

SHOREBIRDS OF THE SACRAMENTO VALLEY, CALIFORNIA

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Shorebird studies in the Central Valley of California have been limited even though the status and ecology of shorebirds along the coast of central California have been well studied (Storer 1951, Recher 1966, Page 1973). Consequently, many of the conclusions regarding shorebirds in central California have been based on information from coastal localities (Grinnell et al. 1918, Grinnell and Miller 1944, McCaskie and DeBenedictis 1966). In recent years, however, shorebird migration in the Sacramento Valley (Figure 1) has come under increased observation. Censuses at the Spreckles Sugar Company settling ponds near Woodland, Yolo County, and at the Sacramento National Wildlife Refuge, Glenn County, have been included in statewide shorebird surveys of the California Department of Fish and Game (Jurek 1973). Many observers have watched the Woodland ponds, in addition to the nearby Woodland and Davis city sewage ponds, during the past fifteen years and have assembled information on shorebird migration in eastern Yolo County. Also, Manolis censused shorebirds at the Chico sewage ponds, Butte County, during spring 1971 and spring and fall 1972.

One possible reason why shorebird data are lacking from the Central Valley is that shorebird habitat is relatively limited. The main feature of the Sacramento Valley is the extensive system of the Sacramento River and its tributaries. Historically these rivers flooded large areas in spring to form marsh and pond habitats for spring migrants. These areas are now under flood control and, therefore, are not as extensive or attractive to shorebirds as they once were. Some native shorebird habitat has been replaced with rice farming, which suffices for some breeding (stilts and avocets) and migrant (curlews, yellowlegs, etc.) species. Numerous vernal pools provide habitat in some areas of the valley and in the adjacent foothills where they are supplemented with farm ponds and reservoirs. Shorebirds such as plovers and curlews also use the plowed fields, pastures and grasslands that make up much of the region. By summer most natural bodies of water, except for the rivers and permanent streams, have dried up, leaving artificial areas such as waste water ponds as the major shorebird feeding areas in fall until winter rains replenish the natural habitats. The largest concentrations of shorebirds in spring are also found at these waste ponds, indicating that they contain more than just the necessary habitat structure to attract shorebirds.

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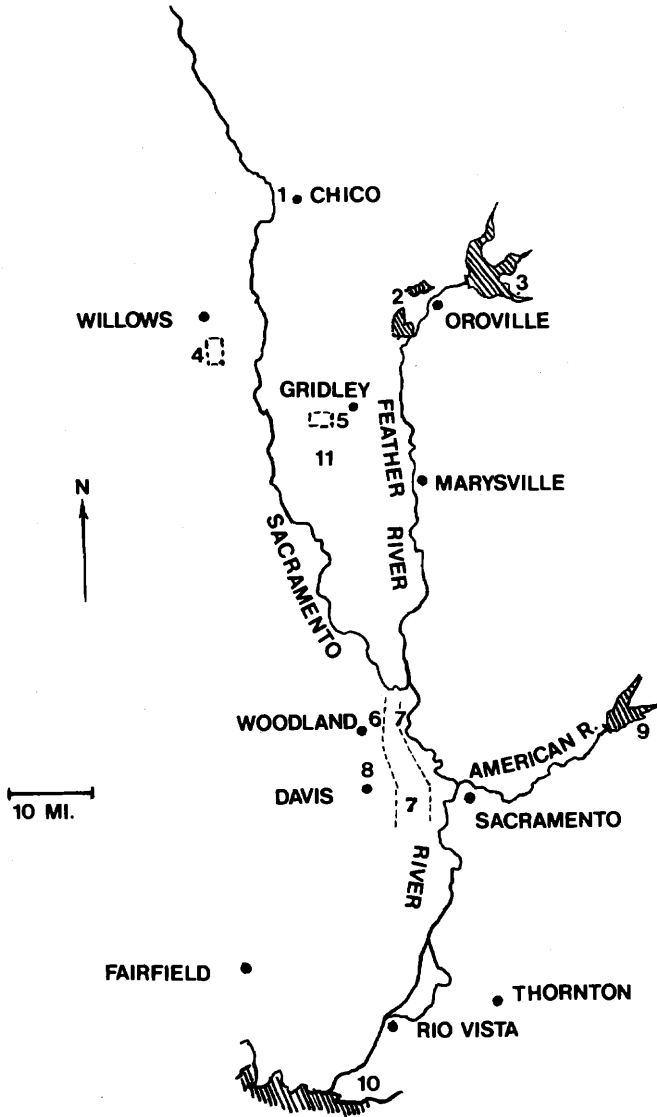


