

COOPER ORNITHOLOGICAL CLUB

**PACIFIC COAST AVIFAUNA
NUMBER 18**

**DIRECTORY TO THE BIRD-LIFE
OF THE
SAN FRANCISCO BAY REGION**

**BY
JOSEPH GRINNELL
AND
MARGARET W. WYTHE**

**CONTRIBUTION NO. 493 FROM THE
MUSEUM OF VERTEBRATE ZOOLOGY
OF THE UNIVERSITY OF CALIFORNIA**



BERKELEY, CALIFORNIA
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Edited by
JOSEPH GRINNELL
and
HARRY S. SWARTH
at the
Museum of Vertebrate Zoology
University of California

NOTE

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PREFACE

The purpose of the present contribution is to provide help and incentive toward an increased knowledge of the bird-life of the San Francisco Bay region. While something may be said for the plan adopted by some students of bird-life, to prosecute their inquiries independently of anyone else, it is the conviction of the present writers that the best procedure on the part of the average student is to acquaint himself as fast and as thoroughly as he can with the findings of other students, those that have preceded him. A main aim in the present paper, therefore, is to give clues as to the literature already available in regard to each kind of bird in the limited territory covered.

This is not, therefore, simply a list of birds that have been found to occur in the region, more or less annotated from the standpoint of the museum collector, but it is primarily an accumulation of facts and citations of a sort thought likely to prove useful to the student of the living bird. This is meant as no disparagement of the worthiness of the efforts of the collector and systematist; for their work is essential, especially in the initial stages in the development of the general field of ornithology.

If, as is the authors' earnest wish, future students of the bird-life in the Bay region make full use of the index feature of the present paper, they will quickly be led to the same conclusion that has forced itself upon us, namely, that knowledge of the life histories of even our commonest birds is as yet deplorably meager. There is greatly needed a concentration of attention, on the part of those with the time and talent to study wild birds out-of-doors, upon this phase of ornithology. Beside the facts and interpretations comprised in the natural history of individual species, there are the more general problems concerned with the inter-relations between different species and with the changes in relative numbers under the altering of conditions which accompany the close settlement of the country by the white man.

Field observations, accurately made, carefully recorded, and finally published in concise form constitute at this time an exceedingly desirable kind of contribution to the science of ornithology. If the present contribution will prove to have aided accomplishment in this direction, its purpose will be realized.

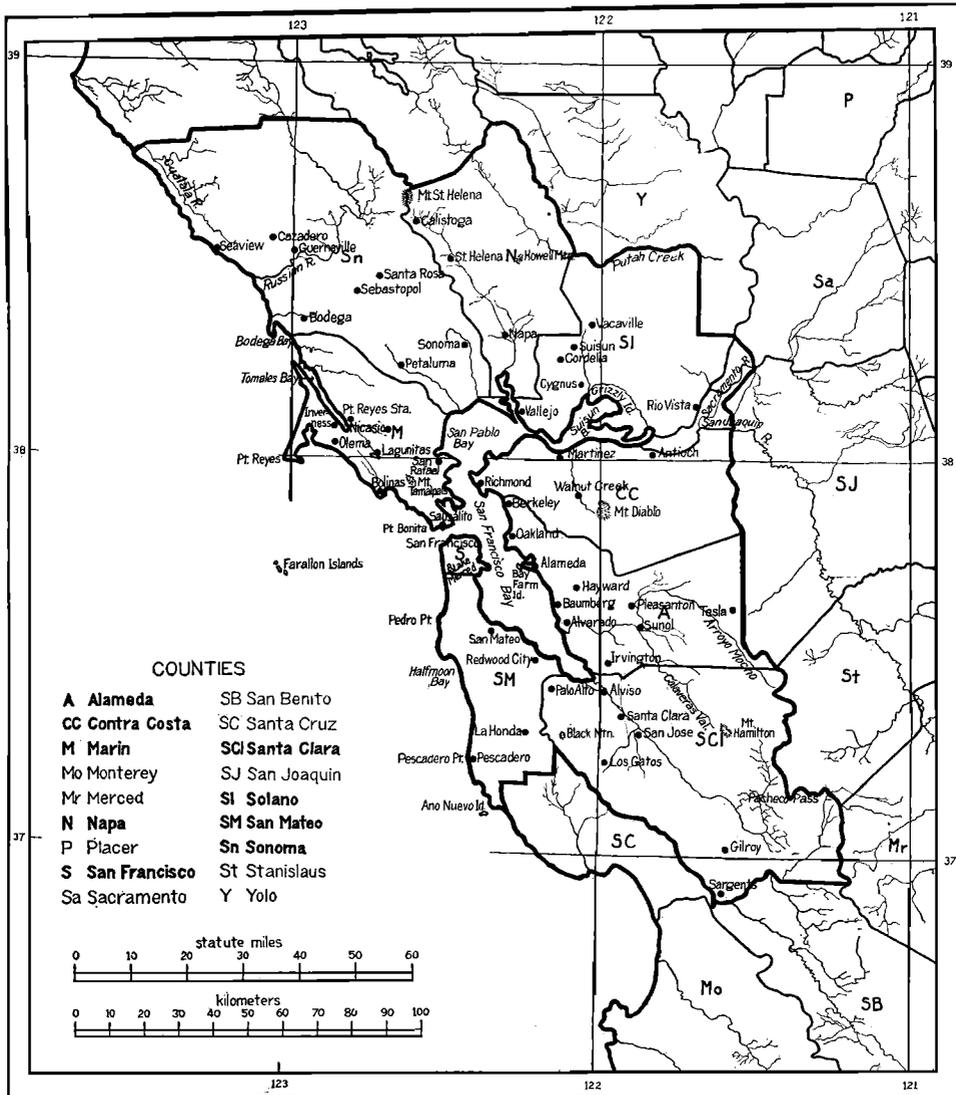
JOSEPH GRINNELL.

MARGARET W. WYTHE.

November 20, 1926.

INTRODUCTION

A first thing naturally necessary in an undertaking of the present sort is to fix arbitrarily the limits of the region dealt with. The "San Francisco Bay region" has been determined upon by us as including the nine counties which border in any measure upon San Francisco Bay, namely, the counties of San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Solano, Napa, Sonoma, and Marin; also the nearby Farallon Islands. The entire area of each of the counties named is taken into account.



MAP OF "SAN FRANCISCO BAY REGION": THE NINE INCLUDED COUNTIES OUTLINED BOLDLY.



Pacific Coast Avifauna No. 18

COMMUTER'S VIEW OF COMMON GULLS OF SAN FRANCISCO BAY
 1a, 1b, Heermann Gull; 2, Short-billed Mew Gull; 3, Ring-billed Gull;
 4a, 4b, American Herring Gull; 5, California Gull; 6, Glaucous-winged
 Gull; 7, Northern Western Gull; 8a, 8b, Bonaparte Gull.

no matter how far from the Bay proper its limits may extend. However, as it turns out (see accompanying map) the area thus delimited is not so irregular as might have been expected; indeed, it proves to have a fair degree of avifaunal individuality, when comparison is made with other sections of California.

In the General Directory, which forms the main part of our contribution, we have aimed to include all the species and subspecies authentically known to have occurred anywhere within the area outlined. We consider authenticity established when based upon a record in the literature, or a specific observation, made by an ornithologist of known experience, or upon one or more specimens of the species, with satisfactory data attached, preserved in a public or private museum. For reasons that it is unnecessary here to go into, the statements of sportsmen or of writers of so-called popular natural history have not, as a rule, been considered as providing satisfactory evidence of the occurrence of rare or unusual birds within our limits. This may account for certain omissions that the critical student may discover. At the same time, it is always possible that we have overlooked some really authentic "record" that should have been included. No doubt we have; and for such lapses we have no apology to offer save that, by reason of the great volume of both published and unpublished sources that have had to be gone over, escape of a certain, though let us hope small, percentage of important facts seems inevitable.

BOOKS RECOMMENDED

As a matter of personal history with many advanced bird students of the present day, the one book that has proved of outstanding worth in furnishing a foundation of ornithological knowledge has been Elliott Coues' classic "Key to North American Birds" (many editions, from 1872 down to the last, 1903, Dana Estes, Boston). Because of the critical scholarship that characterized its authorship, and because of the wide range of subjects covered, descriptive, systematic, morphologic, biographical, and as pertaining to the technique of field collecting, Coues' Key may still, we think, be recommended as *the* bird book to possess, *if* no other volume were ever to be owned.

In the purely systematic field, the one inclusive work is Robert Ridgway's "Birds of North and Middle America", 8 volumes to date (Government Printing Office, Washington, D. C., 1901-1919). Since for most people this work will probably prove unnecessarily technical, we would recommend that such persons use, at least at the outset, for the identification of species, Florence Merriam Bailey's "Handbook of Birds of the Western United States" (Houghton Mifflin, 1902, and many subsequent editions). Also, there are many popular guides, of more or less merit, which we are assured have been varyingly helpful to beginning students in bringing acquaintance with our species by name. Of help from the general geographical standpoint is the official American Ornithologists' Union "Check-list of North American Birds" (last edition, New York, 1910; a new edition shortly to appear). Of more local bearing, and including a discussion of the laws of distribution, is J. Grinnell's "A Distributional List of the Birds of California" (Pacific Coast Avifauna No. 11, 1915).

When it comes to the natural history of our birds, the field of knowledge which deals with the bird in life (and this is, of course, the main one in ornithology), there is a very large number of books seemingly available. But unfortunately, romance, uncritical sentiment, and inexact observation enter in objectionable measure into a great many of these books. The seriously intentioned student who is after facts and

logical inferences will, in using such literature, have to be continually on his guard. He will wish to check everything against his own experience as the scope of his knowledge increases.

The following books dealing with the species represented in the bird-life of the Bay region seem to us to offer dependable natural history in relatively largest measure: A. C. Bent's "Life Histories of North American Birds", 5 volumes to date (Government Printing Office, Washington, D. C., 1919-1925); Frank M. Chapman's "The Warblers of North America" (D. Appleton, New York, 1907); W. L. Dawson's "The Birds of California", 4 volumes (South Moulton Company, San Diego, 1923); J. Grinnell, H. C. Bryant and T. I. Storer's "Game Birds of California" (University of California Press, Berkeley, 1918); J. Grinnell and T. I. Storer's "Animal Life in the Yosemite" (University of California Press, Berkeley, 1924); John C. Phillips' "Natural History of the Ducks", 4 volumes (Houghton Mifflin, Boston, 1922 to 1926); Bradford Torrey's "Field Days in California" (Houghton Mifflin, Boston, 1913).

Then there are general works of a philosophical nature, which deal with the fascinating problems of animal existence and far-reaching inter-relationships. Inevitably, the earnest student will be led more and more deeply into such questions. He will find authoritative, down-to-date presentations of facts and theories in many departments of ornithology in the following books: Glover M. Allen's "Birds and their Attributes" (Marshall Jones, Boston, 1925); Gerhard Heilmann's "The Origin of Birds" (H. F. & G. Witherby, London, 1926); A. Landsborough Thomson's "The Problems of Bird-Migration" (Houghton Mifflin, Boston, 1926); J. Arthur Thomson's "The Biology of Birds" (Macmillan, New York, 1923). Access to any or all of the above designated books can be secured with little trouble from or through local libraries, as we have taken pains elsewhere to explain (see page 17).

Despite the multiplicity of books, it has been our own experience that many of the best accounts of the natural history of our birds are to be found only as articles scattered here and there through the ornithological magazines. And it becomes our function in this Directory, under each species, to give citations to these special articles, as well as to the appropriate chapters or sections of more general works. Unfortunately, we cannot, of course, guarantee to have given every worthy reference to the writings in regard to each species. Many valuable statements may be tucked away in articles with titles of a misleading nature, so as completely to conceal them. The student who wishes to make sure of finding practically everything upon published record in regard to the life history of any given species in our territory will have to make thoroughgoing use of the bibliographies in certain of the general works already named, and especially those bibliographies which are comprised in Pacific Coast Avifaunas Numbers 5 (1909) and 16 (1924); also to the indexes, annual and general, to *The Condor*, *The Auk*, and *Bird-Lore*. Appeal should also be made to the exhaustive synonymies in Ridgway's great work cited above.

BIBLIOGRAPHY OF PUBLISHED LOCAL LISTS

The following bibliography is intended to serve as an index to all published articles listing each a dozen or more species from any locality within the San Francisco Bay region. It is arranged to facilitate the looking up of any particular list, the titles being grouped primarily by locality. First are given titles covering the Bay region as a whole; then titles for counties, and for places within each county, each group in alphabetical sequence by locality and then by author. Citation is in usual form: title, periodical or book, volume, date, and page reference.

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- Allen, Mrs. A. S. The Season > San Francisco Region. < Bird-Lore, xxii, April, 1920, p. 110; June, 1920, pp. 171-172; August, 1920, pp. 232-233; October, 1920, pp. 296-297; December, 1920, p. 361.
- The Season > San Francisco Region. < Bird-Lore, xxiii, February, 1921, p. 38; April, 1921, p. 97; June, 1921, pp. 148-149; August, 1921, pp. 208-209; October, 1921, p. 255; December, 1921, pp. 313-314.
- The Season > San Francisco Region. < Bird-Lore, xxiv, February, 1922, pp. 50-51; April, 1922, pp. 104-105; June, 1922, p. 162; August, 1922, pp. 226-227; October, 1922, pp. 288-289; December, 1922, pp. 356-357.
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- The Season > San Francisco Region. < Bird-Lore, xxviii, April, 1926, pp. 146-147; June, 1926, pp. 218-220; August, 1926, pp. 286-287.
- Kelly, Mrs. G. E. The Season > San Francisco Region. < Bird-Lore, xxvii, June, 1925, pp. 196-198.
- Storer, T. I. The Season > San Francisco Region. < Bird-Lore, xxv, April, 1923, pp. 136-137.
- Wythe, Miss M. W. The Season > San Francisco Region. < Bird-Lore, xxv, October, 1923, pp. 331-332.
- The Season > San Francisco Region. < Bird-Lore, xxvi, April, 1924, pp. 129-130; June, 1924, pp. 197-198; August, 1924, pp. 276-277; October, 1924, pp. 344-345; December, 1924, pp. 423-425.
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- The Season > San Francisco Region. < Bird-Lore, xxviii, February, 1926, pp. 67-68.

ALAMEDA COUNTY

Alameda and Vicinity

- Anonymous. The October Field Trip. < The Gull, I, November, 1919, p. 4. [Bay Farm Island.]
- September Field Trip. < The Gull, II, October, 1920, p. 4. [Bay Farm Island.]
- September Field Trip. < The Gull, III, October, 1921, p. 4. [Lincoln Park; Bay Farm Island; Alameda mole.]

