

THE DISTRIBUTION OF CERTAIN LARGE GULLS (*LARUS*) IN SOUTHERN CALIFORNIA AND BAJA CALIFORNIA

Pierre Devillers, Guy McCaskie and Joseph R. Jehl, Jr.

INTRODUCTION

In the course of investigating the relationships and plumage characters of the large gulls of western North America (Devillers, in prep.) a number of specimens had to be examined, and distributional data checked. Also, field studies, particularly in the San Diego region, northern Baja California, and the Salton Sea, have resulted in a better understanding of the distribution of some species. In this paper we summarize available data on winter distribution, timing of migration, abundance, age ratios, and habitat selection of the Glaucous Gull *Larus hyperboreus*, Thayer's Gull *Larus thayeri*, Yellow-legged Western Gull *Larus occidentalis livens*, Western Gull *Larus occidentalis occidentalis* and *L. o. wymani*, Glaucous-winged Gull *Larus glaucescens*, and Mew Gull *Larus canus brachyrhynchus*.

The following collections have been examined, and are indicated by abbreviations: Museum of Vertebrate Zoology, Berkeley (MVZ), Los Angeles County Museum (LACM), University of California at Los Angeles (UCLA), San Bernardino County Museum (SBCM), and San Diego Natural History Museum (SDNHM). All the specimens discussed were seen by Devillers, and most also by Jehl and McCaskie. Localities mentioned in the text are shown in Fig. 1. Unless otherwise specified, observations at the Salton Sea are by McCaskie, at Guaymas, San Felipe and San Quintin, by Jean T. Craig, Xenia Devillers, Alan M. Craig and Devillers, elsewhere on the Pacific coast of the peninsula, by Jehl or Devillers. Descriptions and photographs mentioned are in the files of the San Diego Natural History Museum and of *California Birds*.

GLAUCOUS GULL

Many records of this species are unreliable because of possible confusion with pale or bleached-out Glaucous-winged Gulls (particularly second-year birds, and especially in late winter and spring) or with

GULL DISTRIBUTION

partially albinistic individuals of any large species of gull (e.g. Fig. 2). Johnston (1955) described correctly the field marks of young Glaucous Gulls (sharply bicolored bill, and mottled tail), and listed 41 west coast specimen records he found acceptable. We have re-examined 16 of these: 6 are incorrectly identified (Table 1), so that the identity of other specimens in Johnston's list is suspect. In Table 1, we summarize our reassessment of Johnston's records, and present a few additional specimen records. Numerous sight records have been published, particularly in *Audubon Field Notes*, without any supporting details. Although they cannot now be assessed, a fair proportion of recent ones by competent observers are probably valid. Older sight records, such as those included uncritically by Grinnell and Miller (1944), are questionable.

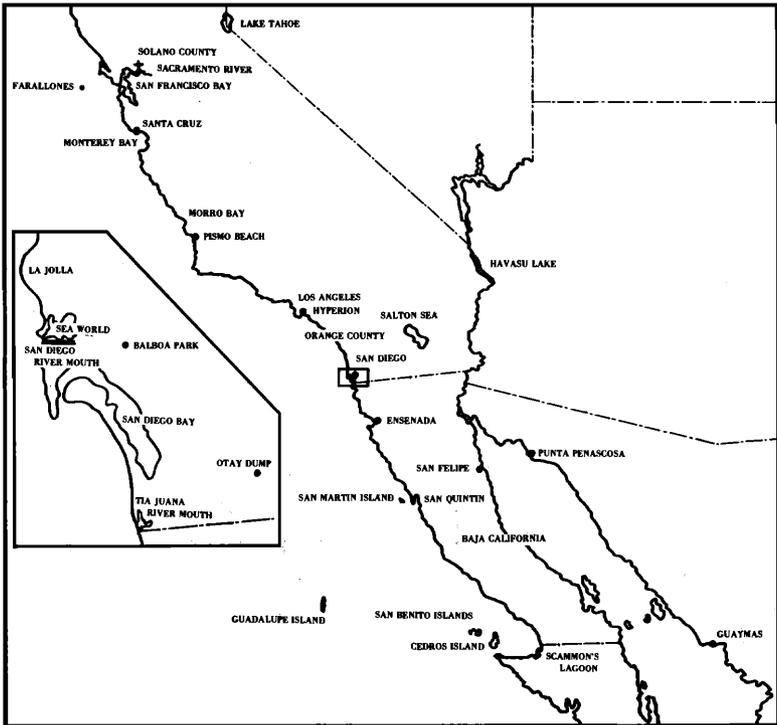


FIGURE 1. Locations mentioned in the text. Detail of the San Diego area in inset.