Figure 1. The lower Sacramento Valley. Numbers refer to the following locations: 1) Chico sewage ponds, 2) Thermalito Forebay and Afterbay, 3) Lake Oroville, 4) Sacramento National Wildlife Refuge, 5) Gray Lodge Wildlife Area, 6) Woodland sugar ponds, 7) Yolo Bypass, 8) Davis sewage ponds, 9) Folsom Lake, 10) delta of the Sacramento River and San Joaquin River systems, 11) Sutter Buttes.

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The following annotated list is an attempt to summarize the available data on the status of shorebirds in the Sacramento Valley. It is based primarily upon our notes, but we also used the notes of other observers, particularly Sacramento area birders' observations compiled by Betty Kimball; the literature; and the California Shorebird Surveys (Jurek 1971, 1972, 1973). Because most observations on which this paper is based are from eastern Yolo County, they may not provide an accurate picture for the entire Sacramento Valley. We believe though, from observations elsewhere in the valley, that most of the generalizations apply to the entire valley with the possible exceptions of the northern counties, Shasta and Tehama.

The following abundance terms used here are adapted from Bull (1964) and McCaskie (1970):

Very abundant—over 1000 individuals per day per locality

Abundant—201 to 1000 individuals per day per locality

Very common—51 to 200 individuals per day per locality

Common—21 to 50 individuals per day per locality

Fairly Common—7 to 20 individuals per day per locality

Uncommon—1 to 6 individuals per day per locality

Rare—1 to 6 individuals per season

Very Rare—perhaps regular, but not found every year

Casual—3 to 6 records of occurrence

When data are available and meaningful, extreme early and late dates of the periods of migration for less common migrants are given.

SEMIPALMATED PLOVER (*Charadrius semipalmatus*): Uncommon to fairly common in spring (10 April to 23 May, peak in late April, early May) and in early fall (28 July to mid-August), rare to uncommon in late fall (mid-August to 21 September), and very rare in winter when confined to the southern end of the valley. This species is far more common along the central California coast than in the valley, especially in fall.

SNOWY PLOVER (*C. alexandrinus*): A rare spring migrant (1 April to 4 May). Casual in fall (see Appendix). Snowy Plovers have nested twice in eastern Yolo County, at the Davis sewage ponds in 1963 (DeBenedictis and Chase 1963) and at the Woodland sugar ponds in 1970 (Baldrige et al. 1970). This plover was possibly more common in the past in the Sacramento Valley, but was never as common in the Sacramento Valley as in more alkaline areas of the state, such as the San Joaquin Valley (Grinnell et al. 1918). Further nesting in the Sacramento Valley should be looked for.

KILLDEER (*C. vociferus*): A common to abundant resident, most numerous in fall and winter when it is found in flocks in plowed fields and pastures. In other seasons it is widely distributed in pairs and small groups. Censuses at Woodland indicate a population peak, possibly of migrants, in mid-September (Jurek 1972), but this peak could also represent residents concentrated around the limited water present at that time.

MOUNTAIN PLOVER (*C. montanus*): Locally fairly common to very common in winter south of the Sutter Buttes (October to mid-May), but found regularly only in eastern Yolo County, in sparsely vegetated fields.

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AMERICAN GOLDEN PLOVER (*Pluvialis dominica*): A very rare fall migrant. There are two winter records (see Appendix). This species is usually found with Black-bellied Plovers in fields and pastures.

BLACK-BELLIED PLOVER (*P. squatarola*): Fairly common to abundant in spring (late February to April) nearly throughout the valley, although records are lacking for the region east of the Sacramento River and north of Marysville. Abundant in fall (late July to October, peak in mid-September) and fairly common in winter in the valley south of the Sutter Buttes; casual north of there in these seasons. A few may overwinter as occasionally one or two have been found at the Woodland sugar ponds in this season. This species is found primarily in grassy fields, pastures and, to a lesser extent, at ponds.

RUDDY TURNSTONE (*Arenaria interpres*): A casual fall migrant (see Appendix), this species has been found almost annually in recent years.