Berkeley and Vicinity

- Anonymous. The August Field Trip. < The Gull, September, 1919, p. 4. [Wildcat Canyon.]
- The November Field Trip. < The Gull, I, December, 1919, p. 4. [University of California Campus.]
- August Field Trip. < The Gull, II, October, 1920, pp. 3-4. [University of California Campus.]
- June Field Trip. < The Gull, III, July, 1921, p. 4. [Claremont Canyon; Tunnel Road.]

- November Field Trip. < *The Gull*, III, December, 1921, p. 4. [University of California Campus.]
- November Field Trip. < *The Gull*, IV, December, 1922, p. 4. [University of California Campus.]
- July Field Trip. < *The Gull*, v, August, 1923, p. 4. [Claremont Canyon; Strawberry Canyon.]
- July Field Trip. < *The Gull*, VI, August, 1924, p. 4. [Claremont Canyon; Strawberry Canyon.]
- April Field Trip. < *The Gull*, VII, May, 1925, p. 4. [University of California Campus.]
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Hayward

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- Cooper, J. G. California Garden Birds. < *Amer. Naturalist*, x, February, 1876, pp. 90-96.

Mt. Eden and Vicinity

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- April Field Trip. < *The Gull*, v, May, 1923, p. 4. [Hayward to Baumberg.]
- September Field Trip. < *The Gull*, v, October, 1923, p. 4. [Baumberg, south of Mt. Eden.]
- September Field Trip. < *The Gull*, VI, October, 1924, p. 4. [Baumberg and vicinity.]
- September Field Trip. < *The Gull*, VII, October, 1925, p. 4. [Baumberg; Mt. Eden.]
- September Field Trip. < *The Gull*, VIII, October, 1926, p. 3. [Baumberg salt marshes.]

Niles Canyon

- Anonymous. April Field Trip. < *The Gull*, III, May, 1921, p. 4.
- April Field Trip. < *The Gull*, IV, May, 1922, p. 4.

Oakland

- Anonymous. The January Field Trip. < The Gull, I, February, 1919, p. 4. [Lake Merritt; Trestle Glen.]
- The January Field Trip. < The Gull, II, February, 1920, p. 4. [Lake Merritt; Trestle Glen.]
- January Field Trip. < The Gull, III, February, 1921, p. 4. [Lake Merritt.]
- January Field Trip. < The Gull, IV, February, 1922, pp. 3-4. [Lake Merritt; Trestle Glen.]
- January Field Trip. < The Gull, V, February, 1923, p. 4. [Lake Merritt; Trestle Glen.]
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Lafayette

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- May Field Trip. < The Gull, II, June, 1920, p. 4.
- May Field Trip. < The Gull, III, June, 1921, p. 4.
- May Field Trip. < The Gull, IV, June, 1922, p. 4.
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Mt. Diablo and Vicinity

- Anonymous. May Field Trip. < The Gull, VII, June, 1925, pp. 3-4. [San Ramon Valley between Walnut Creek and Danville.]
- Cox, R. Diablo, Calif. (within about 1 mile radius from post office). < Bird-Lore's Eighteenth Christmas Census. < Bird-Lore, XX, February, 1918, p. 49.

Las Trampas Creek

- Anonymous. May Field Trip. < The Gull, VIII, June, 1926, p. 4.

MARIN COUNTY

In general

- Mailliard, J. Land Birds of Marin County, Cal. < Condor, II, May, 1900, pp. 62-68.

Fairfax and Vicinity

- Anonymous. June Field Trip. < The Gull, II, July, 1920, p. 4. [Fairfax, the Cascades and east slope of White Hill.]
- August Field Trip. < The Gull, III, September, 1921, p. 4. [Fairfax and the Cascades.]
- March Field Trip. < The Gull, IV, April, 1922, p. 4. [Ridges and lakes west of Fairfax.]
- August Field Trip. < The Gull, VI, September, 1924, p. 4. [Landsdale to Cascades, to Fairfax.]

Lake Lagunitas and Vicinity

- Anonymous. The April Field Trip. < The Gull, I, May, 1919, p. 4. [Lake Lagunitas via Ross.]
- December Field Trip to Lagunitas. < The Gull, I, January, 1919, p. 2.
- November Field Trip. < The Gull, II, December, 1920, p. 4.
- March Field Trip. < The Gull, III, April, 1921, p. 4. [Lake Lagunitas, via Ross and Phoenix Lake.]
- March Field Trip. < The Gull, V, April, 1923, p. 4. [Alpine Lake, via Fairfax, return via Lake Lagunitas and Ross.]
- November Field Trip. < The Gull, V, December, 1923, p. 4. [Lake Lagunitas via Ross and Phoenix Lake.]
- March Field Trip. < The Gull, VI, April, 1924, p. 4. [Lake Lagunitas, Alpine Lake and Phoenix Lake.]
- November Field Trip. < The Gull, VI, December, 1924, p. 4. [Lake Lagunitas, via Ross and Phoenix Lake.]
- August Field Trip. < The Gull, VII, September, 1925, p. 4. [Alpine, Lagunitas and Phoenix lakes, via Fairfax, return via Ross.]
- June Field Trip. < The Gull, VIII, July, 1926, p. 4. [Alpine, Lagunitas and Phoenix lakes, via Fairfax, return via Ross.]

Muir Woods and Big Lagoon

- Anonymous. The September Field Trip. < The Gull, I, October, 1919, p. 4. [Muir Woods, via Mill Valley; to Big Lagoon, via Frank Valley; return via Coyote Valley and Manzanita.]
- December Field Trip. < The Gull, III, January, 1921, p. 4.
- July Field Trip. < The Gull, III, August, 1921, p. 4.
- July Field Trip. < The Gull, VII, August, 1925, p. 4. [Muir Woods to Big Lagoon, return via Coyote Creek and Almonte.]

Point Bonita and Rodeo Lagoon

- Anonymous. August Field Trip. < The Gull, IV, September, 1922, p. 4.
- August Field Trip. < The Gull, V, September, 1923, p. 4.
- March Field Trip. < The Gull, VII, April, 1925, p. 4.
- March Field Trip. < The Gull, VIII, April, 1926, p. 4.

Point Reyes

- Allen, C. A. Collecting on the Pacific Coast. < Ornithologist and Oologist, VI, May, 1881, pp. 18-19.

Rattlesnake and Bootjack camps

- Anonymous. The February Field Trip. < The Gull, I, March, 1919, p. 4. [Via Mill Valley and pipe line trail.]

San Rafael

- Beebe, Miss E. San Rafael, Cal. < The Ninth Christmas Bird Census. < Bird-Lore, XI, February, 1909, p. 36.

Sausalito

- Anonymous. April Field Trip. < The Gull, VI, May, 1924, p. 4. [Ridges above Sausalito.]

Tennessee Cove

- Anonymous. The June Field Trip. < The Gull, I, July, 1919, p. 4.
- July Field Trip. < The Gull, II, August, 1920, p. 4. [Bluffs ½ mile north of the Cove.]
- June Field Trip. < The Gull, IV, July, 1922, p. 4. [Cove and bluffs.]
- June Field Trip. < The Gull, V, July, 1923, p. 4.

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August Field Trip. < *The Gull*, viii, September, 1926, p. 4.

NAPA COUNTY

Howell Mountain

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Mt. St. Helena

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Napa

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Some Further Notes on San Francisco County Birds. < *Condor*, xix, September, 1917, p. 170.

Squires, W. A., Thomas, C. R., and Hansen, H. E. San Francisco County (Golden Gate Park to Lake Merced), Calif. < *Bird-Lore's Eighteenth Christmas Census*. < *Bird-Lore*, xx, February, 1918, p. 49.

Golden Gate Park

Anonymous. The March Field Trip. < *The Gull*, i, April, 1919, p. 4.

The July Field Trip. < *The Gull*, i, August, 1919, p. 4.

The February Field Trip. < *The Gull*, ii, March, 1920, p. 4.

July Field Trip. < *The Gull*, iv, August, 1922, p. 4.

December Field Trip. < *The Gull*, iv, January, 1922, p. 4.

December Field Trip. < *The Gull*, v, January, 1923, p. 4.

May Field Trip. < *The Gull*, vi, June, 1924, pp. 3-4.

December Field Trip. < *The Gull*, vi, January, 1924, p. 4.

June Field Trip. < *The Gull*, vii, July, 1925, p. 4.

December Field Trip. < *The Gull*, vii, January, 1925, pp. 3-4.

December Field Trip. < *The Gull*, viii, January, 1926, p. 4.

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Lake Merced

Anonymous. The April Field Trip. < *The Gull*, ii, May, 1920, p. 4.

October Field Trip. < *The Gull*, ii, November, 1920, pp. 3-4.

- The December Field Trip. < *The Gull*, II, January, 1920, p. 4.
 October Field Trip. < *The Gull*, III, November, 1921, p. 4.
 October Field Trip. < *The Gull*, IV, November, 1922, p. 4.
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 Holy Cross Cemetery
 Grinnell, J. Bird Netting as a Method in Ornithology. < *Auk*, XLII, April, 1925, pp. 245-251.

San Andreas Lake and Vicinity

- Anonymous. February Field Trip. < *The Gull*, III, March, 1921, p. 4. [Buriburi Ridge to San Andreas Lake to Crystal Springs Lake.]
 February Field Trip. < *The Gull*, IV, March, 1922, p. 4.
 February Field Trip. < *The Gull*, V, March, 1923, p. 4.
 February Field Trip. < *The Gull*, VI, March, 1924, p. 4. [Buriburi Ridge to San Andreas Lake.]
 February Field Trip. < *The Gull*, VII, March, 1925, p. 4. [Buriburi Ridge to San Andreas Lake.]
 February Field Trip. < *The Gull*, VIII, March, 1926, p. 4.

Santa Cruz Mountains, vicinity of La Honda

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SANTA CLARA COUNTY

In general

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LIBRARIES OF ORNITHOLOGY

There are, fortunately, in the San Francisco Bay region several libraries which contain very nearly all of the works and periodicals which deal importantly with our birds. Indeed, practically every one of the books and articles cited in this Directory can be consulted by the serious enquirer in any one of the following three libraries.

University of California Library, at Berkeley.

Leland Stanford Junior University Library, at Stanford University.

Library of California Academy of Sciences, in Golden Gate Park, San Francisco.

County Libraries.—Then there are the County libraries, several of which are known to contain a large amount of ornithological literature. Some of these libraries furnish books to the local city libraries, as well as to smaller communities throughout the County. If books that are desired are not to be found in one of the various branches, they can often be obtained by direct application to the County Librarian. County libraries in the San Francisco Bay region are located as follows.

ALAMEDA COUNTY

Oakland: Alameda County Free Library. Has over 85 branches throughout the County.

CONTRA COSTA COUNTY

Martinez: Contra Costa County Free Library. Has over 95 branches throughout the County.

NAPA COUNTY

Napa: Napa County Free Library. Has over 75 branches throughout the County.

SAN FRANCISCO COUNTY

San Francisco: Free Public Library of the City and County of San Francisco. (Contains by far the greatest number of volumes, of any library of this class.)

SAN MATEO COUNTY

Redwood City: San Mateo County Free Library. Has over 60 branches throughout the County.

SANTA CLARA COUNTY

San Jose: Santa Clara County Free Library. Has over 95 branches throughout the County.

SOLANO COUNTY

Fairfield: Solano County Free Library. Has over 65 branches throughout the County.

City Libraries.—Libraries of the various cities and towns throughout the region will also be found to have varying numbers of works on ornithology.

Next below we list the city, county and some institutional libraries, together with the approximate total number of volumes credited to each in the Annual Report of Libraries of October, 1925. Since the larger the library, as a rule the better the chance of its containing books in any one limited class, these figures should prove helpful to the student of birds casting about for special literature.

ALAMEDA COUNTY

Alameda Free Public Library, 70,433.

Berkeley:

Berkeley Public Library, 137,631.

University of California Library, 610,460.

Hayward Public Library (and County branch), 4454.
 Livermore Free Library (and County branch), 4928.
 Oakland:
 Alameda County Free Library, 116,570.
 Margaret Carnegie Library, Mills College, 32,316.
 Oakland Free Library, 306,395.
 San Leandro Free Public Library (and County branch), 5859.

CONTRA COSTA COUNTY

Martinez:
 Contra Costa County Free Library, 142,657.
 Richmond Public Library, 70,884.

MARIN COUNTY

Larkspur Free Public Library, 2363.
 Mill Valley Public Library, 5114.
 San Anselmo Free Public Library, 6273.
 San Rafael Public Library, 12,621.
 Sausalito Free Public Library, 5746.

NAPA COUNTY

Calistoga Free Public Library, 3908.
 Napa:
 Goodman Library, 16,633.
 Napa County Free Library, 22,823.
 St. Helena:
 Pacific Union College Library, (?).
 St. Helena Public Library, 8628.

SAN FRANCISCO (CITY AND COUNTY)

San Francisco:
 California Academy of Sciences Library, 15,000.
 Free Public Library of the City and County of San Francisco, 340,020.
 Mechanics' Mercantile Library, 94,992.

SAN MATEO COUNTY

Burlingame Public Library, 14,513.
 Redwood City:
 Redwood City Free Public Library (and County branch), 6771.
 San Mateo County Free Library, 32,045.
 San Mateo Public Library, 16,548.

SANTA CLARA COUNTY

Campbell Free Library (and County branch), 1110.
 Gilroy Public Library (and County branch), 5550.
 Leland Stanford Junior University Library, 326,629.
 Los Gatos Public Library, 10,476.
 Mountain View Public Library (and County branch), 5776.
 Palo Alto Public Library, 19,881.
 San Jose:
 San Jose Free Public Library, 28,837.
 Santa Clara County Free Library, 96,653.
 State Teachers College Library, 25,016.
 Santa Clara Free Public Library, 1500.
 Sunnyvale Free Public Library, 3642.

SOLANO COUNTY

Benicia Free Public Library (and County branch), 3300.
 Dixon Free Public Library, 4556.
 Fairfield:
 Solano County Free Library, 61,430.
 Suisun Free Public Library (?)
 Vacaville Free Public Library, 2611.
 Vallejo Public Library (and County branch), 22,861.

SONOMA COUNTY

Cloverdale Free Public Library, 2092.
Healdsburg Carnegie Public Library, 7066.
Petaluma Public Library, 14,704.
Santa Rosa Free Public Library, 30,763.
Sebastopol Free Public Library, 4527.
Sonoma Public Library, 3523.

Most public libraries stand ready to purchase such books and sets of periodicals as are likely to be of general interest. With the current spread of interest in out-of-door natural history little argument is necessary toward making available locally through this means a very good working set of bird books.

