

April, when the ski resorts customarily close, Norden, at the top of Donner Pass, still had 15 ft. of snow. Development of flowers and insects was delayed, which in turn changed migration conditions for hummingbirds and insectivorous birds.

Observers described the spring migration variously, ranging from "the most spectacular spring migration" in Florence Haas' 11 years at Soquel, Santa Cruz Co., where large numbers of vireos, warblers, and Bullock's Orioles fed on an oak-worm infestation, to other reports that bird numbers were low. Migrants seem to have been more concentrated than usual, however, with widespread reporting of local high densities and "waves" of migrants. This contrasted sharply with the usual placid unfolding of the spring migration in the Region.

Although the first arrivals of most hardy insectivorous species were not generally late, the main passage was clearly delayed, especially in the case of late migrants (Ash-throated and Olive-sided Flycatchers, W. Wood Pewee, W. Tanager) whose normal passage fell at the worst of the April rains. Migration was still apparent early in June, as the season closed.

The picture is complicated by the fact that, in California, migration takes place up-mountain and down-mountain as well as north and south. Some wintering species that breed in the mountains (thrushes, finches) were still lingering on the valley floors at the end of the season, while winterers which breed to the north seemed to leave about on time.

Spring migrants from the south that breed in the mountains were forced back into the lowlands. With flowering delayed in the foothills, not only were hummingbirds apparently more common this spring in the low country but some species (W. Tanager, Bullock's Oriole) were much more common than usual in the valleys and even along the coast. Edwin Pickett reported that at 3500 feet in the Sierra east of Sacramento, species normally present in mid-April were not around in late May and that the tanagers, which normally arrive in mid-May, were

MIDDLE PACIFIC COAST REGION.—This has been a difficult spring migration to describe. "In over 60 years of bird study, this has been one of the most erratic," Donald McLean reported. The main problem was cold and rainy weather. In April it rained 23 days at San Francisco, and it was the wettest or next-wettest April on record in most parts of the Region, with 200 to 400 percent of normal precipitation (U. S. Dept. of Commerce, Climatological Data, April 1967). Storms continued through May and even as late as June 2-3. In each spring storm the snow line dropped back down lower in the Sierra foothills. At the summit snow was the deepest in years, half again above average. At the end of

just arriving on June 1.

Do some of these migrants make "hard weather movements" back down the mountains? Some of the most interesting reports suggest they did so this season. Betty Kimball found Mountain Chickadees and a Townsend's Solitaire down near Sacramento in mid-April, and her observation of 5 W. Tanagers flying west out of the Sierra near Auburn, Placer Co., on April 9 was striking, for another spring storm had just pushed the snow level down to 4000 ft.

This season brought additional material to support the theory that wind-drift may carry normally interior migrants out to the coast. On the Point Reyes Peninsula, Townsend's and Black-throated Gray Warblers, which are "marker" species in this respect, turned up twice this year, on April 23 and May 6-7. These were also the big dates for passerine migrants on the Monterey Peninsula as well as the top banding days for migrants at the Point Reyes Bird Observatory. Both "waves" coincided with the two periods when the weather maps showed high pressure areas over central northern California and easterly winds aloft. Although both fell on week ends, the fact that at least some banding took place every day at the Point Reyes Bird Observatory seems to exclude mere "Sunday effect" as the explanation for these two migration peaks. Similarly, the greatest flycatcher concentration found in 5 years on outer Point Reyes occurred on the amazing date of June 3 (ROP), on the heels of an unseasonal local storm that brought rains and easterly winds to the central California

Since the 19th century the Farallon Islands, 25 miles off the Golden Gate, have been a classic locale for observation of accumulated migrants at the close of a migration season. Visiting the Farallons June 7-14, C. John Ralph and John Smail of the Point Reyes Bird Observatory banded an Ovenbird and a W. Palm Warbler and saw an E. Kingbird, a Redeyed Vireo, and an Am. Redstart in the South Farallon's two lone cypress trees. They also found a N. Waterthrush which had died within the previous two weeks. Western species present included a Bandtailed Pigeon, a Rock Dove, a Mockingbird, 5 House Sparrows, and a Bullock's Oriole around the same two trees, along with the remains of 2 pewees killed by cats. But were the cats responsible for the drastic decline of Rock Wrens on the island? A generation ago this was the most common passerine species (Dawson, The Birds of California, II, 688); on this visit only one Rock Wren was seen all week and the most common passerine species was the House Sparrow, which, however, showed no signs of breeding. The expedition's principal object was to band colonial sea birds, and 1500 young W. Gulls, 250 Cassin's Auklets, and 12 Ashy Petrels were banded.

