bird observers should long remember the spring migration of 1961 as one of the most spectacular in many years, coming even as it did on the heels of the driest year recorded in the 82 years of record-keeping in southern California by the U. S. Weather Bureau. Although the very dry conditions that prevailed during the spring season had some effect on the migrants, more profound effects were rendered on the breeding bird populations. We will discuss this more fully in the Nesting Season Report. As of June 30, 1961 the year's total rainfall (beginning on July 1, 1960) stood at 485 in. for the Los Angeles area. This was nearly one inch below the previous record dry year of 1958-59 when rainfall was measured at 5.58 in.



Normal annual rainfall in the Los Angeles basin is 14.54 in. Altogether southern California has completed the driest three years on record with a total accumulation of 18.61 in. recorded since July 1, 1958. Before that, the three year low was 20.56 in, reported between 1897 and 1900. It might be well to summarize the year from July 1, 1960 to June 30, 1961, as follows: ironically this southern California weather year showed early indications of being a wet year, bringing false hopes to many, particularly the farmers; November 1960 rainfall was actually above normal-2.40 in. as contrasted with an average figure of 1.03 in.; but after this good beginning the drought took over as in December a scant 0.15 in. fell, compared with a normal of 3.11 in.; January improved a little with 1.28 in.-but still an inch below normal for that time of year; February, usually the wettest month, again produced a meager 0.15 in. which was well below the normal of 3.37 in.; March gave us 0.57 in., April 0.29 in., and May ended with a trace as did June. The implications of this are obvious. Hillsides and meadows had taken on a mid-summer look by early April, and streams that normally flow at flood during the spring were dry by the end of March. While the profoundest effects were to be felt by the nesting species, migrants through this Region also were influenced by the drought. From all parts of the Region reports were received of large numbers of typically migrant species flooding through residential areas and oases. They were in such abundance (notably the Western Tanagers, no doubt because of their brilliant and conspicuous colors) that newspapers and radio gave their appearances wide notoriety. Considerable water available in cultivated areas no doubt attracted the birds to a much greater degree than otherwise. Numerous reports were also received of non-migratory species (such as California Quail) coming frequently and regularly to gardens in urban areas which normally they shun. Desert oases and irrigated areas in the deserts were flooded with migrants during April and the first part of May. Tinderdry conditions in the grasslands, chaparral, and mountain forests coupled with low humidity rendered these

areas as extremely fire-critical even in April, and several brush and timber fires during May and June destroyed much valuable watershed and nesting cover. The overall precipitation totals for southern California can be summarized as follows: Imperial Valley received less than 20% of normal precipitation; Los Angeles, San Diego, Riverside, and southwestern San Bernardino Counties received about 20% of normal; western Santa Barbara, San Luis Obispo, and Kern Counties as well as most of southern San Bernardino County received about 40% of normal; northwestern Kern and northeastern San Bernardino Counties (except for Death Valley) received about 60% of normal as did most of Santa Barbara and San Luis Obispo Counties; Death Valley received about 80% of normal precipitation with more than 5 inches, and even exceeded the Los Angeles Basin.

This spring migration was notable probably because the dry conditions almost everywhere forced the birds both to seek and remain for extended periods at relatively few areas where water was available. These areas likewise were sought out by birders, and the results were most startling. Thousands of migrants joined throngs of residents at these choice locations and remained there or were replaced by incoming birds. Abundant insect and seed foods added to the attractiveness. Notable among such bird-traps were the Imperial and Coachella Valleys where extensive irrigation in the natural desert flyway tended to attract and hold the birds while a strong north wind blowing for days during the latter part of April prevented much movement out of these areas. The results were sometimes staggering to the observer. We witnessed such a sight in the alfalfa fields near Coachella on April 23. The air above the fresh-cut alfalfa was literally black with tens of thousands of migrant swallows (of all species) and Vaux's Swifts feeding upon the rising insects. Down among the uncut alfalfa could be seen hundreds of House Finches, Bullock's Orioles, Lazuli Buntings, Blue Grosbeaks, Ashthroated Flycatchers, and Black-headed Grosbeaks while the bordering tamerisk trees swarmed with warblers, vireos, flycatchers, and tanagers. Other groups afield in the Imperial Valley that weekend had similar experiences, while a week later and thereafter those afield nearer the coast were meeting with swarms of migrants. Oddly however, certain observers reported some species as almost entirely lacking in their areas while at other locations they were normal or even abundant. In general, the migration was somewhat prolonged but the major waves arrived in the southern deserts about April 18-25 and in coastal and inland areas about a week to ten days