COMMON SNIBE (*Capella gallinago*): Uncommon in spring (mid-February to May, peak in early March), fairly common in fall (mid-August to November, peak in early November), and uncommon in winter. Snipe are found primarily along sloughs and in wet fields and pastures.

EUROPEAN JACKSNIBE (*Lymnocyptes minimus*): There is one record, the only one for California, of a bird collected near Gridley, Butte County, on 20 November 1938 (McLean 1939).

LONG-BILLED CURLEW (*Numenius americanus*): Very common to abundant in spring (March to May, peak in late March) and abundant in fall (late June to October, peak in mid-September). An abundant winter resident from Butte County south. In the Sacramento Valley, these birds prefer fields and pastures and use pond areas primarily for resting rather than feeding. In most years a few birds are present through the summer, but are not known to nest.

WHIMBREL (*N. phaeopus*): Uncommon to very common in spring (April to mid-May), when it is often found in single species flocks. Virtually all spring records are for the valley west of the Sacramento River. Very rare in fall and winter, when one to a few are occasionally found in flocks of Long-billed Curlews.

SPOTTED SANDPIPER (*Actitis macularia*): An uncommon spring migrant (mid-March to early June, peak in early May), fall migrant (mid-July to mid-October, peak in August), and winter resident. Uncommon in summer on gravel bars along streams and rivers south at least to Colusa County; found nesting along the Sacramento River in Butte County in 1973 (Gaines 1974). This species also occurs at waste water ponds in migration.

SOLITARY SANDPIPER (*Tringa solitaria*): A very rare migrant in spring (mid-April to mid-May) and a rare migrant in fall.

GREATER YELLOWLEGS (*T. melanoleuca*): A fairly common spring migrant (mid-March to mid-May, peak in early April), when many birds move through the foothill regions on both sides of the valley using ponds and streams which are usually dry in fall. A common fall migrant (mid-July to mid-October, peak in early September) and uncommon winter resident, frequenting pond edges, rivers and streams.

LESSER YELLOWLEGS (*T. flavipes*): A very rare spring migrant (April), an uncommon to fairly common fall migrant (27 June to 12 October, peak in early September) and a rare winter resident. This species appears to be more common in the Sacramento Valley than along the central California coast.

WILLET (*Catoptrophorus semipalmatus*): A rare spring migrant (April) and a rare to uncommon fall migrant (8 July to 20 September). Casual in winter (see Appendix). Most of the fall records are from July and August which corresponds to the first of two fall peaks noted by Storer (1951) for this species at Bay Farm Island, Alameda County, along the central California coast. If there are two populations present in migration along the coast, then probably only the earlier moves

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through the Sacramento Valley. The second peak recorded at Bay Farm Island may represent the coastal wintering population, which is apparently not present, except casually, in the valley.

RED KNOT (*Calidris canutus*): A casual spring and fall migrant (see Appendix).

DUNLIN (*C. alpina*): A common to very abundant spring migrant (mid-March to mid-May, peak in late April), a common to abundant fall migrant (October to early December) and a common winter resident.

LEAST SANDPIPER (*C. minutilla*): A very common spring (mid-March to mid-May, peak in late April) and fall (July to mid-October) migrant, and an uncommon winter resident. A few individuals may be found in most summers. The fall migration periods of this species and the similar Western Sandpiper tend to be temporally separated (Figure 2) as was noted by Recher (1966) for these birds on the coast.

BAIRD'S SANDPIPER (*C. bairdii*): An uncommon fall migrant (27 June to 10 October, peak in August). Casual in spring (see Appendix). This sandpiper, along with the Pectoral Sandpiper which has a similar continental distribution, is more numerous in the Sacramento Valley than along the central California coast in fall.

SHARP-TAILED SANDPIPER (*C. acuminata*): There are two fall records from the Woodland sugar ponds. One was observed in close comparison with Pectoral Sandpipers on 6 and 7 September 1971 by R. Stallcup, D. Gaines, R. LeValley, B. Kimball and the authors. The record was not published, but a description is on file with the Middle Pacific Coast Regional Editors of *American Birds*. A second bird was seen 4 to 16 October 1973 (Remsen and Gaines 1974).