Then the more advanced student of ornithology should know of the facilities open through the inter-library loan system. The rarer books, often of too high cost to permit of local purchase, can be secured on loan at bare cost of mailing from distant libraries, such as the Sacramento State Library, by making appropriate request through the local city or county library. This well-established system has been used to very good advantage in cases we know of.

PUBLIC MUSEUMS

In final resort, accuracy in the identification of the species of our birds can only be secured through the careful examination of specimens. In the cases of most subspecies, indeed, there must be at hand specimens in series, so that minute comparisons can be made, and variations due to sex, age and season, as well as geography, be understood. Most students, nowadays, do not find it possible to collect bird-skins for themselves, though we believe this practice highly advantageous in affording quick and close familiarity with birds in the field. The next best thing is to study collections of specimens already preserved, and of such there are several of considerable extent in the Bay region, accessible to any earnest student of birds. The largest of these are as follows.

University of California, Museum of Vertebrate Zoology, Berkeley.
Museum of the California Academy of Sciences, Golden Gate Park, San Francisco.
Zoological Museum, Leland Stanford Junior University.
Oakland Public Museum, Lake Merritt, Oakland.

In addition to the above museums, some high schools contain sets of study-skins of common birds, and these are usually accessible through appeal to the instructors in biology. Then, in some communities there are known to be private collections, though we are not at liberty, of course, to direct the general public to them. Suitable inquiry will often result in locating private collectors, and, as a rule, the natural history student will find himself received cordially and given valuable instruction in the very points concerning which he seeks information.

ACKNOWLEDGMENTS

The chief source of the facts incorporated in the present paper is comprised in the Museum of Vertebrate Zoology, University of California. This department of the University has served actively during the past eighteen years as a reservoir for information in this particular field of ornithology. The information thus accumulated pertains to our collections of bird skins, to the formally filed field notes of several of our staff members, and to numerous letters—replies to pertinent inquiries—contained in the correspondence file. It is proper here to state that all this accumulation has been made possible through the establishment and continued maintenance of this Museum by Miss Annie M. Alexander, of Oakland. From the outset Miss Alexander

has not only sympathized with the principle of continued gathering of materials, but she has herself participated, from time to time, in field work in nearly all of the Bay counties.

Among the pertinent materials now preserved in the Museum of Vertebrate Zoology is the J. Grinnell collection of bird skins and accompanying notes, made in the vicinity of Palo Alto, 1900 to 1903; the F. O. Johnson collection made in the vicinity of Oakland, 1889 to 1892; the J. M. Willard collection from Oakland and Pescadero; and a portion of the W. E. Bryant collection, gathered in the neighborhoods of Santa Rosa and Oakland. There have also been numerous lesser contributions.

Only in small degree of second importance in a study of the birds of the Bay region are the collections contained in the California Academy of Sciences, Golden Gate Park. There are included there the very valuable Marin County collections of J. and J. W. Mailliard, from which we have secured numerous date and locality records not hitherto published. Then the same institution contains the W. Otto Emerson collection of birds, gathered over a long period of years in the vicinity of Hayward, Alameda County. Smaller collections now housed there include those of H. O. Jenkins, T. E. Slevin, and H. B. Kaeding. We hereby extend thanks to Dr. Barton Warren Evermann, Director of the Museum of the Academy, for the privilege of making use of facts from these collections, as also to Mr. Joseph Mailliard, Curator of the Department of Ornithology and Mammalogy, for his own free permission to the same effect; and to his aide, Miss Mary E. McLellan, for intelligent and time-consuming help in our work with those collections.

A third institution under whose care are collections we have found resourceful of facts, is the Zoological Museum at Stanford University. The W. W. Price collection and that of Mr. Chase Littlejohn have both produced a good many details of information in regard to the bird life of the lower "Peninsula", supplementary to those provided through the one-time activities of the senior author in the same territory. To Professor John O. Snyder, in charge of the Stanford collections, we hereby offer our sincere acknowledgments for permission to make free use of them.

We have received information, verbally or by letter, from a number of experienced bird students in the Bay region, active members of the Cooper Ornithological Club, to whom we have made special appeal, namely, from Mrs. Amelia S. Allen, Mrs. Junea W. Kelly, Mr. and Mrs. A. S. Kibbe, Mr. Henry W. Carriger, Mr. Chase Littlejohn, and Mr. James Moffitt. In this connection we feel a bit disturbed at the thought that very likely we have failed to appeal to someone in the region who is possessed of important information that we ought to have had. But, at best, an enterprise such as we undertook in the present instance can never be considered complete or perfect. If there prove to have been such overlooking of sources by us, it is now in order for those who prove to have the additional facts to put them upon published record so that these facts may be freely accessible to the next persons to engage in studies upon the bird-life of the San Francisco Bay region.

SYSTEMATIC LIST OF THE SPECIES AND SUBSPECIES

We have decided, in the interests of convenience, that our General Directory of species (pp. 35 to 149) had best be given in the old American Ornithologists' Union Check-list order, since that is the sequence of species employed in most of the books and lists which we cite. At the same time, it will likely prove useful to the serious student of ornithology to have at hand the nominal list of our species now offered, arranged and classified in accordance with the most recent views concerning phylogeny. Here, too, the subspecies will be found entered in subordinated fashion, typographically, so that their relations to the species and higher groups can the more readily be perceived. The vernacular names of the subspecies have been amplified, wherever practicable, in order also better to indicate the position in the system, of the forms to which they apply.

In large part, the arrangement here set forth follows the senior author's "A Systematic List of the Birds of California" (Pacific Coast Avifauna No. 8, 1912). But numerous changes proposed since that list was issued have been incorporated. Most especially, has advantage been taken of the opportunity to adopt the higher groupings just announced by Alexander Wetmore and Waldron DeW. Miller (Auk, XLIII, 1926, pp. 337-346) in anticipation of the issuance of the fourth edition of the American Ornithologists' Union Check-list of North American Birds.

Class AVES Birds

Subclass *NEORNITHES* Latter-day Birds

Order GAVIIFORMES Loon-like Birds

Family GAVIIDAE Loons

- Gavia immer* (Brünnich). COMMON LOON.
Gavia pacifica (Lawrence). PACIFIC LOON.
Gavia stellata (Pontoppidan). RED-THROATED LOON.

Order COLYMBIFORMES Grebe-like Birds

Family COLYMBIDAE Grebes

- Colymbus holboellii* (Reinhardt). HOLBOELL GREBE.
Colymbus auritus Linnaeus. HORNED GREBE.
Colymbus nigricollis (Brehm). EARED GREBE.
Colymbus nigricollis californicus (Heermann). AMERICAN EARED GREBE.
Aechmophorus occidentalis (Lawrence). WESTERN GREBE.
Podilymbus podiceps (Linnaeus). PIED-BILLED GREBE.

Order PROCELLARIIFORMES Petrel-like Birds

Family DIOMEDEIDAE Albatrosses

- Diomedea nigripes* Audubon. BLACK-FOOTED ALBATROSS.
Diomedea albatrus Pallas. SHORT-TAILED ALBATROSS.
Thalassogeron culminatus (Gould). YELLOW-NOSED ALBATROSS.

Family HYDROBATIDAE Shearwaters, Fulmars and Petrels

- Puffinus griseus* (Gmelin). DARK-BODIED SHEARWATER.
Puffinus creatopus Coues. PINK-FOOTED SHEARWATER.

- Fulmarus glacialis* (Linnaeus). FULMAR.
Fulmarus glacialis rogersii Cassin. PACIFIC FULMAR.
Oceanodroma furcata (Gmelin). FORKED-TAILED PETREL.
Oceanodroma leucorhoa (Vieillot). LEACH PETREL.
Oceanodroma leucorhoa beali Emerson. BEAL LEACH PETREL.
Oceanodroma homochroa (Coues). ASHY PETREL.
Oceanodroma melania (Bonaparte). BLACK PETREL.

Order PELECANIFORMES Pelican-like Birds

Family PELECANIDAE Pelicans

- Pelecanus erythrorhynchos* Gmelin. AMERICAN WHITE PELICAN.
Pelecanus occidentalis Linnaeus. BROWN PELICAN.
Pelecanus occidentalis californicus Ridgway. CALIFORNIA BROWN PELICAN.

Family PHALACROCORACIDAE Cormorants

- Phalacrocorax auritus* (Lesson). DOUBLE-CRESTED CORMORANT.
Phalacrocorax auritus albociliatus Ridgway. FARALLON DOUBLE-CRESTED CORMORANT.
Phalacrocorax penicillatus (Brandt). BRANDT CORMORANT.
Phalacrocorax pelagicus Pallas. PELAGIC CORMORANT.
Phalacrocorax pelagicus resplendens Audubon. BAIRD PELAGIC CORMORANT.

Family FREGATIDAE Frigate-birds

- Fregata minor* Gmelin. MAN-O'-WAR-BIRD.
Fregata minor palmerstoni (Gmelin). PACIFIC MAN-O'-WAR-BIRD.

Order CICONIIFORMES Stork-like Birds

Family ARDEIDAE Herons, Bitterns, etc.

- Ardea herodias* Linnaeus. GREAT BLUE HERON.
Ardea herodias hyperonca Oberholser. CALIFORNIA GREAT BLUE HERON.
Casmerodius egretta (Gmelin). AMERICAN EGRET.
Egretta thula (Molina). SNOWY HERON.
Egretta thula thula (Molina). COMMON SNOWY HERON.
Butorides virescens (Linnaeus). GREEN HERON.
Butorides virescens anthonyi (Mearns). ANTHONY GREEN HERON.
Nycticorax nycticorax (Linnaeus). NIGHT HERON.
Nycticorax nycticorax naevius (Boddaert). BLACK-CROWNED NIGHT HERON.
Botaurus lentiginosus (Montagu). AMERICAN BITTERN.
Ixobrychus exilis (Gmelin). LEAST BITTERN.
Ixobrychus exilis hesperus Dickey and van Rossem. WESTERN LEAST BITTERN.

Family CICONIIDAE Storks and Wood Ibises

- Mycteria americana* Linnaeus. WOOD IBIS.

Family THRESKIORNITHIDAE Common Ibises

- Plegadis guarauna* (Linnaeus). WHITE-FACED GLOSSY IBIS.
Ajaia ajaja (Linnaeus). ROSEATE SPOONBILL.

Order ANSERIFORMES Goose-like Birds

Family ANATIDAE Ducks, Geese and Swans

- Cygnus columbianus* (Ord). WHISTLING SWAN.
Branta nigricans (Lawrence). BLACK SEA BRANT.

- Branta canadensis* (Linnaeus). CANADA GOOSE.
Branta canadensis canadensis (Linnaeus). HONKER CANADA GOOSE.
Branta canadensis hutchinsii (Richardson). HUTCHINS CANADA GOOSE.
Branta canadensis minima Ridgway. CACKLING CANADA GOOSE.
Philacte canagica (Sevastianoff). EMPEROR GOOSE.
Anser albifrons (Scopoli). WHITE-FRONTED GOOSE.
Anser albifrons albifrons (Scopoli). COMMON WHITE-FRONTED GOOSE.
Anser albifrons gambeli Hartlaub. TULE WHITE-FRONTED GOOSE.
Chen hyperboreus (Pallas). SNOW GOOSE.
Chen hyperboreus hyperboreus (Pallas). LESSER SNOW GOOSE.
Chen rossii (Cassin). ROSS SNOW GOOSE.
Dendrocygna bicolor (Vieillot). FULVOUS TREE-DUCK.
Anas platyrhynchos Linnaeus. MALLARD.
Anas platyrhynchos platyrhynchos Linnaeus. COMMON MALLARD.
Chaulelasmus streperus (Linnaeus). GADWALL.
Mareca penelope (Linnaeus). EUROPEAN WIDGEON.
Mareca americana (Gmelin). BALDPATE.
Dafila acuta (Linnaeus). PINTAIL DUCK.
Dafila acuta tzitzihoa (Vieillot). AMERICAN PINTAIL DUCK.
Nettion carolinense (Gmelin). GREEN-WINGED TEAL.
Querquedula discors (Linnaeus). BLUE-WINGED TEAL.
Querquedula cyanoptera (Vieillot). CINNAMON TEAL.
Spatula clypeata (Linnaeus). SHOVELLER DUCK.
Aix sponsa (Linnaeus). WOOD DUCK.
Nyroca americana (Eyton). REDHEAD DUCK.
Nyroca valisineria (Wilson). CANVAS-BACK DUCK.
Nyroca marila (Linnaeus). GREATER SCAUP DUCK.
Nyroca affinis (Eyton). LESSER SCAUP DUCK.
Nyroca collaris (Donovan). RING-NECKED DUCK.
Glaucionetta clangula (Linnaeus). GOLDEN-EYE.
Glaucionetta clangula americana (Bonaparte). AMERICAN GOLDEN-EYE.
Glaucionetta islandica (Gmelin). BARROW GOLDEN-EYE.
Charitonetta albeola (Linnaeus). BUFFLE-HEAD DUCK.
Clangula hyemalis (Linnaeus). OLD-SQUAW DUCK.
Histrionicus histrionicus (Linnaeus). HARLEQUIN DUCK.
Histrionicus histrionicus pacificus W. S. Brooks. WESTERN HARLEQUIN DUCK.
Somateria spectabilis (Linnaeus). KING EIDER.
Melanitta deglandi (Bonaparte). WHITE-WINGED SCOTER.
Melanitta perspicillata (Linnaeus). SURF SCOTER.
Oidemia americana Swainson. AMERICAN SCOTER.
Erismatura jamaicensis (Gmelin). RUDDY DUCK.
Lophodytes cucullatus (Linnaeus). HOODED MERGANSER.
Mergus americanus Cassin. AMERICAN MERGANSER.
Mergus serrator Linnaeus. RED-BREASTED MERGANSER.

Order FALCONIFORMES Hawk-like Birds

Family CATHARTIDAE American Vultures

- Cathartes aura* (Linnaeus). TURKEY VULTURE.
Cathartes aura septentrionalis Wied. NORTHERN TURKEY VULTURE.
Gymnogyps californianus (Shaw). CALIFORNIA CONDOR.

Family ACCIPITRIDAE Hawks, Eagles, etc.