Pelagic observations.—Owing to the excellence of the flight of pelagic species and the extended and complete observations of Lt. J. G. Ben King, Jr., it would be well to discuss all pelagic species as a group in this section. It might be well to begin with the sighting (and photographing) of the Magnificent Frigate-bird over the desert oasis of Palm Springs, June 24, by Herbert and Olga Clarke. Prior to this date considerable tropical air had moved north from the Gulf of California into southern Arizona and

southern California. On June 23 a strong southerly wind was blowing in these areas and prior to that date there had been strong atmospheric disturbances over the Gulf of California which might help to explain this strange observation. A great flight of Sooty Shearwaters attracted considerable attention from Ventura to Goleta, May 20-27. This large flock probably remained in that area for a week and it was estimated by Michael Jacobsen to contain from one-half million to one million birds. He first noted them on May 26 one-half mile south of Goleta Point, and on the 27th the birds had moved to within a hundred yards of the shore and had attracted considerable attention, especially among the fishermen. Lt. King's notes are so significant as to be included herein in their entirety (all mileages nautical): April 11, 60 mi. north of Guadalupe I. and 160 mi. south of San Clemente I.-2 Cook's Petrels (second record for Mexico), 2 Laysan Albatrosses, 15 Black-footed Albatrosses, 4 white-rumped storm petrels, and 30 Red Phalaropes; April 12, about 50 mi. SW of Los Coronado Ids.—2 rather early Sabine's Gulls April 21, about 30 mi. west of Los Coronado Ids.-3000 Sooty Shearwaters, 250 Pinkfooted Shearwaters, 1 Fulmar, 3 Black-footed Albatrosses, 1 Glaucous Gull (first record in Mexico), and 85 Pomarine Jaegers; April 25, 140 miles SW of San Diego-25 Black-footed Albatrosses: May 9, 60 mi. W'SW of Los Coronados Ids.—10 B'ack-footed Albatrosses, 50 Sooty Shearwaters, 35 Pink-footed Shearwaters; May 10, 60 mi. WSW Los Coronados Ids.-300 Sooty Shearwaters, 50 Pink-footed Shearwaters, 12 Black-footed Albatrosses, 6 Pomarine Jaegers, 1 Skua, and 6 phalaropes (sp.); the above records were all for Mexican waters, but close enough to our Region to be included. The following records were obtained in U. S. waters: April 5, between San Clemente I. and Santa Catalina I.—75 Bonaparte's Gulls, 1 Rufous Hummingbird, and 1 Belted Kingfisher; April 7, 10 mi. SW San Nicholas I.—10 Black-footed Albatrosses, 100 Sooty Shearwaters, 15 Pink-footed Shearwaters, 8 Rhinoceros Auklets, and 5 Common Murres; April 21, from San Diego harbor to 20 mi. west of harbor-2000 Sooty Shearwaters, 150 Pink-footed Shearwaters, 15 Pomarine Jaegers; April 24, from Long Beach harbor to 35 mi. WSW of Los Coronados Ids.—8 Black-footed Albatrosses, 50 Sooty Shearwaters, 30 Pink-footed Shearwaters, and 5 Pomarine Jaegers; April 27, Pt. Loma to 10 mi. SW of San Diego-15 unidentified shearwaters plus 1 MacGillivray's Warbler; May 8, midway between San Diego and San Clemente I.-2 Black-footed Albatrosses; May 11, about 30 mi. west of San Diego-12 Black-footed Albatrosses. 400 Sooty Shearwaters, 100 Pink-footed Shearwaters, 1 Pale-footed Shearwater, 32 Sabine's Gulls, 24 Arctic Terns, 10 Pomarine Jaegers, and 8 Black Petrels; May 15, from San Diego NNW about half way to Long Beach-100 Sooty Shearwaters, 20 Pink-footed Shearwaters. 50 Black Petrels, 4 Pomarine Jaegers, 30 Red and 80 Northern Phalaropes, and 1 unidentified alcid: May 16, between Santa Barbara Ids. and San Nicholas I.— 7000 Sooty Shearwaters, 300 Pink-footed Shearwaters. 65 Ashy Petrels. 1 Black Petrels, 50 Red and 100 Northern Phalaropes; May 17, between Santa Catalina and Santa Barbara Ids.-800 Sooty and 50 Pinkfooted Shearwaters, 15 Red and 50 Northern Phalaropes plus a remarkable record of some typical landbirds—1 Audubon's Warbler, 5 Hermit Warblers, 10 Townsend's Warblers, 15 Wilson's Warblers, 1 Yellow Warbler, 20 unid. warblers, 4 Western Tanagers, 2 Western Wood Pewees, and 1 Snowy Egret!; June 2, from San Diego to about 34 mi. west and return-13 Black-footed Albatrosses, 30 Sooty Shearwaters, and 2 Xantus' Murrelets: June 3, 50 mi. west of Pt. Arguello-20 Black-footed Albatrosses, 400 Sooty and 50 Pink-footed Shearwaters, 50 Leach's Petrels, and 1 Skua. This excellent report indicates how intensive and competent field work at sea reveals much more than we currently know about the status of some species (note the almost complete absence of Parasitic Jaegers as compared with Pomarine Jaegers, for example), and the island-hopping migration of many typical landbirds.