Map by Guy McCaskie

GULL DISTRIBUTION

Table 1. Some specimens of "Glaucous" Gulls from Western North America in California collections.

Museum	Date	Locality	Identification	Age
<i>British Columbia</i>				
*MVZ	17 Dec. 1925	Vancouver Island	<i>hyperboreus</i>	1st year
**MVZ	15 Mar. 1926	Vancouver Island	<i>hyperboreus</i>	2nd year
**MVZ	4 May 1944	Okanagan	<i>hyperboreus</i>	2nd year
**MVZ	8 Apr. 1924	Okanagan	<i>hyperboreus</i>	2nd year
*MVZ	7 Apr. 1938	Okanagan	<i>hyperboreus</i>	1st year
<i>Washington</i>				
**UCLA	14 Jan. 1918	Tacoma	<i>hyperboreus</i>	2nd or 3rd year
**UCLA	5 May 1920	Westport	<i>glaucescens</i>	2nd year?
<i>Oregon</i>				
*SDNHM	12 Dec. 1914	Sauvies Island	<i>hyperboreus</i>	1st year
<i>California</i>				
**MVZ	4 Mar. 1936	Suisun, Solano Co.	<i>glaucescens X hyperboreus</i>	adult
**MVZ	26 Nov. 1952	Richmond	partial albino (<i>glaucescens?</i>)	subadult
**MVZ	20 Feb. 1939	Monterey Bay	<i>glaucescens</i> or partial albino	subadult
**MVZ	5 Jan. 1937	Monterey Bay	<i>hyperboreus</i>	1st year
†SBCM	28 Dec. 1966	Pismo Beach	<i>hyperboreus</i>	2nd year?
*LACM	28 Jan. 1921	Hyperion	<i>hyperboreus</i>	1st year
*LACM	18 Feb. 1918	Hyperion	<i>thayeri</i>	1st year
+,*LACM	24 Nov. 1915	Hyperion	<i>hyperboreus</i>	1st year
†LACM	26 Mar. 1917	Hyperion	<i>hyperboreus</i>	2nd year
**SDNHM	6 May 1919	San Diego	<i>glaucescens</i>	subadult
†SDNHM	22 Jan. 1966	San Diego	<i>hyperboreus</i>	1st year
<i>Inland</i>				
+UCLA	30 Dec. 1921	Kern County	see text	subadult
†SBCM	22 Mar. 1969	Salton Sea	<i>hyperboreus</i>	1st year

*listed by Johnston as *hyperboreus*, first year

**listed by Johnston as *hyperboreus*, second year or older

†not previously published

+referred by Dwight (1925) to *leucopterus* (= *glaucoides*)

GULL DISTRIBUTION

Despite the misidentifications of this species along the Pacific Coast, its status there is fairly clear. It is a regular winter visitor in very limited numbers along the entire coast of the United States. McCaskie has seen the species in Humboldt Bay (17 December 1962), in coastal Marin County (2 January 1970, 1 and 7 January 1961, 17 January 1962), in Monterey Bay (7 February 1971), and in Orange County (11 April 1965). In San Diego the species has been seen almost annually since the winter of 1962-63 (unrecorded only in 64-65, 66-67, and – so far – 70-71) with a maximum of three during the winter of 1967-68. The southernmost, and only Mexican records to date, are: San Quintin Bay (first year, 1 February 1970), West San Benito Island (second (?) -year, 18 January, 31 January, and 16 March 1971, Fig. 3), and Scammon's Lagoon (first-year, 19 January, 21 January, and 18 March 1971); photographs and descriptions are on file for all three.

Glaucous Gulls are usually seen among large numbers of other gulls. Most records are from refuse disposal areas (Fig. 4), but some have been found on open beaches and in sheltered bays, often when other gulls have been attracted by large supplies of "natural" food: spawning squid (La Jolla), pelagic crabs (West San Benito Island), carcasses of marine mammals (West San Benito Island, Scammon's Lagoon). Dates of first detection of San Diego individuals range from 26 December (A. M. Craig) to April (K. Fink) with one on 31 December, one in January, three in February and two in March.