- Elanus leucurus* (Vieillot). WHITE-TAILED KITE.
Elanus leucurus majusculus Bangs and Penard. NORTH AMERICAN WHITE-TAILED KITE.
Astur atricapillus (Wilson). AMERICAN GOSHAWK.
Accipiter velox (Wilson). SHARP-SHINNED HAWK.
Accipiter cooperii (Bonaparte). COOPER HAWK.
Buteo borealis (Gmelin). RED-TAILED HAWK.
Buteo borealis calurus Cassin. WESTERN RED-TAILED HAWK.
Buteo lineatus (Gmelin). RED-SHOULDERED HAWK.
Buteo lineatus elegans Cassin. RED-BELLIED RED-SHOULDERED HAWK.
Buteo swainsoni Bonaparte. SWAINSON HAWK.
Archibuteo lagopus (Brünnich). ROUGH-LEGGED HAWK.
Archibuteo lagopus sancti-johannis (Gmelin). AMERICAN ROUGH-LEGGED HAWK.
Archibuteo ferrugineus (Lichtenstein). FERRUGINOUS ROUGH-LEGGED HAWK.
Aquila chrysaëtos (Linnaeus). GOLDEN EAGLE.
Haliaeetus leucocephalus (Linnaeus). BALD EAGLE.
Haliaeetus leucocephalus leucocephalus (Linnaeus). SOUTHERN BALD EAGLE.
Circus hudsonius (Linnaeus). MARSH HAWK.
Pandion haliaëtus (Linnaeus). OSPREY.
Pandion haliaëtus carolinensis (Gmelin). AMERICAN OSPREY.

Family FALCONIDAE Falcons, etc.

- Falco mexicanus* Schlegel. PRAIRIE FALCON.
Falco peregrinus Tunstall. DUCK HAWK.
Falco peregrinus anatum Bonaparte. AMERICAN DUCK HAWK.
Falco columbarius Linnaeus. PIGEON HAWK.
Falco columbarius bendirei Swann. WESTERN PIGEON HAWK.
Falco sparverius Linnaeus. SPARROW HAWK.
Falco sparverius phalaena (Lesson). DESERT SPARROW HAWK.

Order GALLIFORMES Fowl-like Birds

Family TETRAONIDAE Grouse, Ptarmigan, etc.

- Dendragapus obscurus* (Say). DUSKY GROUSE.
Dendragapus obscurus fuliginosus (Ridgway). SOOTY DUSKY GROUSE.

Family PERDICIDAE Partridges, Quails, etc.

- Lophortyx californica* (Shaw). CALIFORNIA QUAIL.
Lophortyx californica californica (Shaw). COAST CALIFORNIA QUAIL.
Lophortyx californica vallicola (Ridgway). INTERIOR CALIFORNIA QUAIL.
Oreortyx picta (Douglas). MOUNTAIN QUAIL.
Oreortyx picta picta (Douglas). COAST MOUNTAIN QUAIL.

Family PHASIANIDAE Pheasants

- Phasianus torquatus* Gmelin. RING-NECKED PHEASANT.

ORDER MEGALORNITHIFORMES Crane-like Birds

Family MEGALORNITHIDAE Cranes

- Megalornis canadensis* (Linnaeus). LITTLE BROWN CRANE.

Family RALLIDAE Rails, Coots, etc.

- Rallus obsoletus* Ridgway. CALIFORNIA CLAPPER RAIL.
Rallus virginianus Linnaeus. VIRGINIA RAIL.
Porzana carolina (Linnaeus). SORA RAIL.
Coturnicops noveboracensis (Gmelin). YELLOW RAIL.
Creciscus jamaicensis (Gmelin). BLACK RAIL.
Creciscus jamaicensis coturniculus (Ridgway). CALIFORNIA BLACK RAIL.
Gallinula chloropus (Linnaeus). GALLINULE.
Gallinula chloropus cachinnans Bangs. FLORIDA GALLINULE.
Fulica americana Gmelin. AMERICAN COOT.

Order CHARADRIIFORMES Plover-like Birds

Family HAEMATOPODIDAE Oyster-catchers

- Haematopus bachmani* Audubon. BLACK OYSTER-CATCHER.

Family CHARADRIIDAE Plovers, Turnstones, etc.

- Charadrius dubius* Scopoli. RINGED PLOVER.
Charadrius dubius curonicus Gmelin. LITTLE RINGED PLOVER.
Charadrius nivosus (Cassin). SNOWY PLOVER.
Charadrius nivosus nivosus (Cassin). WESTERN SNOWY PLOVER.
Charadrius semipalmatus Bonaparte. SEMIPALMATED PLOVER.
Eupoda montana (J. K. Townsend). MOUNTAIN PLOVER.
Oxyechus vociferus (Linnaeus). KILLDEER.
Oxyechus vociferus vociferus (Linnaeus). NORTHERN KILLDEER.
Pluvialis dominica (Müller). GOLDEN PLOVER.
Pluvialis dominica dominica (Müller). AMERICAN GOLDEN PLOVER.
Squatarola squatarola (Linnaeus). BLACK-BELLIED PLOVER.
Squatarola squatarola cynosurae Thayer and Bangs. AMERICAN BLACK-BELLIED PLOVER.
Aphriza virgata (Gmelin). SURF-BIRD.
Arenaria interpres (Linnaeus). TURNSTONE.
Arenaria interpres morinella (Linnaeus). RUDDY TURNSTONE.
Arenaria melanocephala (Vigors). BLACK TURNSTONE.

Family SCOLOPACIDAE Snipes, Sandpipers, etc.

- Capella delicata* (Ord). WILSON SNIPE.
Numenius americanus Bechstein. LONG-BILLED CURLEW.
Phaeopus hudsonicus (Latham). HUDSONIAN CURLEW.
Actitis macularia (Linnaeus). SPOTTED SANDPIPER.
Heteroscelus incanus (Gmelin). WANDERING TATTLER.
Catoptrophorus semipalmatus (Gmelin). WILLET.
Catoptrophorus semipalmatus inornatus (Brewster). WESTERN WILLET.
Totanus melanoleucus (Gmelin). GREATER YELLOW-LEGS.
Totanus flavipes (Gmelin). LESSER YELLOW-LEGS.
Canutus canutus Linnaeus. KNOT.
Canutus canutus rufus (Wilson). AMERICAN KNOT.
Pisobia maculata (Vieillot). PECTORAL SANDPIPER.
Pisobia minutilla (Vieillot). LEAST SANDPIPER.
Pelidna alpina (Linnaeus). DUNLIN.
Pelidna alpina sakhalina (Vieillot). RED-BACKED DUNLIN.
Limnodromus griseus (Gmelin). DOWITCHER.
Limnodromus griseus scolopaceus (Say). LONG-BILLED DOWITCHER.

Ereunetes mauri Cabanis. WESTERN SANDPIPER.
Limosa fedoa (Linnaeus). MARBLED GODWIT.
Calidris alba (Pallas). SANDERLING.

Family **RECURVIROSTRIDAE** Avocets and Stilts

Recurvirostra americana Gmelin. AMERICAN AVOCET.
Himantopus mexicanus (Müller). BLACK-NECKED STILT.

Family **PHALAROPODIDAE** Phalaropes

Phalaropus fulicarius (Linnaeus). RED PHALAROPE.
Steganopus tricolor Vieillot. WILSON PHALAROPE.
Lobipes lobatus (Linnaeus). NORTHERN PHALAROPE.

Family **STERCORARIIDAE** Jaegers and Skuas

Stercorarius pomarinus (Temminck). POMARINE JAEGER.
Stercorarius parasiticus (Linnaeus). PARASITIC JAEGER.

Family **LARIDAE** Gulls, Terns, etc.

Larus hyperboreus Gunnerus. GLAUCOUS GULL.
Larus glaucescens Naumann. GLAUCOUS-WINGED GULL.
Larus occidentalis Audubon. WESTERN GULL.
Larus occidentalis occidentalis Audubon. NORTHERN WESTERN GULL.
Larus argentatus Pontoppidan. HERRING GULL.
Larus argentatus smithsonianus Coues. AMERICAN HERRING GULL.
Larus californicus Lawrence. CALIFORNIA GULL.
Larus delawarensis Ord. RING-BILLED GULL.
Larus canus Linnaeus. MEW GULL.
Larus canus brachyrhynchus Richardson. SHORT-BILLED MEW GULL.
Larus philadelphia (Ord). BONAPARTE GULL.
Larus heermanni Cassin. HEERMANN GULL.
Rissa tridactyla (Linnaeus). KITTIWAKE.
Rissa tridactyla pollicaris Stejneger. PACIFIC KITTIWAKE.
Xema sabini (Sabine). SABINE GULL.
Sterna hirundo Linnaeus. COMMON TERN.
Sterna forsteri Nuttall. FORSTER TERN.
Sterna antillarum (Lesson). LEAST TERN.
Sterna antillarum browni Mearns. CALIFORNIA LEAST TERN.
Thalasseus maximus (Boddaert). ROYAL TERN.
Thalasseus elegans (Gambel). ELEGANT TERN.
Hydroprogne caspia (Pallas). CASPIAN TERN.
Hydroprogne caspia imperator (Coues). COUES CASPIAN TERN.
Chlidonias nigra (Linnaeus). BLACK TERN.
Chlidonias nigra surinamensis (Gmelin). AMERICAN BLACK TERN.

Family **ALCIDAE** Auks, Murres, etc.

Uria troille (Linnaeus). MURRE.
Uria troille californica (H. Bryant). CALIFORNIA MURRE.
Cephus columba Pallas. PIGEON GUILLEMOT.
Brachyramphus marmoratus (Gmelin). MARBLED MURRELET.
Endomychura hypoleuca (Xantus). XANTUS MURRELET.
Synthliboramphus antiquus (Gmelin). ANCIENT MURRELET.
Ptychoramphus aleuticus (Pallas). CASSIN AUKLET.

Phaleris psittacula (Pallas). PAROQUET AUKLET.
Cerorhinca monocerata (Pallas). RHINOCEROS AUKLET.
Fratercula corniculata (Naumann). HORNED PUFFIN.
Lunda cirrhata (Pallas). TUFTED PUFFIN.

Order COLUMBIFORMES Pigeon-like Birds

Family COLUMBIDAE Pigeons and Doves

Columba fasciata Say. BAND-TAILED PIGEON.
Columba fasciata fasciata Say. NORTHERN BAND-TAILED PIGEON.
Zenaidura macroura (Linnaeus). MOURNING DOVE.
Zenaidura macroura marginella (Woodhouse). WESTERN MOURNING DOVE.
Chamaepelia passerina (Linnaeus). GROUND DOVE.
Chamaepelia passerina pallescens Baird. MEXICAN GROUND DOVE.

Order CUCULIFORMES Cuckoo-like Birds

Family CUCULIDAE Cuckoos, etc.

Coccyzus americanus (Linnaeus). YELLOW-BILLED CUCKOO.
Coccyzus americanus occidentalis Ridgway. CALIFORNIA YELLOW-BILLED CUCKOO.
Geococcyx californianus (Lesson). CALIFORNIA ROAD-RUNNER.

Order STRIGIFORMES Owl-like Birds

Family TYTONIDAE Barn Owls

Tyto alba (Scopoli). BARN OWL.
Tyto alba pratincola (Bonaparte). AMERICAN BARN OWL.

Family STRIGIDAE Eared Owls

Otus asio (Linnaeus). SCREECH OWL.
Otus asio bendirei (Brewster). CALIFORNIA COAST SCREECH OWL.
Bubo virginianus (Gmelin). GREAT HORNED OWL.
Bubo virginianus pacificus Cassin. PACIFIC GREAT HORNED OWL.
Nyctea nyctea (Linnaeus). SNOWY OWL.
Glaucidium gnoma Wagler. PIGMY OWL.
Glaucidium gnoma grinnelli Ridgway. COAST PIGMY OWL.
Speotyto cunicularia (Molina). BURROWING OWL.
Speotyto cunicularia hypugaea (Bonaparte). NORTHERN BURROWING OWL.
Strix occidentalis (Xantus). SPOTTED OWL.
Strix occidentalis caurina (Merriam). NORTHERN SPOTTED OWL.
Asio wilsonianus (Lesson). AMERICAN LONG-EARED OWL.
Asio flammeus (Pontoppidan). SHORT-EARED OWL.
Asio flammeus flammeus (Pontoppidan). NORTHERN SHORT-EARED OWL.
Cryptoglaux acadica (Gmelin). SAW-WHET OWL.

Order CAPRIMULGIFORMES Goatsucker-like Birds

Family CAPRIMULGIDAE Goatsuckers, etc.

Phalaenoptilus nuttallii (Audubon). POOR-WILL.
Phalaenoptilus nuttallii californicus Ridgway. DUSKY POOR-WILL.
Chordeiles virginianus (Gmelin). VIRGINIA NIGHTHAWK.
Chordeiles virginianus hesperis Grinnell. PACIFIC VIRGINIA NIGHTHAWK.

Order MICROPODIIFORMES Swift-like Birds

Family MICROPODIDAE Swifts

Nephoecetes niger (Gmelin). BLACK SWIFT.

Nephoecetes niger borealis (Kennerly). NORTHERN BLACK SWIFT.

Chaetura vauxii (J. K. Townsend). VAUX SWIFT.

Aëronautes melanoleucus (Baird). WHITE-THROATED SWIFT.

Family TROCHILIDAE Hummingbirds

Archilochus alexandri (Bourcier and Mulsant). BLACK-CHINNED HUMMINGBIRD.

Calypte costae (Bourcier). COSTA HUMMINGBIRD.

Calypte anna (Lesson). ANNA HUMMINGBIRD.

Selasphorus rufus (Gmelin). RUFIOUS HUMMINGBIRD.

Selasphorus alleni Henshaw. ALLEN HUMMINGBIRD.

Stellula calliope (Gould). CALLIOPE HUMMINGBIRD.

Order CORACIIFORMES Roller-like Birds

Family ALCEDINIDAE Kingfishers

Megaceryle alcyon (Linnaeus). BELTED KINGFISHER.

Megaceryle alcyon caurina (Grinnell). WESTERN BELTED KINGFISHER.

Order PICIFORMES Woodpecker-like Birds

Family PICIDAE Woodpeckers

Colaptes auratus (Linnaeus). YELLOW-SHAFTED FLICKER.

Colaptes auratus borealis Ridgway. BOREAL YELLOW-SHAFTED FLICKER.

Colaptes cafer (Gmelin). RED-SHAFTED FLICKER.

Colaptes cafer collaris Vigors. MONTEREY RED-SHAFTED FLICKER.

Ceophloeus pileatus (Linnaeus). PILEATED WOODPECKER.

Ceophloeus pileatus picinus (Bangs). WESTERN PILEATED WOODPECKER.

Balanosphyra formicivora (Swainson). ACORN-STORING WOODPECKER.

Balanosphyra formicivora bairdi (Ridgway). CALIFORNIA ACORN-STORING WOODPECKER.

Asyndesmus lewisi Riley. LEWIS WOODPECKER.

Sphyrapicus varius (Linnaeus). SAPSUCKER.

Sphyrapicus varius nuchalis Baird. RED-NAPED SAPSUCKER.

Sphyrapicus varius daggetti Grinnell. SIERRA NEVADA RED-BREASTED SAPSUCKER.