Loons through Cormorants.—The northward flight of loons commenced in late February but generally was widespread and light. Most of the birds had moved through the Region by the middle of May. A few Western Grebes remained in local offshore waters until the third week of May and a single Red-necked Grebe was present at Santa Barbara, March 2 (John Kittredge). More than 40 White Pelicans remained on Morro Bay throughout the spring (Alma Stultz) and a flight of more than 500 passed over Arroyo Seco, March 19 (Russ and Marion Wilson). Cormorants appeared down in most coastal localities.

Herons, Egrets, Ibis.—In general, herons and egrets were scarce during the spring, except in the Coachella and Imperial Valleys. So much dredging and construction work is in progress to create new marinas at Playa del Rey, Huntington Beach, and Newport Bay that very little suitable habitat remains for these birds, and coupled to this is the increasing usage of such coastal waterways for power-beating and waterskiing. So little undisturbed suitable habitat remains for these birds that doubtless they will soon disappear from our local scene. No White-faced Ibis were noted away from the Imperial Valley, and only 15 were observed at Ramer Lake, April 22-23 (RW, MW).

W.aterfowl.-More than 1000 Black Brant were noted on the open ocean north of Morro Rock, March 10 (AS); more than 100 were still present on Morro Bay, April 7 (AS), and a dozen or so could still be seen there at the end of May (ED.). Twenty-four Black Brant were at Pt. Mugu marshes, March 18. and a single individual was noted at Malibu Lagoon, March 29 and April 1 (Ernest J. Willoughby). Most of the dabbling ducks had left the Region by the first week of April, which was somewhat early. The pair of Wood Ducks so long at Johnson Lake, Pasadena, was still there on June 10 (G. Shumway Suffel). Another Wood Duck was seen near Santa Barbara as late as May 25 (JK). A very late male Ring-necked Duck was still at Johnson Lake on June 10 (GSS). Hundreds of scoters (mostly Surfs with a smaller number of White-winged) were still present in waters near Morro Rock as late as May 5 (AS). No Common Scoters were reported during the spring. A female Oldsquaw was found at Morro Bay, March 16 (C. F. Tolman). Only 7 Fulvous Tree Ducks were found at Ramer Lake in the Imperial Valley, April 22-23 (RW, MW).

Condors, Kites, and Hawks.-Four California Condors were seen over Cholame on March 9, and 5 on May 3 (Eben McMillan). White-tailed Kites were reported as scarce during the spring but this may be a result of their retiring to nesting activities. Apparently none of the correspondents saw a large flight of Swainson's Hawks this year. Thirteen were seen over Mt. Williamson, March 13 (RW, MW); more than 75 were seen to come to roost in a eucalyptus grove near Escondido, April 4 (Fred Gallup); and few were noted in Death Valley during the first week of May (Roland Wauer). A single Rough-legged Hawk was still near the Pt. Mugu Gun Clubs, March 18 (EJW), and another was seen near Castaic, April 9 (Don and Caroline Adams). A single Ferrugineus Hawk was still present near Cholame, March 23 (EMcM). Golden Eagles were reported as down in the San Bernardino Mountains (John Goodman), but in the Mt. Pinos area they are doing well. Only one report each was received of Peregrine Falcon and Prairie Falcon—a rather alarming trend. Ospreys were seen as follows: 1 at San Dieguito Reservoir, April 4 (FG); one, flying north along coast near San Clemente, May 7 (Francis Raymond, W. J. Fitzpatrick); and one over Corona, May 7 (Norman H. Mellor).