Away from the ocean records are very few. McCaskie saw a first-year bird feeding on dead fish at the south end of Lake Tahoe on 2 January 1970, a first-year bird at the south end of the Salton Sea on 1 and 22 March 1969, and with Eugene A. Cardiff he found a recently dead first-year bird there on the latter date (Table 1). A specimen found dead at Buena Vista Lake in Kern County was referred to *L. glaucoides* by Dwight (1925) and subsequently to *L. hyperboreus* by Grinnell and Miller (1944). We have examined this puzzling specimen and can only assert that it is not *hyperboreus*. Its identity is uncertain, but the bird appears to be a faded or albinistic example of either *argentatus* or *thayeri*.

All individuals collected or critically observed in California are immature. The alleged specimen of an adult from Solano County MVZ no. 101338 mentioned both by Grinnell and Miller (1944) and by Johnston (1955) is a hybrid Glaucous-winged X Glaucous Gull; the mantle color is intermediate between *glaucescens* and *hyperboreus*, but closer to the former, and the primaries have extensive gray mark-

GULL DISTRIBUTION

ings (Fig. 5).

There is considerable confusion as to the exact age of the immatures recorded. Johnston (1955) indicates that approximately 50% of the birds in his summary are in their second winter, and 15 individuals recorded in the San Francisco Bay area in the winter of 1968-69 were reported as "about equally divided between first-year and second-year" (Baldrige and Chandik, 1969).

Age determination of immatures is extremely difficult. The fresh first- and second-winter plumages are fairly brown and patterned but whiten quickly, mostly through fading of the brown markings. Of Johnston's nine "second year" birds, four are incorrectly identified to species, one is a pale first-winter *hyperboreus*, four are in second- or third-year plumage (British Columbia and Washington, Table 1). The only California specimen unquestionably beyond its first year is the one taken at Hyperion on 26 March 1917. All the individuals seen in San Diego in recent years appeared to be in first-winter dress, and only two of the nine seen by McCaskie elsewhere in California were possibly in their second winter.

Most of the birds occurring in the Pacific States undoubtedly belong to the race *barrovianus* from Alaska and western Canada which averages smaller than the nominate form *hyperboreus* from the eastern Canadian arctic. The extremely large first-year male (SBCM no. 4217; wing 490 mm; exposed culmen 60.8 mm) found dead at the Salton Sea is within the size range of *L. h. hyperboreus* and apparently beyond that of *barrovianus* (Bailey, 1948; Manning, Hohn, and Macpherson, 1956).

THAYER'S GULL

The criteria for identifying this gull, particularly in its immature plumages, are not generally known, so that there has been an almost complete lack of sight records. Furthermore, many specimens are misidentified and, consequently, general statements of distribution in standard check-lists cannot be taken at face value. Thayer's Gull does occur in winter along the entire coast of California (Grinnell and Miller, 1944) but its relative abundance is unstudied. Intensive study since 1967 has shown that 100 to 150 individuals winter in the San Diego area in most years. Along the Pacific coast of Baja California we have found the bird in Ensenada (three, 4 January 1970), on San Martin Island (one, 5 February, 4 March, 14 March 1971, photog-

GULL DISTRIBUTION

raph), on West San Benito Island (minimum of 25 among 5000 gulls, 18 January 1971, photographs; two, 31 January 1971; three, 16 March 1971) and at Guadalupe Island (one, 21 February 1969; one, 16 April 1970; three, 30 January 1971; one, 15 March 1971). The form was not included in the Mexican check-list by Friedmann, Griscom, and Moore (1950), and the reference to the San Benito Island in the AOU Check-list (1957) may be based on a somewhat questionable, badly worn, specimen, taken by van Rossem on 20 February 1930 (UCLA no. 29802).

In San Diego, the first birds arrive in early November (earliest date: 22 October). Numbers increase gradually during November and December, peak in January and February, and drop off by early March. A few remain into early April (20 at Otay on 7 April 1968). Like Herring Gulls, most Thayer's Gulls are found at refuse disposal areas. They are scarce along the beaches and in the bays. Numbers at the Otay dump reach 50, in Balboa Park 12, and fluctuate between 2% and 5% of the Herring Gull population in midwinter. In Baja California they have been seen feeding on carcasses of marine mammals and on fish offal; the large number on San Benito was coincident with a vast emergence of pelagic crabs.