Dryobates villosus (Linnaeus). HAIRY WOODPECKER.

Dryobates villosus hyloscopus Cabanis and Heine. CABANIS HAIRY WOODPECKER.

Dryobates pubescens (Linnaeus). DOWNY WOODPECKER.

Dryobates pubescens turati (Malherbe). WILLOW DOWNY WOODPECKER.

Dryobates nuttallii (Gambel). NUTTALL LADDER-BACKED WOODPECKER.

Order PASSERIFORMES Sparrow-like Birds

Family TYRANNIDAE Tyrant Flycatchers

Tyrannus verticalis Say. WESTERN KINGBIRD.

Myiarchus cinerascens (Lawrence). ASH-THROATED FLYCATCHER.

Myiarchus cinerascens cinerascens (Lawrence). NORTHERN ASH-THROATED FLYCATCHER.

Sayornis saya (Bonaparte). SAY PHOEBE.

Sayornis saya saya (Bonaparte). ROCKY MOUNTAIN SAY PHOEBE.

Sayornis saya yukonensis Bishop. NORTHERN SAY PHOEBE.

- Sayornis nigricans* (Swainson). BLACK PHOEBE.
Empidonax traillii (Audubon). TRAILL FLYCATCHER.
Empidonax traillii traillii (Audubon). WESTERN TRAILL FLYCATCHER.
Empidonax hammondi (Xantus). HAMMOND FLYCATCHER.
Empidonax difficilis Baird. WESTERN FLYCATCHER.
Empidonax difficilis difficilis Baird. YELLOW-BELLIED WESTERN FLYCATCHER.
Myiochanes richardsonii (Swainson). WESTERN WOOD PEWEE.
Myiochanes richardsonii richardsonii (Swainson). COMMON WESTERN WOOD PEWEE.
Nuttallornis borealis (Swainson). OLIVE-SIDED FLYCATCHER.
Nuttallornis borealis majorinus Bangs and Penard. GREATER OLIVE-SIDED FLYCATCHER.

Family ALAUDIDAE Larks

- Otocoris alpestris* (Linnaeus). HORNED LARK.
Otocoris alpestris actia Oberholser. CALIFORNIA HORNED LARK.

Family HIRUNDINIDAE Swallows

- Tachycineta thalassina* (Swainson). VIOLET-GREEN SWALLOW.
Tachycineta thalassina lepida Mearns. NORTHERN VIOLET-GREEN SWALLOW.
Iridoprocne bicolor (Vieillot). TREE SWALLOW.
Riparia riparia (Linnaeus). BANK SWALLOW.
Riparia riparia riparia (Linnaeus). AMERICAN BANK SWALLOW.
Stelgidopteryx serripennis (Audubon). ROUGH-WINGED SWALLOW.
Hirundo erythrogaster Boddaert. BARN SWALLOW.
Petrochelidon albifrons (Rafinesque). CLIFF SWALLOW.
Petrochelidon albifrons albifrons (Rafinesque). NORTHERN CLIFF SWALLOW.
Progne subis (Linnaeus). PURPLE MARTIN.
Progne subis hesperia Brewster. WESTERN PURPLE MARTIN.

Family CORVIDAE Crows, Jays, etc.

- Cyanocitta stelleri* (Gmelin). STELLER JAY.
Cyanocitta stelleri carbonacea Grinnell. SOUTHERN COAST STELLER JAY.
Cyanocitta stelleri frontalis (Ridgway). BLUE-FRONTED STELLER JAY.
Aphelocoma californica (Vigors). CALIFORNIA JAY.
Aphelocoma californica ooleptica Swarth. NORTHWESTERN CALIFORNIA JAY.
Aphelocoma californica californica (Vigors). SOUTHERN CALIFORNIA JAY.
Aphelocoma californica immanis Grinnell. INTERIOR CALIFORNIA JAY.
Pica nuttallii (Audubon). YELLOW-BILLED MAGPIE.
Corvus corax Linnaeus. RAVEN.
Corvus corax sinuatus Wagler. WESTERN RAVEN.
Corvus brachyrhynchos Brehm. AMERICAN CROW.
Corvus brachyrhynchos hesperis Ridgway. WESTERN AMERICAN CROW.
Cyanocephalus cyanocephalus (Wied). PINYON JAY.
Nucifraga columbiana (Wilson). CLARK NUTCRACKER.

Family PARIDAE Titmouses, Chickadees, etc.

- Penthestes rufescens* (J. K. Townsend). CHESTNUT-BACKED CHICKADEE.
Penthestes rufescens rufescens (J. K. Townsend). NORTHWESTERN CHESTNUT-BACKED CHICKADEE.
Penthestes rufescens neglectus (Ridgway). MARIN CHESTNUT-BACKED CHICKADEE.
Penthestes rufescens barlowi (Grinnell). SANTA CRUZ CHESTNUT-BACKED CHICKADEE.
Baeolophus inornatus (Gambel). PLAIN TITMOUSE.
Baeolophus inornatus inornatus (Gambel). CALIFORNIA PLAIN TITMOUSE.

- Psaltriparus minimus* (J. K. Townsend). BUSH-TIT.
Psaltriparus minimus minimus (J. K. Townsend). PACIFIC COAST BUSH-TIT.
Psaltriparus minimus californicus Ridgway. CALIFORNIA BUSH-TIT.

Family SITTIDAE Nuthatches

- Sitta carolinensis* Latham. WHITE-BREADED NUTHATCH.
Sitta carolinensis aculeata Cassin. SLENDER-BILLED WHITE-BREADED NUTHATCH.
Sitta canadensis Linnaeus. RED-BREADED NUTHATCH.
Sitta pygmaea Vigors. PIGMY NUTHATCH.
Sitta pygmaea pygmaea Vigors. NORTHERN PIGMY NUTHATCH.

Family CERTHIIDAE Creepers

- Certhia familiaris* Linnaeus. BROWN CREEPER.
Certhia familiaris zelotes Osgood. SIERRA NEVADA BROWN CREEPER.
Certhia familiaris occidentalis Ridgway. TAWNY BROWN CREEPER.

Family CHAMAEIDAE Wren-tits

- Chamaea fasciata* (Gambel). WREN-TIT.
Chamaea fasciata rufula Ridgway. RUDDY WREN-TIT.
Chamaea fasciata fasciata (Gambel). INTERMEDIATE WREN-TIT.
Chamaea fasciata henschawi Ridgway. PALLID WREN-TIT.

Family CINCLIDAE Dippers

- Cinclus mexicanus* Swainson. AMERICAN DIPPER.
Cinclus mexicanus unicolor Bonaparte. NORTHERN AMERICAN DIPPER.

Family TROGLODYTIDAE Wrens

- Troglodytes aëdon* (Vieillot). HOUSE WREN.
Troglodytes aëdon parkmanii Audubon. WESTERN HOUSE WREN.
Nannus hiemalis (Vieillot). WINTER WREN.
Nannus hiemalis pacificus (Baird). WESTERN WINTER WREN.
Thryomanes bewickii (Audubon). BEWICK WREN.
Thryomanes bewickii spilurus (Vigors). VIGORS BEWICK WREN.
Thryomanes bewickii marinensis Grinnell. NICASIO BEWICK WREN.
Thryomanes bewickii drymoecus Oberholser. SAN JOAQUIN BEWICK WREN.
Telmatodytes palustris (Wilson). MARSH WREN.
Telmatodytes palustris paludicola (Baird). TULE MARSH WREN.
Telmatodytes palustris aestuarinus Swarth. SUISUN MARSH WREN.
Telmatodytes palustris plesius (Oberholser). WESTERN MARSH WREN.
Catherpes mexicanus (Swainson). CANYON WREN.
Catherpes mexicanus punctulatus Ridgway. DOTTED CANYON WREN.
Salpinctes obsoletus (Say). ROCK WREN.
Salpinctes obsoletus obsoletus (Say). NORTHERN ROCK WREN.

Family MIMIDAE Mockingbirds, Thrashers, etc.

- Mimus polyglottos* (Linnaeus). MOCKINGBIRD.
Mimus polyglottos leucopterus (Vigors). WESTERN MOCKINGBIRD.
Dumetella carolinensis (Linnaeus). CATBIRD.
Toxostoma redivivum (Gambel). CALIFORNIA THRASHER.
Toxostoma redivivum sonomae Grinnell. SONOMA CALIFORNIA THRASHER.

Family TURDIDAE Thrushes

- Planesticus migratorius* (Linnaeus). ROBIN.
Planesticus migratorius propinquus (Ridgway). WESTERN ROBIN.

Ixoreus naevius (Gmelin). VARIED THRUSH.

Ixoreus naevius naevius (Gmelin). COAST VARIED THRUSH.

Ixoreus naevius meruloides (Swainson). NORTHERN VARIED THRUSH.

Hylocichla guttata (Pallas). HERMIT THRUSH.

Hylocichla guttata guttata (Pallas). ALASKA HERMIT THRUSH.

Hylocichla guttata nanus (Audubon). DWARF HERMIT THRUSH.

Hylocichla guttata slevini Grinnell. MONTEREY HERMIT THRUSH.

Hylocichla ustulata (Nuttall). RUSSET-BACKED THRUSH.

Hylocichla ustulata ustulata (Nuttall). PACIFIC RUSSET-BACKED THRUSH.

Sialia mexicana Swainson. MEXICAN BLUEBIRD.

Sialia mexicana occidentalis J. K. Townsend. WESTERN MEXICAN BLUEBIRD.

Sialia currucoides (Bechstein). MOUNTAIN BLUEBIRD.

Myadestes townsendi (Audubon). TOWNSEND SOLITAIRE.

Family SYLVIIDAE Old-World Warblers, Kinglets, etc.

Poliophtila caerulea (Linnaeus). BLUE-GRAY GNATCATCHER.

Poliophtila caerulea amoenissima Grinnell. WESTERN BLUE-GRAY GNATCATCHER.

Regulus satrapa Lichtenstein. GOLDEN-CROWNED KINGLET.

Regulus satrapa olivaceus Baird. WESTERN GOLDEN-CROWNED KINGLET.

Corthylio calendula (Linnaeus). RUBY-CROWNED KINGLET.

Corthylio calendula calendula (Linnaeus). EASTERN RUBY-CROWNED KINGLET.

Corthylio calendula cineraceus (Grinnell). WESTERN RUBY-CROWNED KINGLET.

Corthylio calendula grinnelli (W. Palmer). SITKA RUBY-CROWNED KINGLET.

Family MOTACILLIDAE Wagtails

Anthus rubescens (Tunstall). AMERICAN PIPIT.

Family BOMBYCILLIDAE Waxwings

Bombycilla cedrorum Vieillot. CEDAR WAXWING.

Family PTILOGONATIDAE Silky Flycatchers

Phainopepla nitens (Swainson). PHAINOPEPLA.

Phainopepla nitens lepida Van Tyne. NORTHERN PHAINOPEPLA.

Family LANIIDAE Shrikes

Lanius ludovicianus Linnaeus. LOGGERHEAD SHRIKE.

Lanius ludovicianus gambeli Ridgway. CALIFORNIA LOGGERHEAD SHRIKE.

Family VIREONIDAE Vireos

Vireo gilvus (Vieillot). WARBLING VIREO.

Vireo gilvus swainsonii Baird. WESTERN WARBLING VIREO.

Vireo solitarius (Wilson). SOLITARY VIREO.

Vireo solitarius cassinii Xantus. CASSIN SOLITARY VIREO.

Vireo huttoni Cassin. HUTTON VIREO.

Vireo huttoni huttoni Cassin. CALIFORNIA HUTTON VIREO.

Vireo bellii Audubon. BELL VIREO.

Vireo bellii pusillus Coues. LEAST BELL VIREO.

Family MNIOTILTIDAE Wood Warblers

Mniotilta varia (Linnaeus). BLACK-AND-WHITE WARBLER.

Vermivora peregrina (Wilson). TENNESSEE WARBLER.

Vermivora ruficapilla (Wilson). NASHVILLE WARBLER.

Vermivora ruficapilla gutturalis (Ridgway). CALAVERAS NASHVILLE WARBLER.

- Vermivora celata* (Say). ORANGE-CROWNED WARBLER.
Vermivora celata celata (Say). EASTERN ORANGE-CROWNED WARBLER.
Vermivora celata lutescens (Ridgway). LUTESCENT ORANGE-CROWNED WARBLER.
Vermivora celata sordida (C. H. Townsend). DUSKY ORANGE-CROWNED WARBLER.
Dendroica aestiva (Gmelin). YELLOW WARBLER.
Dendroica aestiva brewsteri Grinnell. CALIFORNIA YELLOW WARBLER.
Dendroica aestiva rubiginosa (Pallas). ALASKA YELLOW WARBLER.
Dendroica magnolia (Wilson). MAGNOLIA WARBLER.
Dendroica caerulescens (Gmelin). BLACK-THROATED BLUE WARBLER.
Dendroica caerulescens caerulescens (Gmelin). CANADIAN BLACK-THROATED BLUE WARBLER.
Dendroica coronata (Linnaeus). MYRTLE WARBLER.
Dendroica coronata hooveri McGregor. ALASKA MYRTLE WARBLER.
Dendroica auduboni (J. K. Townsend). AUDUBON WARBLER.
Dendroica auduboni auduboni (J. K. Townsend). PACIFIC AUDUBON WARBLER.
Dendroica nigrescens (J. K. Townsend). BLACK-THROATED GRAY WARBLER.
Dendroica townsendi (J. K. Townsend). TOWNSEND WARBLER.
Dendroica virens (Gmelin). BLACK-THROATED GREEN WARBLER.
Dendroica occidentalis (J. K. Townsend). HERMIT WARBLER.
Seiurus aurocapillus (Linnaeus). OVEN-BIRD.
Seiurus noveboracensis (Gmelin). WATER-THRUSH.
Seiurus noveboracensis notabilis Ridgway. ALASKA WATER-THRUSH.
Oporornis tolmiei (J. K. Townsend). TOLMIE WARBLER.
Geothlypis trichas (Linnaeus). YELLOW-THROAT.
Geothlypis trichas occidentalis Brewster. WESTERN YELLOW-THROAT.
Geothlypis trichas scirpicola Grinnell. TULE YELLOW-THROAT.
Geothlypis trichas sinuosa Grinnell. SAN FRANCISCO YELLOW-THROAT.
Icteria virens (Linnaeus). YELLOW-BREASTED CHAT.
Icteria virens longicauda Lawrence. LONG-TAILED YELLOW-BREASTED CHAT.
Wilsonia pusilla (Wilson). PILEOLATED WARBLER.
Wilsonia pusilla chryseola Ridgway. GOLDEN PILEOLATED WARBLER.
Setophaga ruticilla (Linnaeus). AMERICAN REDSTART.