Rails and Shorebirds.—Only a vestige of suitable habitat remains in Los Angeles, Orange, and San Diego Counties for rails, especially Clapper Rails. A Black Rail was found dead near Morro Bay, April 22 (A. I. Roest). It is redundant to continue to speak of diminishing coastal marshes; suffice it to say that in general, shorebird numbers of most species were very poor, largely because of inadequate and unsuitable feeding and resting grounds. Three Wilson's Plovers were carefully identified in Upper Sorrento Valley, San Diego Co., April 19 (Alice Williams). The only Surfbirds (5) and Black Turnstones (4) reported south of Morro Bay were from near Goleta (JK). those formerly present at the Playa del Rey breakwaters having largely deserted. The only Wandering Tattler reported during the spring was a single bird at El Capitan State Beach, April 14 (JK). Two Lesser Yellowlegs were near Upper Newport Bay, April 11 (GSS). Am. Avocets were found nesting at the mouth of the Santa Clara River, June 11; at least 3 nests were found (EJW'). Numbers of Northern and Wilson's Phalaropes at Upper Newport Bay were very poor this spring

Juegers, Gulls, Terns, and Alcids.—Aside from the pelagic observations made by Lt. King, no reports of jaegers were received. No Mew Gulls were found in the Region after March 10. Some 10 Bonaparte's Gulls were seen feeding over alfalfa fields near Mecca in the Coachella Valley, April 22 (ED.). Two Blacklegged Kittiwakes in immature plumage were at Malibu Lagoon, March 18, and one was seen on March 29 (EJW). Forty-five Arctic Terns were seen in Long Beach Harbor between the Inner and Outer

Breakwaters, May 17 (BK, Jr.). Caspian Terns were reported down at the Salt Works near south San Diego Bay; no Royal Tern nests were found this year. More than a dozen active nests of the Elegant Tern were there, and nesting success was good. The Pigeon Guillemots commenced nesting operations near Morro Bay during the latter part of May.

Quail, Doves. and Owls.-A pair of California Quail visited your editor's garden in Cheviot Hills, Los Angeles during the spring, for the first time in memory. Similar experiences in other urban areas probably reflect movements into city areas in search of food and water. A Ringed Turtle Dove was present daily through March 29 at a feeder in Manhattan Beach (DA, CA). Two White-winged Doves were found near Upper Newport Bay, April 8 (FR, Arnold Lane) and they first appeared in Death Valley, May 6 (RW). At least 15 pairs of Ground Doves were noted in the citrus groves near Corona during the spring (NHM), but no nests or young were found. Five Ground Doves were found near Finney Lake. April 23 (RW, MW). An Inca Dove visited a feeder in Whittier, May 27 (Ebon McGregor); they are extremely rare in this Region. A juvenile Spotted Owl was found out of the nest near Morro Bay, May 19, and probably represents the first bona fide record of this species for San Luis Obispo County (AS, CFT).

Poor-wills, Swifts, Hummingbirds, Woodpeckers.— In the Morro Bay area Poor-wills called occasionally through September and October, 1960 and the last one was heard calling at dusk on Nov. 30. They were silent during December; one or more commenced calling on Jan. 24 and the chorus increased thereafter. Doubtless some Poor-wills spent the winter in this area. The spring flight of swifts was prolonged and spectacular. Black Swifts were seen over Morro Bay together with thousands of swallows and other swifts on April 12, a day of low overcast (AS). Black Swifts also were seen over West Los Angeles and Charlton Flats in late May. The Vaux's Swift migration commenced about April 12 and continued very heavy until about May 10 with the greatest flights occurring over the Coachella Valley, April 17-24, and over inland valleys, May 6-10. Smaller flights of Vaux's and White-throated Swifts continued until the end of May. The migration of hummingbirds was about normal. Several Broad-tailed Hummingbirds were found in the piñon pine-juniper association at 5000 feet in the Panamint Mtns., April 24 (GSS). After a fairly good winter flight, Lewis' Woodpeckers were seen during the spring at the University of Redlands (JG), at China Lake as late as May 12 (Don Moore), at Furnace Creek Ranch in Death Valley until May 10 (RW'), and along the San Juan River in eastern San Luis Obispo County, May 20 (AIR). Williamson's Sapsuckers have been notable in their absence from local mountains in the past few

Flycutchers.—The migration of flycatchers was reported by numerous observers to have been from very good to exceptional. Major flights of Empidonax flycatchers occurred through desert areas during the latter part of April and through inland valley areas during the first week of May. The general trend of the migra-

tion then seemed to run thus: large flights of small landbirds arrived in the Imperial and Coachella Valleys about April 17-20, remained in these areas for about 10 days owing to abundant food, water, and strong head-winds. These winds eased on April 30 and the birds poured north and west out of the deserts and flooded through interior valleys, but ran into another weather front on May 6, which again backed them up. An Eastern Phoebe was found in Morro Bay State Park, May 7 (AS). There was no report of Vermilion Flycatchers.