PECTORAL SANDPIPER (*C. melanotos*): An uncommon to fairly common migrant in fall (mid-August to October, peak in late September). There is one spring record (see Appendix). As noted above under Baird's Sandpiper, this species is more common in the valley than along the coast in fall.

WESTERN SANDPIPER (*C. mauri*): A common to abundant migrant, in spring (mid-March to mid-May, peak in late April) and fall (mid-July to October, peak in early September). An uncommon winter resident. Figure 2 compares the fall migration periods of this species and the Least Sandpiper at Chico, Butte County.

SANDERLING (*C. alba*): A very rare fall migrant. There are two spring records (see Appendix). All of the fall records are from eastern Yolo County with the exception of one photographed at Chico on 2 and 3 September 1973 (Remsen and Gaines 1974).

SHORT-BILLED DOWITCHER (*Limnodromus griseus*): A rare spring (April to mid-May) and fall (July to mid-September) migrant. This dowitcher is probably more numerous than the few records a year indicate, partially because it is difficult to separate it in the field from the very abundant Long-billed Dowitcher. Many of our observations are of birds observed away from the Long-billed Dowitcher flocks, which may be due to either one of two factors: 1) Short-billed Dowitchers may prefer a different substrate for foraging (Lenna 1969), or 2) when isolated, Short-billed Dowitchers are more easily identified by plumage and, especially, by call. The Short-billed Dowitcher is far more common along the central California coast in migration than in the Sacramento Valley.

LONG-BILLED DOWITCHER (*L. scolopaceus*): Fairly common to very abundant in spring (mid-March to mid-May, peak in mid-April) and fall (July to mid-October, peak in early September). Common in winter and uncommon in summer. Fall migration inland differs from that along the coast where this species is uncommon until late September, when the wintering population probably arrives (Lenna 1969). Competitive interactions between the two dowitcher species may account for this difference in Long-billed Dowitcher migration periods because the Short-billed Dowitcher is a common coastal migrant.

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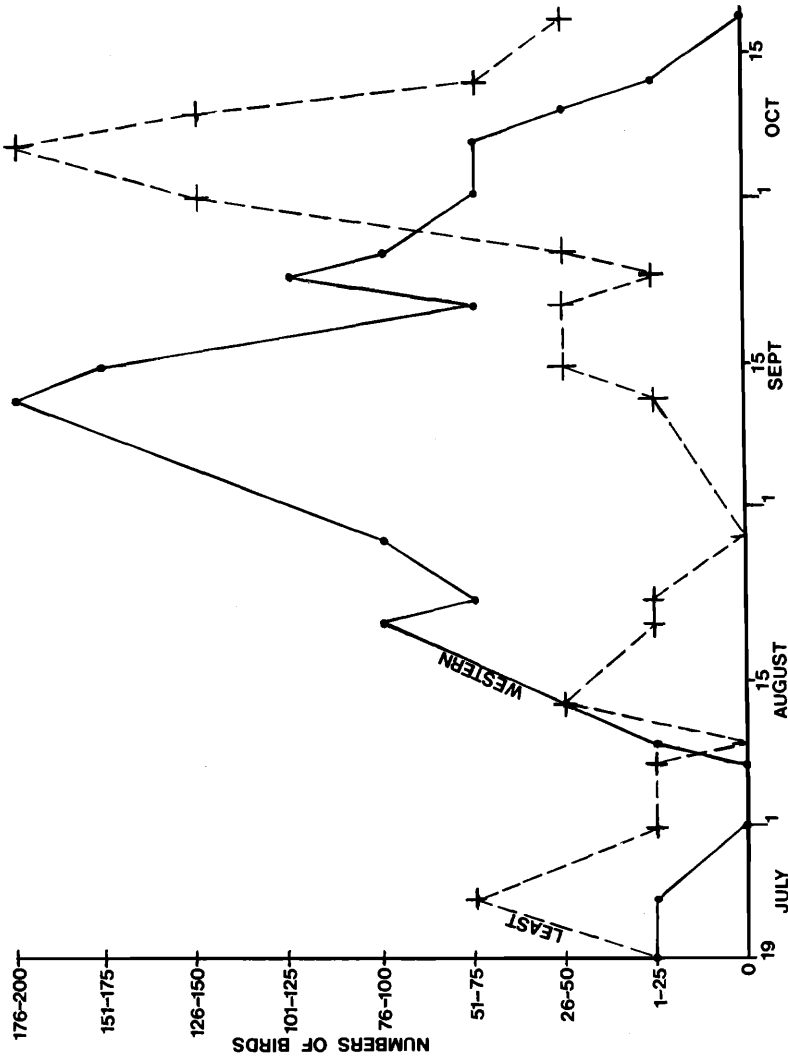


Figure 2. Estimated numbers of Least and Western sandpipers at the Chico sewage ponds, Butte County, in fall 1972.