Family **ICTERIDAE** Troupials, etc.

- Dolichonyx oryzivorus* (Linnaeus). BOBOLINK.
Sturnella neglecta Audubon. WESTERN MEADOWLARK.
Xanthocephalus xanthocephalus (Bonaparte). YELLOW-HEADED BLACKBIRD.
Agelaius phoeniceus (Linnaeus). RED-WINGED BLACKBIRD.
Agelaius phoeniceus mailliardorum van Rossem. SAN FRANCISCO RED-WINGED BLACKBIRD.
Agelaius phoeniceus californicus Nelson. CALIFORNIA RED-WINGED BLACKBIRD.
Agelaius tricolor (Audubon). TRI-COLORED RED-WINGED BLACKBIRD.
Icterus bullockii (Swainson). BULLOCK ORIOLE.
Euphagus cyanocephalus (Wagler). BREWER BLACKBIRD.
Euphagus cyanocephalus minusculus Grinnell. CALIFORNIA BREWER BLACKBIRD.
Molothrus ater (Boddaert). COWBIRD.
Molothrus ater artemisiae Grinnell. NEVADA COWBIRD.
Molothrus ater californicus Dickey and van Rossem. CALIFORNIA COWBIRD.

Family **THRAUPIDAE** Tanagers

- Piranga ludoviciana* (Wilson). WESTERN TANAGER.

Family **FRINGILLIDAE** Finches

- Zamelodia melanocephala* (Swainson). BLACK-HEADED GROSBEAK.
Zamelodia melanocephala capitalis (Baird). PACIFIC BLACK-HEADED GROSBEAK.

- Guiraca caerulea* (Linnaeus). BLUE GROSBEEK.
Guiraca caerulea salicarius Grinnell. CALIFORNIA BLUE GROSBEEK.
Passerina amoena (Say). LAZULI BUNTING.
Passer domesticus (Linnaeus). HOUSE SPARROW.
Passer domesticus domesticus (Linnaeus). ENGLISH HOUSE SPARROW.
Hesperiphona vespertina (W. Cooper). EVENING GROSBEEK.
Hesperiphona vespertina californica Grinnell. CALIFORNIA EVENING GROSBEEK.
Carpodacus purpureus (Gmelin). PURPLE FINCH.
Carpodacus purpureus californicus Baird. CALIFORNIA PURPLE FINCH.
Carpodacus cassinii Baird. CASSIN PURPLE FINCH.
Carpodacus mexicanus (Müller). LINNET.
Carpodacus mexicanus frontalis (Say). CALIFORNIA LINNET.
Spinus pinus (Wilson). PINE SISKIN.
Spinus pinus pinus (Wilson). NORTHERN PINE SISKIN.
Spinus tristis (Linnaeus). AMERICAN GOLDFINCH.
Spinus tristis salicamans Grinnell. WILLOW AMERICAN GOLDFINCH.
Spinus psaltria (Say). ARKANSAS GOLDFINCH.
Spinus psaltria hesperophilus (Oberholser). GREEN-BACKED ARKANSAS GOLDFINCH.
Spinus lawrencei (Cassin). LAWRENCE GOLDFINCH.
Loxia curvirostra Linnaeus. RED CROSSBILL.
Loxia curvirostra minor (Brehm). AMERICAN RED CROSSBILL.
Loxia curvirostra bendirei Ridgway. BENDIRE RED CROSSBILL.
Oberholseria chlorura (Audubon). GREEN-TAILED TOWHEE.
Pipilo maculatus Swainson. SPOTTED TOWHEE.
Pipilo maculatus falcifer McGregor. SAN FRANCISCO SPOTTED TOWHEE.
Pipilo maculatus falcinellus Swarth. SACRAMENTO SPOTTED TOWHEE.
Pipilo fuscus Swainson. BROWN TOWHEE.
Pipilo fuscus petularis Grinnell and Swarth. SAN FRANCISCO BROWN TOWHEE.
Pipilo fuscus carolae McGregor. SACRAMENTO BROWN TOWHEE.
Passerculus sandwichensis (Gmelin). SAVANNAH SPARROW.
Passerculus sandwichensis sandwichensis (Gmelin). ALEUTIAN SAVANNAH SPARROW.
Passerculus sandwichensis anthinus Bonaparte. KADIAK SAVANNAH SPARROW.
Passerculus sandwichensis alaudinus Bonaparte. WESTERN SAVANNAH SPARROW.
Passerculus sandwichensis bryanti Ridgway. BRYANT SAVANNAH SPARROW.
Ammodramus savannarum (Gmelin). GRASSHOPPER SPARROW.
Ammodramus savannarum bimaculatus Swainson. WESTERN GRASSHOPPER SPARROW.
Ammospiza caudacuta (Gmelin). SHARP-TAILED SPARROW.
Ammospiza caudacuta nelsoni (J. A. Allen). NELSON SHARP-TAILED SPARROW.
Poocetes gramineus (Gmelin). VESPER SPARROW.
Poocetes gramineus affinis G. S. Miller. OREGON VESPER SPARROW.
Chondestes grammacus (Say). LARK SPARROW.
Chondestes grammacus strigatus Swainson. WESTERN LARK SPARROW.
Passerella iliaca (Merrem). FOX SPARROW.
Passerella iliaca iliaca (Merrem). EASTERN FOX SPARROW.
Passerella iliaca unalascensis (Gmelin). SHUMAGIN FOX SPARROW.
Passerella iliaca insularis Ridgway. KADIAK FOX SPARROW.
Passerella iliaca sinuosa Grinnell. VALDEZ FOX SPARROW.
Passerella iliaca annectens Ridgway. YAKUTAT FOX SPARROW.
Passerella iliaca townsendi (Audubon). TOWNSEND FOX SPARROW.
Passerella iliaca fuliginosa Ridgway. SOOTY FOX SPARROW.
Passerella iliaca altivagans Riley. ALBERTA FOX SPARROW.
Passerella iliaca megarhynchus Baird. THICK-BILLED FOX SPARROW.
Passerella iliaca brevicauda Mailliard. YOLLA BOLLY FOX SPARROW.
Aimophila ruficeps (Cassin). RUFIOUS-CROWNED SPARROW.
Aimophila ruficeps ruficeps (Cassin). CALIFORNIA RUFIOUS-CROWNED SPARROW.
Amphispiza belli (Cassin). BELL SPARROW.
Amphispiza belli belli (Cassin). CALIFORNIA BELL SPARROW.

- Junco hyemalis* (Linnaeus). SLATE-COLORED JUNCO.
Junco hyemalis hyemalis (Linnaeus). EASTERN SLATE-COLORED JUNCO
- Junco oreganus* (J. K. Townsend). OREGON JUNCO.
Junco oreganus oreganus (J. K. Townsend). NORTHWESTERN OREGON JUNCO.
Junco oreganus thurberi Anthony. SIERRA NEVADA OREGON JUNCO.
Junco oreganus pinosus Loomis. POINT PINOS OREGON JUNCO.
- Spizella passerina* (Bechstein). CHIPPING SPARROW.
Spizella passerina arizonae Coues. WESTERN CHIPPING SPARROW.
- Spizella atrogularis* (Cabanis). BLACK-CHINNED SPARROW.
Spizella atrogularis cana Coues. CALIFORNIA BLACK-CHINNED SPARROW.
- Spizella breweri* Cassin. BREWER SPARROW.
- Zonotrichia albicollis* (Gmelin). WHITE-THROATED SPARROW.
- Zonotrichia querula* (Nuttall). HARRIS SPARROW.
- Zonotrichia coronata* (Pallas). GOLDEN-CROWNED SPARROW.
- Zonotrichia leucophrys* (Forster). WHITE-CROWNED SPARROW.
Zonotrichia leucophrys gambelii (Nuttall). GAMBEL WHITE-CROWNED SPARROW.
Zonotrichia leucophrys nuttalli Ridgway. NUTTALL WHITE-CROWNED SPARROW.
- Melospiza georgiana* (Latham). SWAMP SPARROW.
- Melospiza lincolni* (Audubon). LINCOLN SPARROW.
Melospiza lincolni lincolni (Audubon). NORTHEASTERN LINCOLN SPARROW.
Melospiza lincolni gracilis (Kittlitz). FORBUSH LINCOLN SPARROW.
- Melospiza melodia* (Wilson). SONG SPARROW.
Melospiza melodia caurina Ridgway. YAKUTAT SONG SPARROW.
Melospiza melodia morphna Oberholser. RUSTY SONG SPARROW.
Melospiza melodia cleonensis McGregor. MENDOCINO SONG SPARROW.
Melospiza melodia gouldii Baird. MARIN SONG SPARROW.
Melospiza melodia samuelis (Baird). SAMUELS SONG SPARROW.
Melospiza melodia pusillula Ridgway. SALT MARSH SONG SPARROW.
Melospiza melodia santaecrucis Grinnell. SANTA CRUZ SONG SPARROW.
Melospiza melodia maxillaris Grinnell. SUISUN SONG SPARROW.
Melospiza melodia merrilli Brewster. MERRILL SONG SPARROW.
Melospiza melodia fisherella Oberholser. MODOC SONG SPARROW.

THE GENERAL DIRECTORY

SCOPE.—The authors have aimed to treat each species in the following account according to a fairly uniform system. First, in the heading, is given a common or vernacular name—the currently accepted one with, admittedly, a certain amount of elaboration in certain cases, so as more logically to indicate the kind of bird designated. There is then given, in the second line of the heading, the scientific name best to be used at the present time according to a conservative basis of determination; as a rule, it is the one employed in the 1910 edition of the American Ornithologists' Union *Check-list*. Then there are given some additional vernacular names of the species, if any, such as have been used commonly in other literature, or locally.

The general text of each species includes statements (1) defining seasonal status (whether permanently resident, a summer resident, a winter visitant, or a transient); (2) relative abundance, in the usual terms (abundant, common, fairly common, rare); (3) geographic occurrence, detailed where the species is not uniformly distributed throughout the entire territory under consideration; (4) a sort of directory, by towns and counties, so that the reader may know where to go with fair prospect of finding the bird in question (always figuring, however, on changes due to settlement); (5) the local habitat preferences of the bird, that is, the kind of ground inhabited, in other words, at least a clue as to its "ecologic niche"; and finally (6) our main aim, as emphasized in the Preface, the references under published literature to all those special articles, or paragraphs, of importance, which relate to the *living bird*—its behavior, voice, nesting habits, food, etc. In some cases, where far from adequate life history information is covered in the literature concerning our own region, we have felt more or less free to include citations relating to other parts of California, or even to other parts of North America.

WESTERN GREBE

Aechmophorus occidentalis (Lawrence)

Common winter visitant of the San Francisco Bay region; to be seen both on the open ocean near shore and on the waters of bays, tidal sloughs, and lakes. Earliest recorded date of arrival in the fall is September 9, on San Leandro Bay, Alameda County; last of the supposedly winter visiting birds, observed on May 15 on Bolinas Bay, Marin County. This grebe was found nesting on Lake Merced in 1885 (well incubated eggs, June 1); of more recent years, while individual birds have been seen occasionally at this locality through the summer months, no signs of nesting have been noted until 1926 when two nests and eggs were found there June 27 (H. W. Carriger, MS). For a detailed account of habits, food and nesting see: A. C. Bent, *Life Histories of North American Diving Birds*, 1919, p. 1. See also: V. Bailey, *Condor*, iv, 1902, p. 64; W. L. Finley, *Condor*, ix, 1907, p. 99; F. M. Bailey, *Condor*, xx, 1918, p. 171; F. M. Chapman, *Camps and Cruises*, 1908, p. 330; W. L. Dawson, *Birds of California*, 1923, p. 2039.

HOLBOELL GREBE

Colymbus holboellii (Reinhardt)

Fairly common winter visitant, chiefly on salt water. Observed on San Francisco Bay at such points as the Presidio in San Francisco, and Oakland, Alameda, and Bay Farm Island, Alameda County. Seen also, in midwinter, on Stow Lake in Golden Gate Park, San Francisco. The earliest date of appearance in the fall is October 9 and the last date of spring observation is April 11 (on Lake Merced). For general account see: A. C. Bent, *Life Histories of North American Diving Birds*, 1919, p. 9.

This account includes other references to literature, of which note particularly: J. Grinnell, Pacific Coast Avifauna no. 1, 1900, p. 4. See also: F. M. Bailey, Condor, xviii, 1916, p. 17, and Condor, xxi, 1919, p. 191.

HORNED GREBE

Colymbus auritus Linnaeus

Winter visitant; fairly common. Restricted closely to salt water. Has been observed at points on San Francisco Bay (Suisun Bay, San Pablo Bay, Oakland, Bay Farm Island, San Leandro Bay, Redwood City, etc.) from October 27 to May 20. Observed on Bolinas Bay, Marin County, on May 15. For general account see: A. C. Bent, Life Histories of North American Diving Birds, 1919, p. 20. Note in this account other references to literature. See also: W. L. Dawson, Birds of California, 1923, p. 2048.

AMERICAN EARED GREBE

Colymbus nigricollis californicus (Heermann)

Common in winter on both salt and fresh water throughout the Bay region. Most numerous from September to November (earliest on Lake Merritt, Oakland, September 20, 1925). Remains until late in April (up to the 26th in 1923). A few are found throughout the summer at Lake Merced, in San Francisco, pointing to the possibility of nesting in that particular locality. For a general account see: A. C. Bent, Life Histories of North American Diving Birds, 1919, p. 27. This account includes further references to literature. See also: W. L. Dawson, Birds of California, 1923, p. 2051; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 247; W. L. Finley, Condor, ix, 1907, p. 99; F. M. Bailey, Condor, xviii, 1916, p. 17, and Condor, xxi, 1919, pp. 6, 7, 190; W. M. Pierce, Condor, xviii, 1916, p. 177; W. E. Allen, Condor, xxv, 1923, p. 28.

PIED-BILLED GREBE

Podilymbus podiceps (Linnaeus)

Resident, in small numbers, on fresh water. Nests regularly on lakes in Golden Gate Park and on Lake Merced, San Francisco. Has also been found nesting in the vicinity of Alvarado, Alameda County. The nesting season extends from April 8 (incubated eggs at Alvarado) to August 6 (eggs at Lake Merced). Numbers increased during winter months by winter-visiting individuals. At this season this species may be looked for on salt water also: San Francisco Bay; Bodega and Tomales bays, Marin County; Lake Merritt, in Oakland (sometimes in numbers). For general accounts see: A. C. Bent, Life Histories of North American Diving Birds, 1919, p. 39; W. L. Dawson, Birds of California, 1923, p. 2057; A. A. Allen, Bird-Lore, xvi, 1914, p. 243; R. B. Rockwell, Condor, xii, 1910, p. 188; F. M. Bailey, Condor, xxi, 1919, pp. 159, 160; G. Bancroft, Condor, xxii, 1920, p. 206.