Swallows, Jays, Magpies, Chickadees.— The migration of swallows, especially Violet-green Swallows (mixed with flocks of swifts) was excellent. Already described were the flocks numbering tens of thousands gathered in the Imperial and Coachella Valleys, April 18-23. A heavy flight of mixed swallows and swifts passed over Morro Bay on the cloudy and cold day of April 12 (AS). Large flights were recorded over Pasadena, April 19 and May 4 (GSS). Thousands of Cliff Swallows had taken up residence on their huge cliffside colony on Black Mountain in Morro Bay State Park. This is one of the most remarkable and impressive colonies I have ever witnessed. Steller's Jays are reported as more commonly seen in Redlands during the summer and probably now nest in Sylvan Park (JG). Remarkable is the sighting of a Yellow-billed Magpie on Anacapa Island, April 9 (Arthur Langton, Jr.). There are no previous records for this species on any of the Channel Islands. A Chestnut-backed Chickadee was seen near Morro Bay State Park, May 22 (ED.); they are not normally found south of Cambia Pines.

Thrashers, Thrushes.—A Le Conte's Thrasher was found on the Carrizo Plain, May 20 (AIR) and 10 Sage Thrashers were at Harrisburg Flat in Death Valley National Monument, March 12 (RW'). During the winter Robins were reported as exceptionally numerous in certain areas (as in Corona and Redlands) but scare in others (as in Morro Bay). Robins remained to breed in Corona (NHM) in greater numbers than ever before, as they did in Redlands (JG), San Bernardino, and Los Angeles. After a very good winter influx, Varied Thrushes departed the Region by the first week of March. The flight of Swainson's Thrushes was one of the greatest ever seen here. Many observers commented on how abundant they were from April 24 to May 27, with the greatest flights occurring between May 7 and May 13.

Wixwings, Starlings.—The most remarkable thing about the flight of Cedar Waxwings was not how many birds appeared here (in this regard the flight was moderate), but the lateness of their stay. Normally, most Cedar Waxwings have departed for the north by the first week in May, but this year large flocks were still being seen during the first week in June¹

A single bird was seen June 21 at Red Box Station (Earle R. Greene). In the Corona area, large flocks of Cedar Waxwings were seen from March through May (NHM). More Starlings than ever before for this season were reported this year, and numerous nests were found in this Region.

Warblers.—The warbler flight was excellent. Large flights of warblers arrived in Death Valley about April 20, and elsewhere the flights were reported as heavy and extending from the last week in April to the second week of May. Some species such as Townsend's and Hermit Warblers were reported as unusually abundant whereas Black-throated Gray Warblers were virtually absent from near Redlands (JG). A Black-and-white Warbler was found in San Clemente Canyon, April 2 (Jean Morley). Myrtle Warblers were found at Chantry Flats. April 8 (RW, MW) and at Furnace Creek Ranch, Death Valley, April 28 (RW).

Orioles, Tanagers.—The spring flight of all orioles was very good, but Hooded Orioles had difficulties in nesting as many reports were received of unsuccessful attempts. What was probably a female Baltimore Oriole came to a feeder in Santa Ana daily from March 9 to April 15 (Margaret Harding). Almost without exception, observers commented on the wonderful flight of Western Tanagers. Newspaper accounts repeatedly commented on the brilliant birds. and Audubon House in Hollywood was constantly queried as to what these birds might be. The flight was excellent and the birds remained until the middle of June in many lowland areas. The first large flights were reported through desert areas about April 17 and large flights reached inland and coastal areas by April 26 with large groups of tanagers moving through during most of May.

Grosheaks, Finches and Sparrous.—The flight of Black-headed Grosbeaks began about March 23 and was very good thereafter until about May 10. A male Rose-breasted Grosbeak was found in China Lake, May 21 (DWM) and small groups of Evening Gresbeaks frequented a feeder in China Lake during the first week in May (DW'M). The spring flight of Purple Finches was better than usual. A male Pyrrhuloxia was seen at Cottonwood Springs in Joshua Tree National Monument, May 6-7 (JG). Greentailed Towhees, rarely seen in Indian Wells Valley at China Lake, were recorded many times there during May (DW'M). An adult Harris' Sparrow was found near Morro Bay, June 2, 4, and 5 (CFT). A Whitethroated Sparrow was seen at a feeder at Morro Bay until April 10 (AS) and another was found near Santa Barbara, May 1 (JK). Most of the Whitecrowned Sparrows had departed from the Region by the end of April. ARNOLD SMALL, 3028 Carendish Drive, Los Angeles 64, Calif.