The observers noted that during the calm first days of their visit passerines paused on the island without remaining. Next, during a period of strong westerly winds, passerines did not arrive on the island. Finally, when the sky was overcast, passerines came in and remained. These observations suggest that, because of their lack of cover and the manageable

number of passerines that use the islands, the Farallons could be as rewarding a place for the study of weather and migration as is Fair Isle in the North Sea.

Albatrosses, Shearwaters—Seven Black-footed Albatrosses on May 3 were the first of the year seen on regularly checked Monterey Bay (AB); 2, however, were found off the Sonoma County coast to the north on April 22 (BDP). The last Fulmars reported for the winter season were 2 on Monterey Bay on April 4 (AB). Sooty Shearwaters migrated throughout the period, but the majority apparently moved north during May; about 20 per minute (for an hour) were counted flying by Point Pinos on the Monterey Peninsula on May 6 (MP & EA), and about 10,000 lingered in the same area for a week after May 18 to feed on spawning squid (AB).

Cormorants, Herons—Alan Baldridge reported considerable mortality among the Brandt's Cormorants in the Monterey Bay area during May. The causes were unknown. He also found a hitherto unrecorded breeding colony of 20 pairs of Pelagic Cormorants on the sandstone cliffs of Año Nuevo State Beach, San Mateo Co. on May 29. A nesting colony of herons on Bair Island, San Mateo Co., on San Francisco Bay, was inspected by state fish and game employees on May 8 and found to contain 30 pairs of Great Blue Herons, 50 to 100 pairs of Snowy Egrets, and 200 to 300 pairs of Black-crowned Night Herons (WA).

Geese—Migrating Black Brant were seen stopping in small flocks on the kelp beds of Monterey Bay, behavior that has not been noted during their southward migration (AB). A flock of 250 at Año Nuevo State Beach on May 29 was large for so late in the season (AB). An individual seen wearing a pink plastic neck band (from the Canadian Arctic) at Limantour on the Point Reyes Peninsula, April 7, was mobbed by a number of gulls which pecked at the pink plastic (PRL, fide ROP). Ross' Geese were still at the Colusa Nat'l Wildlife Refuge in the Sacramento Valley on the late date of May 1 (AJA).

Ducks—Two pairs of Fulvous Tree Ducks were seen on May 14 at the Mendota Wildlife Management Area in the San Joaquin Valley, a favored area for this species within the northern limits of its range (AB & WR). A & Blue-winged Teal near the Dumbarton Bridge over San Francisco Bay on May 19 was the only one reported (WA). A pair of Redheads, uncommon in the Region, were reported with young at the Woodland Sewer Ponds, Yolo Co. (AJA). On the late date of April 22 a pair of Harlequin Ducks was still at Crescent City, Del Norte Co., where they are regularly found (GAK).

Hawks, Cranes—For the second year Swainson's Hawks nested near Courtland, Sacramento Co. during May (AJA). A late Rough-legged Hawk was noted near Crescent City on April 22 (GAK). A flock of 17 Sandhill Cranes was seen migrating over the unusual coastal locality of San Jose, Santa Clara Co. on April 1 (DDMcL).