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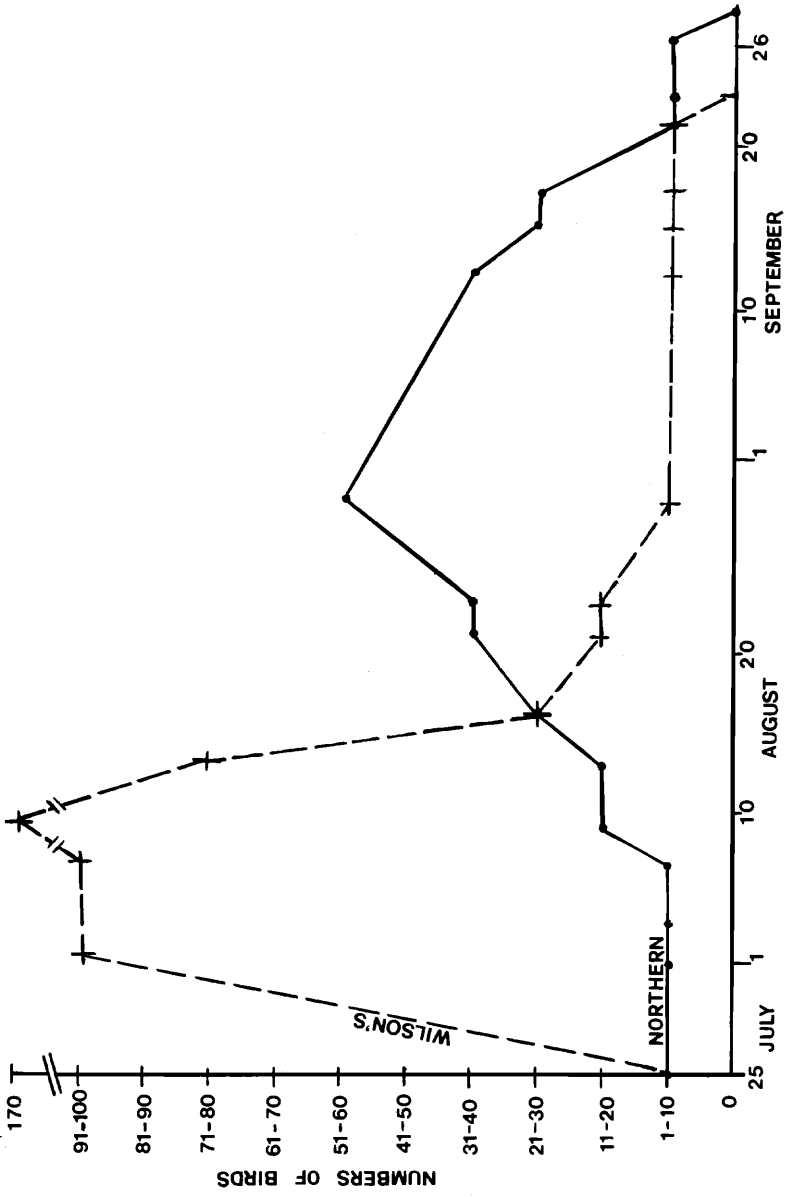


Figure 3. Estimated numbers of Wilson's and Northern phalaropes at the Chico sewage ponds, Butte County, in fall 1972.

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STILT SANDPIPER (*Micropalama himantopus*): Casual in fall (see Appendix). In light of the status of the Baird's and Pectoral sandpipers, which have mid-continental migration routes similar to that of the Stilt Sandpiper, and of the regular occurrence of Stilt Sandpipers at the Salton Sea in southern California (McCaskie 1970), this sandpiper may be regular in the Sacramento Valley, but is possibly overlooked in the large dowitcher flocks with which it frequently associates.