COMMON LOON

Gavia immer (Brünnich)

Fairly common winter visitant on the ocean and inner bays, occurring from the second week of October (earliest, the 9th) to early May (latest, the 13th). Is also to be found occasionally on reservoirs and lakes, as at Stow Lake (Golden Gate Park) and Merced Lake, San Francisco; Lake Merritt, in Oakland, Alameda County; and on a reservoir near Palo Alto, Santa Clara County. At the Farallon Islands and Lake Merced summer stragglers have been observed at various times in June and July. For a general account see: A. C. Bent, Life Histories of North American

Diving Birds, 1919, p. 47. Note the included reference to C. W. Beebe, Auk, xxiv, 1907, p. 34. See also: W. E. Allen, Ecology, I, 1920, p. 309; A. D. Henderson, Condor, xxvi, 1924, p. 143; W. L. Dawson, Birds of California, 1923, p. 2030.

PACIFIC LOON

Gavia pacifica (Lawrence)

Common winter visitant on both the open ocean and San Francisco Bay. The earliest in the fall, noted at Bay Farm Island, Alameda County, on November 17; the last in the spring on Bolinas Bay, Marin County, on May 15. A full-plumaged bird seen June 16, 1926, near Key Route Mole, Oakland (H. S. Swarth, MS); possibly crippled. For a full account see: A. C. Bent, Life Histories of North American Diving Birds, 1919, p. 67. This account includes other references to literature.

RED-THROATED LOON

Gavia stellata (Pontoppidan)

Common winter visitant, occurring chiefly on the open ocean. Noted on San Francisco Bay in the vicinity of Berkeley, Oakland and Bay Farm Island; on San Leandro Bay (southeast of Alameda); at Sausalito, and on Tomales and Bolinas bays, Marin County. Earliest autumn date available is November 24 for Bay Farm Island, and last date in spring is May 15, for Bolinas Bay. For general account see: A. C. Bent, Life Histories of North American Diving Birds, 1919, p. 72. Other references to literature are included in this account.

TUFTED PUFFIN

Lunda cirrhata (Pallas)

Has also been called Sea Parrot.

Resident on the open ocean, but not observed commonly during the winter. From latter part of March to end of nesting season, found in large numbers on the Farallon Islands. Some eggs are laid as early as April 30 and some as late as July 8, but the majority are laid between May 27 and June 17. The far ends of burrows and natural cavities are used for nesting places. A smaller number of Tufted Puffins also come to the cliffs at Point Reyes, Marin County, during the nesting season. In spring stragglers have been noted on San Francisco Bay near Sausalito; and once in summer (July 17, 1916), a single bird was observed about the cliffs at the mouth of Russian River, Sonoma County. For general account see: A. C. Bent, Life Histories of North American Diving Birds, 1919, p. 82. See also: W. E. Bryant, Proc. Calif. Acad. Sci., 2nd ser., I, 1888, p. 27; W. L. Dawson, Condor, xiii, 1911, p. 173; H. Heath, Condor, xvii, 1915, p. 29; M. S. Ray, Auk, xxi, 1904, p. 428; W. L. Dawson, Birds of California, 1923, p. 1507.

HORNED PUFFIN

Fratercula corniculata (Naumann)

Rare straggler on the open ocean. The only occurrences on record are for dead or decrepit birds on the outer ocean shore, in San Mateo County, all in 1919: at Mussel Rock, March 2; Coast Ways near Pescadero, May 17; Montara Beach, May 24 (see H. C. Bryant, Condor, xxi, 1919, p. 239). For a general account see: A. C. Bent, Life Histories of North American Diving Birds, 1919, p. 97; this includes further references to literature, of which note especially: J. Grinnell, Pacific Coast Avifauna no. 1, 1900, p. 6; E. W. Nelson, Report upon Natural History Collections in Alaska, 1887, p. 38. See also: R. C. McGregor, Condor, iv, 1902, p. 137; H. Heath, Condor, xvii, 1915, p. 29.

RHINOCEROS AUKLET
Cerorhinca monocerata (Pallas)

Has also been called Horn-billed Auk.

Common winter visitant on the open ocean in the vicinity of San Francisco. Has been found washed ashore on the outer beach at San Francisco, September 16, December 5 and 26, January 19, and February 22; at Half Moon Bay, November 6; and at Tunetas, San Mateo County, December 11. Formerly, previous to about 1865, remained through the summer around the Farallon Islands and nested on them. The single egg was laid in holes three to six feet deep, in May and June (see J. Grinnell, Condor, xxviii, 1926, p. 37). For other accounts see: A. C. Bent, Life Histories of North American Diving Birds, 1919, p. 104; J. Grinnell, Bulletin Cooper Orn. Club, I, 1899, p. 17; H. Heath, Condor, xvii, 1915, p. 30; W. L. Dawson, Birds of California, 1923, p. 1518; W. E. Allen, Bird-Lore, xxviii, 1926, p. 331.

CASSIN AUKLET
Ptychoramphus aleuticus (Pallas)

Common resident on the open ocean. During the summer is found in large numbers about and upon the Farallon Islands, to which it repairs for nesting. The nesting season extends ordinarily from the middle of May to mid-July, but eggs have been found from April 3 to November 20. For a general account see: A. C. Bent, Life Histories of North American Diving Birds, 1919, p. 110; in this account are other references to literature, of which note especially: W. E. Bryant, Proc. Calif. Acad. Sci., 2nd. ser., I, 1888, p. 28; F. Stephens, Auk, x, 1893, p. 298; W. L. Dawson, Condor, xiii, 1911, p. 173; H. Heath, Condor, xvii, 1915, p. 33. See also: H. Robertson, Condor, v, 1903, p. 96; W. L. Dawson, Birds of California, 1923, p. 1467.

PAROQUET AUKLET
Phaleris psittacula (Pallas)

Rare, midwinter visitant to the Bay region. Only a few instances of occurrence known, for San Francisco Bay "and ocean at San Francisco": five individuals, of dates January 10, 1895, January 8, 1899, and December 17, 1899. For a general account see: A. C. Bent, Life Histories of North American Diving Birds, 1919, p. 116. Note the included reference to: E. W. Nelson, Report upon Natural History Collections in Alaska, 1887, p. 40.

ANCIENT MURRELET
Synthliboramphus antiquus (Gmelin)

Winter visitant on the open ocean. A single bird was found on the outer sea-beach near Half Moon Bay, San Mateo County, November 25, 1920; and two were found on the outer beach of San Francisco, January 16, 1915. In San Francisco Bay a lone straggler was captured near San Bruno, San Mateo County, December 23, 1907. Other occurrences have been reported for the inner Bay, but without details. For a general account see: A. C. Bent, Life Histories of North American Diving Birds, 1919, p. 132. Note especially the following included references: C. E. Bendire, Auk, xii, 1895, p. 270; H. Heath, Condor, xvii, 1915, p. 34; L. M. Loomis, Proc. Calif. Acad. Sci., 2nd. ser., vi, 1896, p. 17; H. S. Swarth, Univ. Calif. Publ. Zool., vii, 1911, p. 32. See also: W. L. Dawson, Birds of California, 1923, p. 1481.

MARBLED MURRELET

Brachyramphus marmoratus (Gmelin)

Fairly common winter visitant on the open ocean. Occasionally observed in limited numbers on San Francisco Bay. On the ocean beach near San Francisco, one was found dead September 16; on an outer beach of San Mateo County, cast-ups found September 30 and January 19; within the Bay, found near Tiburon, Marin County, November 16 and January 4; and observed several other times (dates unrecorded) in the vicinity of Goat Island and San Francisco. For a general account see: A. C. Bent, *Life Histories of North American Diving Birds*, 1919, p. 141; in this account note especially the included reference: J. Grinnell, *Osprey*, I, 1897, p. 115. See also: W. L. Dawson, *Birds of California*, 1923, p. 1484.

XANTUS MURRELET

Endomychura hypoleuca (Xantus)

Known to the Bay region by but one instance of occurrence. A bird found, only recently dead, washed up on the beach at Half Moon Bay, San Mateo County, April 10, 1926 (C. Littlejohn, MS). For general accounts see: A. C. Bent, *Life Histories of North American Diving Birds*, 1919, p. 149; W. L. Dawson, *Birds of California*, 1923, p. 1489.

PIGEON GUILLEMOT

Cepphus columba Pallas

Common in summer on the open ocean; occasional visitant to the inner waters of San Francisco Bay. Lone stragglers have been observed on the Bay during the summer. With the beginning of the nesting season numbers resort to the Farallon Islands. Here they nest from the first week in May (earliest date May 3) to the middle of July (downy young on the 16th). Smaller numbers nest at Año Nuevo Island, San Mateo County, and Point Reyes, Marin County; and a few pairs have at various times been observed to nest in rock bluffs on the south side of the Golden Gate (in June and July of 1911, 1912 and 1916). Previous to 1909 some nested at Pedro Point, San Mateo County. For a general account of habits, nesting and distribution see: A. C. Bent, *Life Histories of North American Diving Birds*, 1919, p. 167. This account includes several other references to literature. For other accounts of habits and nesting see: W. E. Bryant, *Proc. Calif. Acad. Sci.*, 2nd. ser., I, 1888, p. 30; H. B. Kaeding, *Condor*, v, 1903, p. 122; G. Willett, *Condor*, XI, 1909, p. 186; G. Schussler, *Condor*, XVIII, 1916, p. 35; H. E. Hansen and W. A. Squires, *Condor*, XIX, 1917, p. 58; F. M. Bailey, *Handbook*, 1902, p. 16; W. L. Dawson, *Birds of California*, 1923, p. 1475.

CALIFORNIA MURRE

Uria troille californica (H. Bryant)

Has also been called California Guillemot.

Common resident on the open ocean. Resorts to certain rookeries for the nesting season, the largest of which in the region are located on ledges on the steepest slopes of the Farallon Islands. Murres nest there from the last of May to the last of July (egg dates, May 28 to July 25). Formerly nested in countless thousands, but now greatly reduced, due to various adverse factors such as depredations by an increasing population of gulls, and oil on the ocean. A smaller nesting colony is located at Point Reyes, Marin County; and formerly there was a colony nesting at Pedro Point, San Mateo County. On San Francisco Bay, Murres appear regularly within the Golden

Gate as far as the vicinity of Angel Island in late summer, and elsewhere in the Bay sporadically; for example, somewhere near Hayward, Alameda County, February 9. For a general account see: A. C. Bent, *Life Histories of North American Diving Birds*, 1919, p. 182. This account includes other references to literature. For other accounts of habits or nesting see: F. M. Bailey, *Handbook*, 1902, p. 16; J. Grinnell, *Condor*, v, 1903, p. 20; H. B. Kaeding, *Condor*, v, 1903, p. 123; W. L. Finley, *Condor*, vii, 1905, p. 166; W. L. Dawson, *Condor*, xiii, 1911, p. 174; R. H. Palmer, *Condor*, xxiii, 1921, p. 135; E. P. Walker, *Condor*, xxiv, 1922, p. 26; R. W. Chaney, *Condor*, xxvi, 1924, p. 30; L. M. Loomis, *Proc. Calif. Acad. Sci.*, 2nd. ser., vi, 1896, p. 356; C. A. Keeler, *Zoe*, iii, 1892, p. 155; W. L. Dawson, *Birds of California*, 1923, p. 1494.

POMARINE JAEGER

Stercorarius pomarinus (Temminck)

Migrant coastwise. A few noted in the fall quite regularly on San Francisco Bay between San Francisco and the Marin County shore. Dates of recorded occurrence, September 1 to October 2. Observed also, more sparingly, as a northbound migrant during the month of May (5th, 15th and 16th). For a general account see: A. C. Bent, *Life Histories of North American Gulls and Terns*, 1921, p. 7. See also: J. Mailliard, *Condor*, vi, 1904, p. 15, and *Condor*, xviii, 1916, p. 202.

PARASITIC JAEGER

Stercorarius parasiticus (Linnaeus)

Rare fall migrant, chiefly on salt water. Has been known to occur on San Francisco Bay (no particulars available: see W. H. Kobbe, in F. M. Bailey, *Handbook*, 1902, p. xlvi); also near Suisun, Solano County, October 8, 1924, and again in early October, 1925 (J. Moffitt, MS). For a general account see: A. C. Bent, *Life Histories of North American Gulls and Terns*, 1921, p. 14. This account includes references to other literature.

PACIFIC KITTIWAKE

Rissa tridactyla pollicaris Stejneger

Rare, irregular, mid-winter visitant. Has been reported occasionally from San Francisco Bay, and remains have been found on the outer ocean beach at San Francisco. For a general account see: A. C. Bent, *Life Histories of North American Gulls and Terns*, 1921, p. 44. This account includes references to other literature. See also: J. Grinnell, *Pacific Coast Avifauna* no. 1, 1900, p. 9.

GLAUCOUS GULL

Larus hyperboreus Gunnerus

Rare, irregular, mid-winter visitant. Single individuals have been reported as observed on several occasions on San Francisco Bay. Has also been observed on or near the Farallon Islands. Exact dates are lacking, save for verified occurrence of one near Alameda, March 30 (*Calif. Acad. Sci.*). For a general account see: A. C. Bent, *Life Histories of North American Gulls and Terns*, 1921, p. 52. This account includes references to other literature. See also: A. M. Bailey, *Condor*, xxvii, 1925, p. 106.

GLAUCOUS-WINGED GULL

Larus glaucescens Naumann

Fairly common winter visitant. Its stay in the Bay region seasonally dates from the middle of November (the 14th) to the first week in May (the 4th). A few have

been found around the Farallon Islands also as late as May. Restricted rather closely to salt water. Observed once, however, on the University campus at Berkeley, December 22, 1921; here a single bird was seen foraging with gulls of other species. Seen regularly at Lake Merritt, Oakland. This is one of the large gulls which commonly follow the Bay ferry-boats. For general account see: A. C. Bent, *Life Histories of North American Gulls and Terns*, 1921, p. 65. This includes other references to literature, of which note especially: L. Jones, *Wilson Bulletin*, xx, 1908, p. 197; E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 53; W. Palmer, *The Avifauna of the Pribilof Islands*, 1899, p. 394; G. Willett, *Bird-Lore*, xiv, 1912, p. 423. See also: H. Heath, *Condor*, xvii, 1915, p. 36; G. Willett, *Condor*, xxv, 1923, p. 25; J. H. Wales, *Condor*, xxviii, 1926, p. 97; H. S. Swarth, *Condor*, xxviii, 1926, p. 97; W. L. Dawson, *Birds of California*, 1923, p. 1366.