Shorebirds—An estimated 22,000 shorebirds were concentrated in Bolinas Lagoon, Marin Co. during a

low tide on April 22 (PRL). A migration of the rocky shore species in the Crescent City area on April 15 produced the following large numbers: 125+ Surfbirds, 250+ Black Turnstones, and 7 Rock Sandpipers (IHH & ODS). A Rock Sandpiper was still in the area on the late date of April 22 (GAK). Over 50 Whimbrels were observed in two adjacent plowed fields near Moss Landing, Monterey Co., May 13 (DDeS & TC). Two Solitary Sandpipers at the Cameron Park sewer ponds near Sacramento on May 7 (RPM) were an unusual spring record. As many as 5000 dowitchers (probably Long-billed) were estimated at the Woodland Sewer Ponds on May 6 but only about 500 on the following day (BK). Some 4800 Marbled Godwits were seen migrating from the Hayward, Alameda Co. shore of San Francisco Bay on April 27 and 28. Flocks of 500 to 1100 birds were observed to rise high, until only specks in the sky, and then head north with a great amount of vocalizing (JSL). Northern Phalaropes moved through in fair numbers with as many as 2400 estimated in two adjacent ponds on the Hayward shore on May 5 (JSL).

Jaegers, Gulls and Terns-The only jaegers reported were 11 Pomarines on Monterey Bay on April 4 that were thought to be the last of the wintering population (AB), Some 3000 W. Gulls, mostly immatures, joined the Sooty Shearwaters in the squid feast off Point Pinos for the week following May 18 (AB), Sabine's Gulls are seldom reported in the spring because they migrate far offshore and there are few spring boat trips; this year 3 adults were seen on Monterey Bay on May 17 and a slightly oiled bird was at the mouth of the Salinas River. Monterey Co. on May 28 (AB). Common Terns also are seldom reported in the spring, but 31 were seen in Monterey Bay, May 13 (AB), and 6 were seen at Limantour on Point Reves, May 19 (PRL). Black Terns, rarely seen along the coast, were reported from two coastal localities: 1 at Moss Landing on May 6 (MP & EA) and as many as 15 over a rain-filled salt pond in Hayward on the same date (JSL, et al.).

Alcids—A large count of 4786 Com. Murres in Monterey Bay on April 4 declined to 335 by May 3 (AB). The breeding colony at the Point Reyes Lighthouse rocks was estimated to contain 1200 to 1500 birds on April 27 (CJR, et al.). At least 3 Marbled Murrelets in breeding plumage were seen on April 8 at Pigeon Point, San Mateo Co., where they are regular (DDeS & TC). The numbers of Rhinoceros Auklets wintering on Monterey Bay declined to 190 on April 4 and to 5 on May 3 (AB).

Pigeons, Owls, Goatsuckers—Band-tailed Pigeons have been notoriously erratic in their distribution in this Region, moving with the food supply and breeding in every season (Audubon Field Notes 19: 413). Although the known breeding places in California were in the mountains or along the north coast, this species has summered and bred in the hills on the east side of San Francisco Bay in recent years. It bred in the Strawberry Canyon area of Berkeley after 1960 (Condor 64: 445) and in Orinda, Alameda Co., last year. Now Harry Adam-

son reports that for the second year in a row flocks are persisting into summer at Lafayette, Contra Costa Co. For the fourth consecutive year Flammulated Owls were heard calling near China Camp in the Santa Lucia Mountains, Monterey Co., on May 8 and 13, before all snow had left the ground (WR, AB, TC, DDeS); this is the first known locality for this species in California outside of the Sierra and northern interior ranges. A Poor-will at Bridgehouse, near Sacramento, on June 6 (JW) was remarkable; this foothill bird has not been known to occur on the floor of the Central Valley.

Swifts, Hummingbirds-In spite of the cold. rainy April. Vaux's Swifts migrated in the usual scattered small bands at the usual time, from April 8 at Pigeon Point (DDeS, TC) through May 5 at South San Jose (DDMcL). A & Black-chinned Hummingbird fed regularly after May 7 at Margaret Chandlee's feeder in Yreka, its northernmost regular point of occurrence. Around Chico, Butte Co., Emilie Hodnette found Rufous Hummingbird migration by far the largest and longest (to May 12) in 8 years of observation. Similarly, this species was present until "well into May" on the Monterey Peninsula (AB), until May 9 at Soquel (FH), and far into May at the Point Reyes Bird Observatory, where netted females could be distinguished from Allen's Hummingbirds by tail measurement. A male was still present in Sacramento on June 11 (A. Parker, fide AJA). Calliope Hummingbirds also seemed more common than usual in the lowlands, especially around Sacramento and San Jose (AJA, RS. DDMcL).