First-year birds are the most numerous in southern California and northern Baja California. The number of adults at Otay, or along the San Diego beaches, does not exceed one in five. At Balboa Park, however, Jehl often found the percentage of adults to equal or considerably exceed that of immatures, particularly in the latter part of the winter; the sample is small but consistent. All Baja California records pertain to first- (mostly) or second-year birds, except for two adults at Guadalupe Island on 30 January 1971. There may be a slight tendency for immatures to arrive earlier than adults, and the very early arrivals contain a higher proportion of second-year birds. Third-year birds are rarely seen in the region.

The Gulf of California may be part of the regular winter area of the species. Between 28 and 30 December 1970, at least 25 different individuals were seen at San Felipe (Fig. 6), with up to 15 on one day, while the total Herring Gull population never exceeded 150. The birds were loafing and feeding on the beaches, as well as feeding at sea near the fishing boats. About three-fourths were first-year birds, the rest second-year except for one adult. A first-year bird was collected at San Felipe, 26 March 1926 (SDNHM no. 10362). At the Salton Sea a first-winter bird was seen on 23 January 1971 and an adult female was collected on 22 March 1969 (SBCM no. 4225).

GULL DISTRIBUTION

Phillips, Marshall, and Monson (1964) refer to this species a specimen collected at Havasu Lake (Lower Colorado River) on 13 December 1946.

YELLOW-LEGGED WESTERN GULL

The Yellow-legged Western Gull, or Yellow-footed Gull (van Rossem, 1945), is restricted to the Gulf of California, where it is common but, at least on the mainland and in northern Baja California, never seems as abundant as is *wymani* on the Pacific coast. In winter, at San Felipe, or Guaymas, these gulls frequent rocky or sandy beaches; they do not form large pure flocks but are spread out alone or in small groups, among the other gulls; and on average they stay closer to the water edge than other species, often wading in shallow water.

Grinnell and Miller (1944) list two records for the Pacific coast of California: one "certain," an adult taken 7 miles off Santa Cruz on 29 February 1936, the other possible (Hyperion, Los Angeles, 25 April 1922). Devillers has examined the first specimen (MVZ no. 101310); it is definitely not *livens*. The bill is not typical of that form and, besides, the inscription on the label "legs pale saffron yellow, tinged flesh at joints" leaves no doubt to any one familiar with the bright, deep yellow legs of adult *livens* that the bird is misidentified. Some *wymani* have legs which could be thought of as yellowish or yellow-tinged, but those shades are unlike the amazingly bright leg color of adult *livens*, a color which usually matches fairly well that of their bill. A second adult specimen (MVZ no. 101311) labeled *livens*, collected by Allan Brooks at Morro Bay on 7 January 1939, is also misidentified; the label indicates "one leg (other lost) pale cream tinged saffron." We have not examined the Hyperion bird, but Willett (1933) when he first reported it, considered the record hypothetical. The only definite record along the Pacific Coast north of the Cape District is an adult taken by van Rossem on Santa Margarita Island, Magdalena Bay, 1 March 1930 (UCLA no. 21874). However, there is a probable record for San Diego. In June 1966, Carl L. Hubbs (pers. comm.), noticed a gull with yellow legs on a pond in the enclosure of Sea World. The bird eventually became sick, was caught, and is preserved in the SDNHM collection (No. 36001, 23 June 1966). It is a subadult female, and at the time of capture the soft parts were recorded as "iris light yellow, eye-ring bright yellow, eyelids light blue grey, legs light yellow, bill yellow with orange spot on distal third of

GULL DISTRIBUTION

lower bill." Those colors which can be verified on close-up slides (SDNHM collection) are strongly indicative of *livens*. In addition the measurements (wing 404, exposed culmen 54.6, height at posterior nares 19.2, height at gonys 20.9 mm.) come close to those of adult females of *livens*, and are not matched by any *wymani* in the SDNHM collection. Only the gonydeal protuberance is not as marked, but this is perhaps not surprising in a subadult. The plumage characteristics also seem to fit *livens* better than *wymani*, but we lack comparative material of *livens* at that plumage stage.

