 60 miles W of Cortes Banks on 15 October was associated with three Ashy Petrels and one Leach's Petrel. This is apparently the latest fall record of the species.

Red Phalarope (*Phalaropus fulicarius*).—Except for several flocks in a small area off Point Conception on 18 October, we observed only scattered individuals of this species.

Pomarine Jaeger (*Stercorarius pomarinus*).—Distributed throughout the survey area, but seemingly commoner in waters of less than 1000 fathoms. Most of the birds seen on 13 October were in migrating flocks.

Long-tailed Jaeger (*Stercorarius longicaudus*).—The relative abundance of this species was surprising. All observations were in the southern part of the survey area. The largest concentration, a flock of nine 20 miles east of Cortes Banks on 13 October, was feeding on a

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large school of bait fish, probably anchovies; eight of the birds appeared to be juveniles, and one was a sub-adult. Two birds, including an adult, were seen in the same general area on the 14th, and another adult was seen later on the Cortes Banks. Additional observations included one bird on the 15th and two (three?) on the 16th at the edge of the 1000 fathom curve.

Skua (*Catharacta sp.*).—Seven individuals were observed in 10 days. On 13 October a single bird circled our ship when we were stationed 20 miles east of Cortes Banks. A bird over Cortes Banks on the 14th was pursuing a Western Gull, and one off the coast of Mexico on the 15th was chasing a Black-footed Albatross. A skua on the 19th and one of the two birds on the 21st were each associated with small flocks of shearwaters. The other two observations (20, 21 October) were of unaccompanied individuals.

It now appears that the vast majority of skua records from the west coast of the United States are referable to the South Polar Skua (*C. maccormicki*) (DeVillers, MS). Although not all of the birds seen on this trip closely approached the boat, several that did were small and blackish with golden hackles and I identified them as dark-phased individuals of *maccormicki*. All of the other skuas were also dark and lacked the distinct cinnamon underparts that characterize *Catharacta skua chilensis*; these were probably referable to *maccormicki*.

Gulls.—Gulls were very rare and often absent in offshore waters. We saw a few scattered Western (*Larus occidentalis*) and California (*L. californicus*) gulls, principally in the northern half of the survey area and a single Heermann's Gull (*L. heermanni*) 50 miles W of Point Conception. Four Sabine's Gulls (*Xema sabini*) 15 miles W of San Diego on 13 October and one in the same area on the 22nd were the only observations of that species.

Arctic Tern (*Sterna paradisaea*).—Three resting on an old bamboo beach mat 60 miles SW of Point Conception on 18 October seem to be the latest record of the species in California.

Murrelets (*Endomychura hypoleuca* and *E. craveri*).—Six Xantus' Murrelets were identified in the northern half of the survey area between 18-20 October; one of these was 200 miles W of Los Angeles. On 13 October, 12 miles W of San Diego, I saw two Craveri's Murrelets plus two murrelets that could not be identified. This is the latest record for *E. craveri* in California waters.

Cassin's Auklet (*Ptychoramphus aleuticus*).—Two 10 miles W of Cortes Banks on 14th and one 40 miles WSW of Point Conception on the 20th.

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Non-pelagic birds.—Several species of non-pelagic birds were observed near the ship. The great majority, including a Black-and-white Warbler (*Mniotilta varia*), were seen on 14 October, when the ship was 80-110 miles from shore. The following species were recorded: Eared Grebe (*Podiceps nigricollis*), Great Blue Heron (*Ardea herodias*), Hudsonian Curlew (*Numenius phaeopus*), Dunlin (*Calidris alpina*), Mourning Dove (*Zenaida macroura*), Barn Swallow (*Hirundo rustica*), Starling (*Sturnus vulgaris*), Nashville Warbler (*Vermivora ruficapilla*), Yellow-rumped (Audubon's) Warbler (*Dendroica (coronata) auduboni*), Western Meadowlark (*Sturnella neglecta*), and Brewer's Blackbird (*Euphagus cyanocephalus*).

DISCUSSION

Pelagic bird populations were sparse beyond the edge of the continental shelf in mid-October. This was not unexpected since the survey was conducted several weeks after the peak of southward migration for most species. Thus, shearwaters, petrels, Arctic Terns, Sabine's Gulls, and phalaropes were very rare, and the only species we encountered regularly were those which usually winter commonly off the southern California coast (Pomarine Jaeger, Black-footed Albatross, Northern Fulmar). The only obvious instances of southward migration were noted on 13 October, when small flocks of Pink-footed Shearwaters and Pomarine Jaegers were seen moving southward about 20 miles offshore.

We encountered no significant concentrations of birds, not even in areas such as the Cortes Banks, San Juan Seamount, and Rodriguez Dome, where upwelling and good feeding conditions were expected.

Certainly the most interesting finding of the cruise was the presence of probable South Polar Skuas off the coast of southern California and northern Baja California, an area in which skuas had previously been virtually unreported. The timing of these observations, in mid-October, is in accord with Devillers' (MS) interpretation that the South Polar Skua probably follows a clockwise migration route through the North Pacific. As Devillers demonstrates, the species appears off the coast of Japan in late spring, off the Pacific Northwest in late summer, and in northern California in early autumn. The mid-October records for southern California fit neatly into this pattern, and I believe that further observations well offshore in October will reveal the presence of a transient population.

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On purely geographic grounds, the Chilean Skua (*Catharacta skua chilensis*) is the form most likely to reach the west coast of the United States, as it ranges northward through the Humboldt Current to northern South America. I am confident that I have seen this well-marked form off San Clemente Island (31 May and 1 June 1971).

Although some of my records (perhaps all) for October 1971 seem to pertain to the South Polar Skua, my experience in the southern hemisphere convinces me that sight records for many forms of skuas are unacceptable. Perhaps only the reddish *chilensis* and the light phase of *maccormicki* can be identified with any certainty, except under the best conditions. Further, our present knowledge of geographic variation in skuas is far from satisfactory, and many breeding populations remain to be fully sampled. Thus, the important task of confirming the proposed circular migration route of *maccormicki*, and Devillers' interpretation that virtually all of the skuas which occur in the North Pacific are that species, can only be accomplished through collecting a reasonable series of specimens throughout the year.

Field work in near shore waters has shown that the distribution and abundance of many species varies greatly from year to year. Whether the results of this survey are representative of conditions beyond the continental shelf in late autumn remains to be determined.

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