Flycatchers—A Tropical Kingbird at Pacific Grove. Monterey Co., May 13 (TC, DDeS), was perhaps the last remnant of last winter's group there. The bulk of flycatcher migration came remarkably late in the cold, wet spring, and there were considerable concentrations when the weather settled in middle and late May. As late as May 27, Steve Speich found some 25 W. Wood Pewees along 2 miles of road above Placerville, El Dorado Co. at 3500 ft. Most remarkable of all was the astonishing "fall" of about 150 Empidonax, 25 W. Wood Pewees, and 4 Ashthroated Flycatchers in three cypress windbreaks on outer Point Reyes on June 3, after the unseasonal rainstorm with easterly winds already described. Empidonax flycatchers examined in the hand before banding at the Point Reyes Bird Observatory included a Traill's (in the June 3 influx), 4 Hammond's, 2 birds whose final identification is as yet undetermined, and 20 Western Flycatchers banded from April 4 through June 5. Only the Western Flycatcher breeds in the area. The bulk of Empidonax migration at Point Reyes occurred much nearer June 1 than the usual mid-Mav.

Swallows—Swallow migration took place normally in February and March before the onset of the April rains. Cliff Swallows in a colony closely studied by Speich, which had arrived on time on Feb. 22 and had begun nesting, abandoned nesting activity until the return of settled weather. He found no evidence of mortality as a result of the rains, however. The Purple Martins of downtown Sacra-

mento are still losing nesting sites to urban redevelopment (AJA). Only 2 nests, in a palm tree instead of the usual eaves, were reported from Sacramento (BK). The species still ness locally in hollow trees in the Coast Range.

Thrushes, Waxwings-Netting and banding of Swainson's Thrushes at the Point Reves Bird Observatory produced some interesting sequences. The first birds to arrive on May 3-5 were mostly adults banded there the previous season, while the main bulk of "new" birds and migrants passed through after May 18. The earlier birds were silent during the first week, suggesting that actual arrival dates may be missed by those who depend on song to locate this species. Wintering Hermit Thrushes and Mountain Bluebirds remained late; there were 20 Mountain Bluebirds in the rolling lands east of Sacramento on April 27 (Mrs. Richard Gilmore, fide ERP). Cedar Waxwings remained unusually late in the lowlands this spring and were still present at Chico, Sacramento, and South San Jose in early June (EH, BK, DDMcL). Out on the floor of the Central Valley, at San Luis Nat'l Wildlife Refuge. Merced Co., where they are quite unusual, a group of about 25 was present on April 22 (ROW).

Vireos, Warblers-Both Solitary and Warbling Vireos were widely reported in the Central Valley and along the coast. The Red-eyed Vireo on the Farallons on June 14 (CJR) was the only vagrant in this family. As usual, many warbler species migrated chiefly in the interior except when drifted to the coast by wind. For example, Nashville Warbler, widely reported as the predominant species in warbler flocks in the foothills, with 30 in one-half mile of lakefront at Paradise Lake, Butte Co., elevation 2500 ft., on May 7 (EH) and 20 at Folsom Lake. Placer Co., on April 26 (BK, RPM), was recorded only once on the Point Reyes Peninsula, during the "wave" of April 23 (ROP). Similarly, Hermit Warblers occurred in groups in the inner coast range, with 9 on Mount Diablo on May 10 and 5 in the Santa Lucia Mountains on May 21 (JW), and in the Central Valley, but were not recorded on the Point Reyes Peninsula. Townsend's and Black-throated Gray Warblers were most widespread along the coast during the easterly winds of April 23 and May 6-7. Two late Townsend's Warblers were on outer Point Reyes on June 3 (ROP). Perhaps the largest single concentration of warblers reported this season, however, was a group of 150 to 200 birds at the mouth of the Big Sur River, Monterey Co., early in the morning of May 2 (RLB). Most were Wilson's, but there were also 25 Black-throated Grays, 10 Yellows, 10 Audubon's, smaller numbers of Townsend's, Myrtle, MacGillivray's, and Orangecrowned Warblers, and 2 Yellow-breasted Chats. As usual, warbler vagrants tended to turn up at the end of the season on coastal promontories and islands. Those that could be verified by several observers included two reports of Black-and-white Warblers in Monterey County (where one seems to have wintered last year but where there are apparently no prior spring records), 1 at the mouth of the Carmel River on (RS, DDeS), and 1 at Point Lobos (Tom Galli, RLB). A third bird was reported by a single observer (FH) at Soquel, Santa Cruz Co., April 8. Perhaps because outer Point Reves and the Point Pinos area of the Monterey Peninsula were covered less intensively this spring, the only other verified reports of warbler vagrants were the W. Palm Warbler, Ovenbird, N. Waterthrush, and Am. Redstart seen on the Farallons, all of which breed well west into British Columbia and are now expected along the coast in small numbers each vear.