Yellow-footed Gulls were first recorded at the Salton Sea (Fig. 7) in 1965. In that year and again in 1966 single adults were observed (22 August and 5 June respectively). But since 1967 the summer presence of at first a few and later rather sizeable numbers of Yellow-footed Gulls has been a regular phenomenon. Before 1969, 6 was the highest number recorded in one day, but counts of 48 and 45 were made in 1969 and 1970. Nearly all records pertain to adults. They are most numerous in July and August, with extreme dates of 29 June and 28 September. Birds of the year first appeared in 1967 (1) and 1968 (2), but in 1969 and 1970 up to 10 were recorded (earliest date 11 July). The dates of occurrence and the age composition of the flocks clearly indicate that the Salton Sea is reached in the course of postbreeding movements. The species begins to breed in March, and by late June and early July birds have left the colonies. Outside the period of postbreeding dispersal there are only two records: single birds (second-year) were seen on 24 January 1970 and 29 April 1968. At the Salton Sea, the birds frequent bare shores, rocky jetties, and mudflats; an occasional individual has been seen in inundated fields with other gulls.

WESTERN GULL

Results of the Pacific Gull Color-banding Project of 1937-1942 (Woodbury and Knight, 1951) indicate that the northern race *L. o. occidentalis*, which breeds south along the Pacific coast to the San Francisco Bay area, is fairly migratory while the southern *L. o. wymani* breeding from Baja California north to Monterey, seems to remain close to its colonies. During that survey, *occidentalis* was not reported south of the Los Angeles area, which is also the southern limit given by Grinnell and Miller (1944). In the San Diego area, however, two birds banded as juveniles on the Farallones have been recovered during their first winter (27 October 1968, 31 October



FIGURE 2. Albinistic immature Herring Gull, San Diego, 6 December 1968.

Photo by Joseph R. Jehl, Jr



FIGURE 3. Glaucous Gull, West San Benito Island, 18 January 1971.

Photo by Joseph R. Jehl, Jr



FIGURE 4. First-winter Glaucous Gull at a dump in Arcata, California, 7 December 1970.
Photo by Ron LeValley

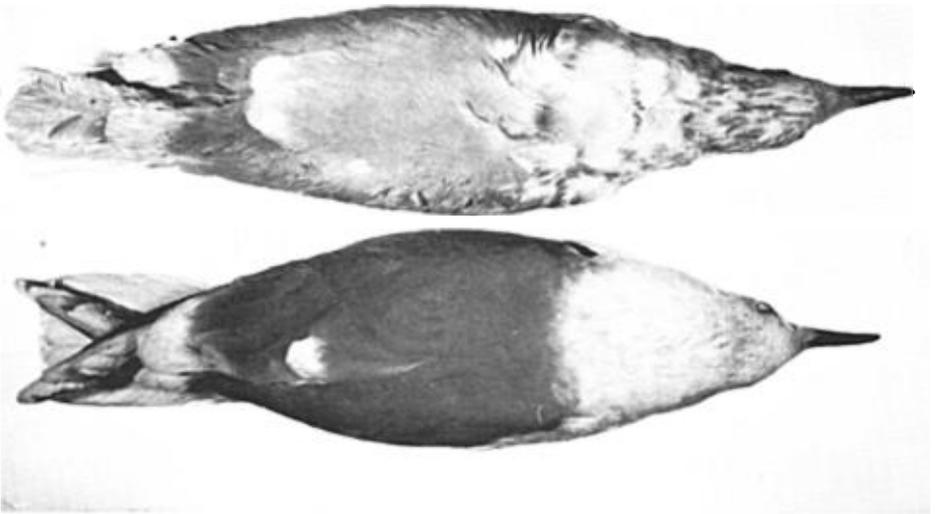


FIGURE 5. *Larus hyperboreus*, female, Barrow, Alaska, 23 September 1931, SDNHM no. 16072 (above). *L. hyperboreus* X *L. glaucescens* (below).
Photo by Joseph R. Jehl, Jr.