MARBLED GODWIT (*Limosa fedoa*): A rare spring migrant (April) and an uncommon fall (mid-July to September) migrant. Casual in winter (see Appendix). The relative scarcity of this species in the Sacramento Valley parallels that of the Willet; the Marbled Godwit also is a freshwater breeding bird of the northern Great Plains and in winter is one of the more common shorebirds of the central California coast.

AMERICAN AVOCET (*Recurvirostra americana*): A very common summer resident and breeder. Rare in winter. The exact duration of the spring migration is unclear as it overlaps the breeding season. From census data for Woodland (Jurek 1971), it appears that spring migration begins in early February and reaches a peak in mid-April. Fall movements are also not well defined, but apparently consist of a gradual reduction of post-breeding numbers until mid-August, followed by a leveling off to a final drop in early November.

BLACK-NECKED STILT (*Himantopus mexicanus*): A common summer resident and breeder. Casual in winter (see Appendix). Apparently, spring movements begin in early March and peak in mid-April. Fall numbers begin to increase in late August, peak in mid-September, and then decline almost to zero by early October (Jurek 1971).

RED PHALAROPE (*Phalaropus fulicarius*): A very rare fall migrant. There is one spring record (see Appendix).

WILSON'S PHALAROPE (*Steganopus tricolor*): An uncommon spring (late April to mid-May) migrant and a very common fall (July to mid-October) migrant. Rare in summer, but there are no breeding records. Figure 3 compares fall migration patterns of this phalarope and the Northern Phalarope at Chico in 1972.

NORTHERN PHALAROPE (*Lobipes lobatus*): An uncommon spring (late April to mid-May) migrant and a common to abundant fall (mid-July to mid-October, peak in late August) migrant. There are two winter records (see Appendix). There appears to be temporal segregation of peak fall movements of this species and Wilson's Phalarope (Figure 3).

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LITERATURE CITED

- Baldridge, A., T. Chandik and D. DeSante. 1970. The spring migration. Middle Pacific Coast region. Aud. Field Notes 24:638-642.
Bull, J. 1964. Birds of the New York area. Harper Row, New York.

SHOREBIRDS

- DeBenedictis, P., and T. Chase, Jr. 1963. The nesting season. Middle Pacific Coast region. *Aud. Field Notes* 17:480-483.
- Gaines, D. 1974. A new look at the nesting riparian avifauna of the Sacramento Valley, California. *West. Birds* 5:61-80.
- Grinnell, J., H. C. Bryant and T. I. Storer. 1918. *The gamebirds of California*. Univ. Calif. Press, Berkeley.
- Grinnell, J., J. Dixon and J. M. Linsdale. 1930. Vertebrate natural history of a section of northern California through the Lassen Peak region. *Univ. Calif. Publ. Zool.* 35:1-594.
- Grinnell, J. and A. H. Miller, 1944. The distribution of the birds of California. *Pac. Coast Avif.* 27:1-608.
- Jurek, R. M. 1971. California shorebird survey, 1969-1970. *Spec. Wildl. Rept.*, Calif. Dept. Fish and Game.
- Jurek, R. M. 1972. California shorebird surveys, 1970-1971. *Spec. Wildl. Rept.*, Calif. Dept. Fish and Game.
- Jurek, R. M. 1973. California shorebird study. Final Project Rept., Calif. Dept. Fish and Game.
- Lenna, P. 1969. Short-billed and Long-billed dowitchers in the Point Reyes, California area. *Point Reyes Bird Observatory Newsl.* 13:2-10.
- McCaskie, G. 1970. Shorebird and waterbird use of the Salton Sea. *Calif. Fish and Game* 56:87-95.
- McCaskie, G. and P. DeBenedictis. 1966. Annotated field list: birds of northern California. Golden Gate Audubon Soc., Berkeley.
- McLean, D. D. 1939. European Jacksnipe and Franklin Gull in California. *Condor* 41:164.
- Page, G. 1973. Shorebird censuses on Bolinas Lagoon. *Point Reyes Bird Observatory Newsl.* 25:1-3.
- Recher, H. F. 1966. Some aspects of the ecology of migrant shorebirds. *Ecology* 47:393-407.
- Remsen, V. and D. Gaines. 1974. The fall migration. Middle Pacific Coast region. *Am. Birds* 28:98-106.
- Storer, R. W. 1951. The seasonal occurrence of shorebirds on Bay Farm Island, Alameda County, California. *Condor* 53:186-193.