Blackbirds and Orioles-By all accounts Yellowheaded Blackbirds breed less commonly in the Central Valley than a generation ago, but east of Sacramento there is a colony of about 10 pairs (AJA). A single Q of this species was still along the coast at Moss Landing on the late date of May 5 (EA. MP). Hooded Orioles, which were unknown north of Santa Barbara in 1923 (Dawson, op. cit.) and had reached Modesto in the San Joaquin Valley by 1944 (Grinnell and Miller, The Distribution of the Birds of California), continue to establish themselves in ornamental palms in residential districts of the Sacramento Valley, with 5 pairs nesting in Sacramento, 1 in Courtland, and 1 in Yuba City this season (ERP, SS). Bullock's Oriole, normally an inland spring migrant, appeared along the coast: 1 at Rodeo Lagoon on April 20 (VDaC), the first seen there by that observer; 2 on outer Point Reyes on April 23 (ROP); and 1 on the Farallons in early June.

Tanagers-Western Tanagers, like other late migrants this season, were present in small numbers at about the normal time, but the bulk of the migration was late and erratic. As late as May 15 there were concentrations at 3500 ft. in the Sierra at Potato Patch Camp, Tehama Co. (EH). At the same elevation in El Dorado County to the south, where they are expected in mid-May, they were not found until early June (ERP). This species was seen migrating up-mountain on April 29, then down-mountain at Auburn, Placer Co. after a snowstorm on May 9, then up again in mid-May (BK). On May 13, 2 were on outer Point Reyes, where they are very unusual migrants (ROP). This species shows perhaps most clearly the disruption of normal spring movements and territory establishment by the weather.

Grosbeaks, Finches and Sparrows-Most Blackheaded Grosbeaks migrated late and in concentrations; 30 were seen in Stevens Creek Park, Santa Clara Co., April 23 (TC). About 5 pairs of Blue Grosbeaks were reported at a long-favored site just west of Sacramento (RPM). A report of a Blue Grosbeak in the Carmel Valley on May 20 (JW, DDeS) is remarkable; although there are a few coastal records of this species in spring, it is not known to breed outside of the Central Valley. After a winter in which Evening Grosbeaks were notably scarce, there were scattered reports during and after the spring storm period: 10 at Pebble Beach, Monterey Co., May 20 (RLB), were especially noteworthy, as were late Red Crossbills at Pacific Grove, April 18-19 (RLB). Lawrence's Goldfinches were reported in larger numbers than in recent spring seasons, all from the upper reaches of westward-facing valleys in the foothills of the Coast Range. This species seemed to outnumber other goldfinches by 5 to 1 in the Carmel River Valley, where 70 were seen on May 28 (JW); 10 were seen in the Arroyo Mocho south of Livermore, in extreme northern Santa Clara Co., on May 21 (ROP). A breeding pair was at China Camp on May 21 (JW) at 5000 ft., an unusually high elevation for this species. Like many other mountain-nesting wintering species, Fox Sparrows and Lincoln's Sparrows were still in the lowlands until early May, well after their usual departure dates. On the other hand, northerly breeding Golden-crowned Sparrows seemed to have disappeared at about the usual time, in the first week of May.

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