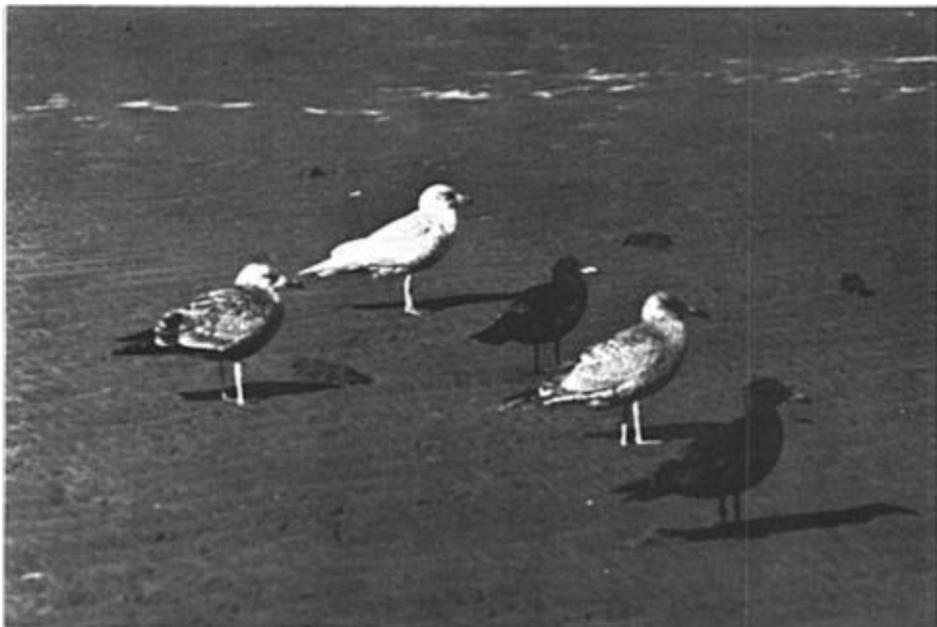


FIGURE 6. First- and very pale second-winter Thayer's Gulls with Herring and Heermann's gulls, San Felipe, 29 December 1970.
Photo by Pierre Devillers



FIGURE 7. Yellow-footed Gull, Salton Sea, 22 July 1967.

Photo by Larry L. Tuttle

GULL DISTRIBUTION

1969, Smail, 1971), a color-banded individual of the same origin was seen by Carl L. Hubbs (pers. comm.) and we have seen a few individuals referable to this race, in first-, second- and third-year plumages. The northern form appears to be regular in small number, at least to San Diego.

Western Gulls are virtually restricted to the immediate proximity of the ocean. In midwinter in San Diego they represent about 1% of the gull population at the Otay Valley dump, but 10-15% at the Balboa Park fill, which is much closer to the sea. They share the beaches and bays with the California Gulls *Larus californicus*, Ring-billed Gulls *L. delawarensis* and Heermann's Gulls *L. heermanni*.

The Gulf of California seems to be reached only rarely, although the difficulties associated with the identification of this gull must be taken into account. A first-winter bird was observed (description on file) in San Felipe on 29 December 1970. Adults were seen in Guaymas on 15 (one) and 24 (three) March 1969. Two of the 24 March birds were courting. van Rossem (1945) reported one in the same area on 25 December 1931. At the Salton Sea, a third-winter bird was present between 17 January and 13 February 1965 and another was seen on 29 March 1969. An "immature" *L. o. occidentalis* was collected on the lower Colorado, at Lake Havasu, on 12 December 1946 (Phillips, Marshall and Monson, 1964).

GLAUCOUS-WINGED GULL

The species winters in large numbers south to the San Francisco Bay area, where it is one of the most numerous gulls, and in lesser numbers to Monterey; farther south it becomes progressively scarcer and more localized. The total San Diego population fluctuates between 100 and 300 depending on the winter (large numbers in 1964-65 and 1968-69). We have seen up to 30 in Ensenada (among 3500 gulls), 20 on Guadalupe Island, 20 on the San Benito Islands, and scattered individuals at various other points of the northern Baja California coast such as San Martin Island, San Quintin Bay, Cedros Island, Scammon's Lagoon. The species was recorded as far south as San Jose del Cabo by Grinnell (1928).

Glaucous-winged Gulls reach San Diego in November. Numbers peak in late January and February and drop off sharply in March, although they can still be sizeable in April (7 April 1968: 10 at the Otay dump). A few birds can still be found in May and June, and even through the summer.

GULL DISTRIBUTION

In southern California, this gull favors disposal areas but a rather high proportion, particularly of adults, can be found along the beaches, particularly on rocky outcrops, in bays, outlets and estuaries. It is commoner at dumps situated closer to the sea than at more inland ones (2% of gull population at Balboa Park, 0.5% at Otay, in midwinter). On Baja California islands, this form sometimes outnumbered the Herring Gull locally near colonies of marine mammals.