APPENDIX

The following records are of shorebird species of casual occurrence in the Sacramento Valley in certain seasons. They cover the period prior to 1975, and are in chronological order for each species. WP indicates the Woodland sugar ponds and vicinity and DP indicates the Davis sewage ponds. Both are in Yolo County. SCBC indicates the Sacramento Christmas Bird Count; the count area includes parts of both Sacramento and Yolo counties. *American Birds* is abbreviated by AB and *Audubon Field Notes* by AFN.

SNOWY PLOVER: 1, DP 29 Jul 1962 (AFN 16:504, 1962); 1, WP 8 Sep 1968 (AFN 23:102, 1969).

AMERICAN GOLDEN PLOVER: 1, five miles south of Sacramento, Sacramento Co. 15 Feb 1959 (AFN 13:318, 1959); 1, WP 9 Dec 1961 (AFN 16:361, 1962).

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RUDDY TURNSTONE: 1, WP 2 Oct 1960 (R. Stallcup pers. comm.); 1, DP 28 Jul 1963 (AFN 18:69, 1964); 1, DP 12-14 Aug 1970 (AFN 24:713, 1970); 1, DP 28 Aug 1971 (Loveless pers. comm.); 2, DP 15-19 Aug 1972 (AB 26:901, 1972); 1, Chico, Butte Co. 18 Aug 1973 (AB 28:99, 1974).

WILLET: 2, SCBC 27 Dec 1953 (AFN 8:221, 1954); 12, SCBC 27 Dec 1958 (AFN 13:253, 1959); 1, SCBC 30 Dec 1961 (AFN 16:288, 1962); 1, Oroville, Butte Co. 1 Jan 1973 (AB 27:520, 1973).

RED KNOT (spring records): 4, along Highway 12 between Rio Vista and Fairfield, Solano Co. 24 Apr 1965 (AFN 19:508, 1965); 1, WP 9 May 1971 and 22, WP 15 May 1971 (AB 25:795, 1971). (fall records): 3, DP 19 Aug 1962 (AFN 17:64, 1963); 1, Thermalito Afterbay, Butte Co. 22 Aug 1968 (AFN 23:102, 1969); 2, DP 8 Aug 1971 (AB 25:902, 1971).

PECTORAL SANDPIPER: 1, WP 12 May 1962 (AFN 16:444, 1962).

BAIRD'S SANDPIPER: 3, Dales, Tehama Co. 14 Apr 1928 (Grinnell et al. 1930); 1, Folsom Lake, Sacramento Co. 21 Apr 1961 (AFN 16:444, 1962); 1, WP 25 Apr 1970 (B. Kimball pers. comm.).

SANDERLING: 5, DP 14 May 1960 (AFN 14:418, 1960); 3, DP 2 May 1971 (AB 25:795, 1971).

STILT SANDPIPER: 2, WP 1 Oct 1960 (AFN 15:72, 1961); 1, WP 19 Sep 1965 (AFN 20:88, 1966); 1, WP 6-7 Sep 1971 (AB 26:114, 1972); 2, Yolo Bypass, Yolo Co. 12 Oct 1973 (AB 28:101, 1974).

MARBLED GODWIT: 3, SCBC 27 Dec 1953 (AFN 8:221, 1954); 2, SCBC 30 Dec 1956 (AFN 11:230, 1957); 9, SCBC 29 Dec 1957 (AFN 12:240, 1958); 1, SCBC 27 Dec 1958 (AFN 13:253, 1959); 5, Chico, Butte Co. 31 Dec 1972 (AB 27:505, 1973).

BLACK-NECKED STILT: 1, Yolo Bypass, Yolo Co. 28 Nov 1954 (AFN 9:282, 1955); 5, SCBC 26 Dec 1971 (AB 26:520, 1972).

RED PHALAROPE: 1, WP 28 Apr 1974 (AB 28:847, 1974).

NORTHERN PHALAROPE: 1, Sacramento National Wildlife Refuge, Glenn Co. 23 Feb 1959 (AFN 13:318, 1959); 1, SCBC 30 Dec 1961 (AFN 16:288, 1962).



Sketch by Tim Manolis