Adults never make up more than 10% of the population in San Diego. This maximum is reached in late January and February. In Baja California, adults are rare except perhaps at Guadalupe Island (30% adults on 30 January 1971) but we have seen them as far south as Scammon's Lagoon. Limited data gathered in 1970 seem to indicate that second-winter birds reach San Diego before the first-winter individuals.

This gull may be of sporadic occurrence in the northern Gulf of California. An adult and an immature were seen near Guaymas on 16 March 1969. Previous records include one adult near Guaymas on 25 December 1937 (van Rossem, 1945) and an individual seen by van Rossem at Bluff Point, Baja California (Grinnell, 1928). Records of "a few" at San Felipe in April 1926 (Huey, 1927) and "not uncommon" at Punta Penascosa in February 1934 (Huey, 1935) may be correct, but the possibility of confusion with *thayeri* cannot be entirely eliminated. At the Salton Sea fifteen were seen between May 1964 and January 1971. Records range between 23 November and 15 June, with one in December, four in January, one in March, one in April, six in May (including five in 1969, after a winter that saw large numbers in San Diego). All but two were immatures in first- or second-year plumage. Two Colorado River records of immatures are mentioned by Phillips, Marshall and Monson (24 February 1954 and 17 November 1956).

MEW GULL

This small gull is a very common winter visitor, often the most numerous gull, in the San Francisco Bay and Monterey areas. Fair numbers penetrate inland along the lower Sacramento river (McCaskie). South of Monterey, numbers probably drop fairly quickly, although local concentrations can be misleading. In San Diego the total population probably does not exceed 100 birds, most of which occur on the sand bars at the mouth of the San Diego and Tia Juana

GULL DISTRIBUTION

Rivers, and in the entrance channel of San Diego Bay. South of San Diego, we have only two records: three birds in first winter plumage in a large congregation of gulls at the fish factory outlet in Ensenada, on 4 January 1970 (Xenia Devillers and P. Devillers, description on file), and a first-winter bird near the kelp bed off west San Benito on 31 January 1971 (Raymond Gilmore and P. Devillers, descr. on file).

Individuals first reach San Diego in early November, and are not present in any numbers until the end of the month. Peak numbers are found between early January and late March, with an occasional bird staying later. The species is commonest at sand bars of river mouths, in bay entrances and in kelp beds.

In San Diego, adults considerably outnumber immatures. A typical count on 14 February 1971: mouth of San Diego River: 39 adults, 1 first-winter; mouth of Tia Juana River: 40 adults.

The Mew Gull has not yet been found in the Gulf of California. A first year bird was collected at the south end of the Salton Sea on 19 April 1969 (SDNHM no. 37202).

DISCUSSION

The data presented suggest a few general comments on gull movements.

Immature gulls migrate farther than adults, as has often been noted (Woodbury and Knight, 1951). At least 1500 miles separate the southernmost record of an adult Glaucous Gull (Vancouver Island, British Columbia, Johnston, 1955) from the southernmost record of the species (Scammon's Lagoon). In southern California and Baja California immatures of Thayer's and Glaucous-winged gulls far outnumber adults, and only immatures of the northern race of the Western Gull have been seen. All these forms are at or near the southern limit of their range. The only – and puzzling – exception is the Mew Gull. Data on age ratios of all species of gulls are needed from the entire coast.

We do not have enough data to relate timing of migration and age groups, but a tendency for second-year birds to reach San Diego before yearlings seems detectable in Thayer's and Glaucous-winged gulls. This is definitely the case with Herring Gulls but it cannot be easily documented with other abundant species (e.g. California, Ring-billed gulls) because older immatures summer in the area.

Several species that are usually considered coastal in the west occur in the northern Gulf of California. They can reach that area

GULL DISTRIBUTION

either by overland flight or by a coastal route around Cape San Lucas. The tendency for unusual gulls to appear at the Salton Sea in late winter and early spring seems to support the idea that gulls which have reached the latitude of the Cape or beyond during the winter return northwards up the "wrong" sea, become "trapped" in the Gulf, and undertake an overland flight that brings them to the Salton Sea. Although this may sometimes happen, the Thayer's, Glaucous-winged and coastal Western Gulls present in the northern Gulf in late December or early January are much too early to represent northward migrants, for they appear at the same time that large numbers of southward migrants are arriving in the San Diego area. It appears therefore that Glaucous-winged and Western Gulls reach the Sea of Cortez by overland flight from the California or Baja California coast. The possibility that at least some Thayer's and Glaucous gulls have arrived via the interior of North America is supported by the apparent abundance of Thayer's Gulls at San Felipe in December 1970, as compared to San Diego, and the possible racial allocation of one Salton Sea Glaucous Gull to *L. h. hyperboreus*.

Observations of gulls and other marine birds in the Gulf of California are very much needed. As one of the seas that is completely enclosed by land to the north and has a remote southern opening, it offers, like the northern Indian Ocean and the interior seas of Asia, a perfect opportunity to study overland migratory behavior of seabirds, marine ducks and maritime shorebirds.

ACKNOWLEDGEMENTS

We are grateful to Ned K. Johnson, Kenneth Stager, Thomas R. Howell and Eugene A. Cardiff for permission to study the collections in their care, and for the loaning of specimens. Ronald LeValley and Larry L. Tuttle kindly contributed photographs; Carl L. Hubbs generously permitted use of his observations.

SUMMARY

This paper summarizes distributional data on certain large gulls in Southern California and Baja California. Previous assessments of the status of the Glaucous Gull are inaccurate because of misidentifications; the species is a winter visitor in extremely small numbers along the coast of the Californias, south to Scammon's Lagoon, and has been recorded at the Salton Sea. Thayer's Gull has only recently begun to be recognized, but winters regularly in sizeable numbers

GULL DISTRIBUTION

along the coast, south to the San Benito Islands and may also normally reach the Gulf of California. The Yellow-footed Gull, endemic to the Gulf, visits the Salton Sea after the breeding season. Northern Western Gulls *Larus occidentalis occidentalis* occur as far south as San Diego. Western Gulls (*wymani* and *occidentalis*) and Glaucous-winged Gulls occasionally reach the Gulf area. The Mew Gull has been found on the Pacific coast of Baja California and at the Salton Sea.

In general, immatures occur farther south than adults. It is suggested that northern gulls reach the northern Gulf of California by direct overland flight.

LITERATURE CITED

- American Ornithologists' Union. 1957. Check-list of North American birds. Fifth ed. Amer. Ornithol. Union, Baltimore.
- Bailey, A. M. 1948. Birds of arctic Alaska. Colorado Mus. of Nat. Hist., Popular Ser., no. 8:1-317.
- Baldrige, A., and T. Chandik. 1969. Winter season. Middle Pacific Coast region. Audubon Field Notes 23:513-518.
- Dwight, J. 1925. The gulls (*Laridae*) of the world; their plumages, moults, variations, relationships and distribution. Bull. Amer. Mus. Nat. Hist. 52:63-408.
- Friedmann, H., L. Griscom, and R. T. Moore. 1950. Distributional check-list of the birds of Mexico, part 1. Pacific Coast Avifauna no. 29.
- Grinnell, J. 1928. A distributional summation of the ornithology of Lower California. Univ. of Calif. Publ. in Zool. 32:1-300.
- Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pacific Coast Avifauna no. 27.
- Huey, L. M., 1927. Birds recorded in spring at San Felipe, northeastern Lower California, Mexico, with the description of a new woodpecker from that locality. Trans. San Diego Soc. Nat. Hist. 5:13-40.
- Huey, L. M. 1935. February bird life of Punta Penascosa, Sonora, Mexico. Auk 52:249-256.
- Johnston, D. W. 1955. The Glaucous Gull in western North America south of its breeding range. Condor 57:202-207.
- Manning, T. H., E. O. Hohn, and A. H. Macpherson. 1956. The birds of Banks Island. Nat. Mus. Can. Bull. 143.
- Phillips, A., J. Marshall, and G. Monson. 1964. The birds of Arizona. Univ. of Arizona Press, Tucson.
- Smail, J., Ed. 1971. Point Reyes Bird Observatory Fifth Annual Report.
- van Rossem, A. J. 1945. A distributional survey of the birds of Sonora, Mexico. Louisiana State Univ. Mus. of Zool., Occ. Pap. 21:1-379.
- Willett, G. 1933. A revised list of the birds of southwestern California. Pacific Coast Avifauna no. 21.
- Woodbury, A. M., and H. Knight. 1951. Results of the Pacific Gull Color-banding Project. Condor 53:57-77.

San Diego Natural History Museum, Balboa Park, San Diego, California 92112.