NORTHERN WESTERN GULL

Larus occidentalis occidentalis Audubon

Abundant resident on salt water. Observed the year around on both the outer ocean and the inner bays. Nesting colonies, in the Bay region, are located now only upon the Farallon Islands and the cliffs at Point Reyes. On the Farallon Islands the breeding gulls begin to congregate about the first of April. The period of egg-laying is from May 9 to July 10. This is perhaps the commonest of the large gulls which are seen to follow the ferry-boats on San Francisco Bay. For general account see: A. C. Bent, *Life Histories of North American Gulls and Terns*, 1921, p. 89. This includes other references, among which note especially: M. S. Ray, *Auk*, xxi, 1904, p. 434; A. W. Anthony, *Auk*, xxiii, 1906, p. 134; W. E. Bryant, *Proc. Calif. Acad. Sci.*, 2nd. ser., i, 1888, p. 37; C. Keeler, *Zoe*, iii, 1892, p. 157. See also: F. M. Bailey, *Handbook*, 1902, p. 21; C. Keeler, *Bird Notes Afield*, 1907, p. 42; H. S. Swarth, *Condor*, xxviii, 1926, p. 97; W. L. Dawson, *Birds of California*, 1923, p. 1376.

AMERICAN HERRING GULL

Larus argentatus smithsonianus Coues

Fairly common winter visitant. Earliest date of definite observation in the fall is November 3, at Bay Farm Island, Alameda County. Last date of observation in the spring is April 14, near Alameda. This is one of the larger gulls often to be seen following the San Francisco Bay ferry-boats. For general accounts see: A. C. Bent, *Life Histories of North American Gulls and Terns*, 1921, p. 102; G. H. Mackay, *Auk*, ix, 1892, p. 221; W. Dutcher and W. L. Baily, *Auk*, xx, 1903, p. 417; R. M. Strong, *Auk*, xxxi, 1914, pp. 22, 178.

CALIFORNIA GULL

Larus californicus Lawrence

Abundant winter visitant. Arrives in numbers by the latter part of August (as early as the 20th), and remains commonly until the first part of May (last seen on the 22nd). Small numbers, immature or non-breeding birds, remain through the summer months. Seen at times in numbers on the lawns around Lake Merritt, in Oakland; at Lake Merced, in San Francisco; along the lower Sacramento River, near Rio Vista; observed also more or less commonly, in the fall, around the Farallon Islands. One of the commonest followers of Bay ferry-boats. For general accounts see: A. C. Bent, *Life Histories of North American Gulls and Terns*, 1921, p. 124; S. H. Goodwin, *Condor*, vi, 1904, p. 99; W. L. Finley, *Condor*, ix, 1907, p. 12; H. C. Bryant, *Condor*, xxi, 1919, p. 127; R. C. Miller, *Condor*, xxv, 1923, p. 5; E. R.

Hall, Condor, xxviii, 1926, p. 87; W. L. Dawson, Birds of California, 1923, p. 1398; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 248.

RING-BILLED GULL

Larus delawarensis Ord

Common winter visitant, both along the seacoast and inland. Arrives by the first week in August (earliest the 7th), and remains until the first part of May (up to the 15th). Around San Francisco Bay, to be looked for on open water and also near the shores, as at Sausalito, Marin County; Berkeley, Oakland, Alameda and Bay Farm Island, Alameda County; and Cygnus, Solano County. Often to be seen during the day foraging away from water on open ground such as park lawns and school yards. For general accounts see: A. C. Bent, Life Histories of North American Gulls and Terns, 1921, p. 132; W. L. Finley, Condor, ix, 1907, p. 12; J. Mailliard, Condor, xviii, 1916, p. 41; G. Willett, Condor, xxi, 1919, p. 196; W. L. Dawson, Birds of California, 1923, p. 1413.

SHORT-BILLED MEW GULL

Larus canus brachyrhynchus Richardson

Common mid-winter visitant on the ocean, and found irregularly on San Francisco Bay. Has been observed from October (the 9th, at Berkeley) to March (the 30th, at Alameda). Other Bay stations are: Sausalito and Tiburon, Marin County; "bay shore near Hayward." For general accounts see: A. C. Bent, Life Histories of North American Gulls and Terns, 1921, p. 140; J. Grinnell, Pacific Coast Avifauna no. 1, 1900, p. 10; E. W. Nelson, Report upon Natural History Collections in Alaska, 1887, p. 54; W. L. Dawson, Birds of California, 1923, p. 1418.

HEERMANN GULL

Larus heermanni Cassin

Has also been called White-headed Gull.

Visitor from the south, restricted to salt water; most numerous from the middle of June to the last of October; individuals have also been observed occasionally through the winter months. Observed, at times, from ferry-boats on San Francisco Bay. Localities other than San Francisco Bay at which it has been observed are: San Pablo Bay; Bodega, Sonoma County; Farallon Islands. For general accounts see: A. C. Bent, Life Histories of North American Gulls and Terns, 1921, p. 148; A. W. Anthony, Auk, xxiii, 1906, p. 133; H. H. Bailey, Auk, xxiii, 1906, p. 377; J. E. Thayer, Condor, xiii, 1911, p. 104; F. M. Bailey, Handbook, 1902, p. 24; W. L. Dawson, Birds of California, 1923, p. 1428.

BONAPARTE GULL

Larus philadelphia (Ord)

Common, at times abundant, migrant coastwise; small numbers remain through the winter. Earliest known date in the fall migration is August 13, and latest spring date is May 20; but stray individuals have been noted also on July 20 and June 3 and 10. Varying numbers may be observed at many points on San Francisco Bay nearly every month between the extreme fall and spring dates. Localities at which they have been seen are: on Bolinas Bay, and near Sausalito and Tiburon, Marin County; Petaluma, Sonoma County; San Pablo Bay; El Cerrito, Berkeley, Oakland, Alameda and Baumberg, Alameda County; San Mateo, San Mateo County; San Francisco. Usually to be observed in loose companies flying low over the water near the shore

line. For general accounts see: A. C. Bent, Life Histories of North American Gulls and Terns, 1921, p. 175; J. R. Chalker, *Zoe*, iv, 1893, p. 225; W. L. Dawson, Birds of California, 1923, p. 1422; A. D. Henderson, *Auk*, XLIII, 1926, p. 288.

SABINE GULL

Xema sabini (Sabine)

Spring and fall migrant on the open ocean; an exact date is April 7, 1896, near Pescadero, San Mateo County (coll. Stanford Univ.). Observed rarely on the inner bays; four instances of occurrence are on record for San Francisco Bay, two in October (see W. H. Kobbe, in F. M. Bailey, Handbook, 1902, p. xlix, and W. E. Bryant, *Zoe*, III, 1892, p. 165), one for May 19 (1926), near Red Rock, between Richmond and San Rafael (J. Grinnell, MS), and one for tide flats at Albany, Alameda County, April 28 (1926) (see E. J. Booth, *Condor*, XXVIII, 1926, p. 271). For general accounts of habits, nesting and food see: A. C. Bent, Life Histories of North American Gulls and Terns, 1921, p. 191; E. W. Nelson, Report upon Natural History Collections in Alaska, 1887, p. 56.

COUES CASPIAN TERN

Hydroprogne caspia imperator (Coues)

Summer resident locally, and occasional through the winter. A nesting colony (164 nests counted, each with 2 eggs or young, July 4, 1926) found by C. Littlejohn on the San Francisco Bay marshes in San Mateo County; had been there for at least three years previously, increasing each year. Otherwise has been observed only scatteringly at various seasons; for example, on Baden Marsh, near South San Francisco, San Mateo County, June 27 and 30; near ferry slips, San Francisco, August 8; on the Bay shore at Alameda, May 26 and July 19; at West Berkeley, April 13; and on the open Bay, July 17, December 2 and 23. Also noted on the San Joaquin River, at Antioch, Contra Costa County, June 4; from Rodeo ferry, near Crockett, Contra Costa County, August 31; and at Bolinas, Marin County, October 17. For general accounts see: A. C. Bent, Life Histories of North American Gulls and Terns, 1921, p. 202; W. L. Dawson, Birds of California, 1923, p. 1435; J. G. Tyler, *Condor*, XVIII, 1916, p. 195; J. Mailliard, *Condor*, XVIII, 1916, p. 228; J. R. Pemberton, *Condor*, XXIV, 1922, p. 42; H. F. Lewis, *Auk*, XLII, 1925, p. 78.

ROYAL TERN

Thalasseus maximus (Boddaert)

Variably common visitant at almost any season along the outer sea-coast. Has been observed also on Tomales Bay, Marin County, at Oakland (August 30) and along Key Route Mole, Alameda County, and at the Presidio, in San Francisco. For general accounts see: A. C. Bent, Life Histories of North American Gulls and Terns, 1921, p. 211.

ELEGANT TERN

Thalasseus elegans (Gambel)

Irregular fall straggler into the region. Only two occurrences have been recorded, both for San Francisco Bay. One of these was of date September 17 (year unknown). For general accounts see: A. C. Bent, Life Histories of North American Gulls and Terns, 1921, p. 219; J. Grinnell, *Condor*, XXI, 1919, p. 230.

FORSTER TERN

Sterna forsteri Nuttall

Common migrant on San Francisco Bay, both in spring and in autumn. A few appear at different times during the winter. In spring has been observed up to April 30 (and once June 10) on the Alameda County shores; in Marin County has been seen as late as May 30. In the fall has been observed on the Alameda shores as early as August 4. Some winter dates are: November 18 and February 23 near Alameda, January 23 at Bay Farm Island, and February 20 at Richmond. To be looked for in flight, singly or in small companies, near sandy or marshy shorelines. For general accounts see: A. C. Bent, *Life Histories of North American Gulls and Terns*, 1921, p. 229; R. B. Rockwell, *Condor*, XIII, 1911, p. 57; M. S. Ray, *Condor*, v, 1903, p. 47, and Osprey, v, 1901, p. 116; W. L. Dawson, *Birds of California*, 1923, p. 1443.

COMMON TERN

Sterna hirundo Linnaeus

Rare migrant in the Bay region. Has been reported but twice: one decrepit individual at the Presidio in San Francisco, January 19, 1903 (see C. Littlejohn, *Condor*, v, 1903, p. 81); three individuals near Alameda, September 6, 1899 (*Calif. Acad. Sci.*). For a general account see: A. C. Bent, *Life Histories of North American Gulls and Terns*, 1921, p. 236.

CALIFORNIA LEAST TERN

Sterna antillarum browni Mearns

Rare fall straggler into the Bay region. Only one instance of occurrence definitely recorded: Two birds seen near Alameda, on the Alameda County shore of San Francisco Bay, August 19, 1923 (see A. S. Allen, *Bird-Lore*, xxv, 1923, p. 408). For general accounts see: A. C. Bent, *Life Histories of North American Gulls and Terns*, 1921, p. 270; W. L. Chambers, *Condor*, x, 1908, p. 237; R. Hoffmann, *Condor*, xxiii, 1921, p. 192; C. C. Lamb, *Condor*, xxiv, 1922, p. 182; W. L. Dawson, *Birds of California*, 1923, p. 1453.

AMERICAN BLACK TERN

Chlidonias nigra surinamensis (Gmelin)

Rare migrant. Only three definite records: One individual near Alameda, May 5, 1910 (*Calif. Acad. Sci.*); two around salt ponds near Redwood City, San Mateo County, September 8 and November 26, 1913 (coll. Stanford Univ.). For general accounts see: A. C. Bent, *Life Histories of North American Gulls and Terns*, 1921, p. 290; W. L. Dawson, *Birds of California*, 1923, p. 1460.

BLACK-FOOTED ALBATROSS

Diomedea nigripes Audubon

Has also been called Sooty Albatross and Brown Gooney.

Occurs in varying numbers on the open ocean many miles off-shore where observed following ocean steamers. Comes occasionally within sight of land. On April 6, 1914, several noted on fishing banks southwest of Golden Gate (T. I. Storer, MS). For general accounts see: A. C. Bent, *Life Histories of North American Petrels and Pelicans*, 1922, p. 1; W. L. Dawson, *Birds of California*, 1923, p. 1984; S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, II, 1884, p. 355; W. K. Fisher, *Auk*, XXI, 1904, p. 14; H. Kirby, *Condor*, xxvii, 1925, p. 186.

SHORT-TAILED ALBATROSS

Diomedea albatrus Pallas

Of irregular occurrence on the open ocean, casually entering San Francisco Bay. Observed once near Goat Island, March 10 (year unknown). One shot at the Farallon Islands March 20, 1887. For general accounts see: A. C. Bent, Life Histories of North American Petrels and Pelicans, 1922, p. 6; S. F. Baird, T. M. Brewer and R. Ridgway, Water Birds of N. Amer., II, 1884, p. 351; W. L. Dawson, Birds of California, 1923, p. 1989.

YELLOW-NOSED ALBATROSS

Thalassogeron culminatus (Gould)

Has also been called Culminated Albatross.

Rare ocean wanderer. Only one record of occurrence is known: a skull was found on the ocean beach near San Francisco some time previous to 1868 (see J. G. Cooper, Proc. Calif. Acad. Sci., IV, 1868, p. 12; L. M. Loomis, Proc. Calif. Acad. Sci., 4th ser., II, 1918, p. 84). For general account see: A. C. Bent, Life Histories of North American Petrels and Pelicans, 1922, p. 16.

PACIFIC FULMAR

Fulmarus glacialis rogersii Cassin

Has also been called Rodgers Fulmar.

Fairly common winter visitant. Small numbers have been observed both on the open ocean and on San Francisco Bay. Earliest appearance is for August 18, in the vicinity of the Farallon Islands, and the latest in the season is for a vagrant, February 4, on the Bay near Redwood City, San Mateo County. For general accounts see: A. C. Bent, Life Histories of North American Petrels and Pelicans, 1922, p. 38; A. W. Anthony, Auk, XII, 1895, p. 100; W. L. Dawson, Birds of California, 1923, p. 1992.

PINK-FOOTED SHEARWATER

Puffinus creatopus Coues

Rare wanderer into our region. Beyond observations of occurrence many years ago near the Farallon Islands, in June, and near "San Francisco", by J. G. Cooper, only one instance is known: A bird was found dead on July 7, 1906, on the road between Irvington and Hayward, Alameda County, some fifty miles away from the nearest ocean shore-line (see W. O. Emerson, Condor, IX, 1907, p. 60). For a general account see: A. C. Bent, Life Histories of North American Petrels and Pelicans, 1922, p. 62.

DARK-BODIED SHEARWATER

Puffinus griseus (Gmelin)

Has also been called Sooty Shearwater.

Present on the open ocean in numbers at intervals during the late summer and fall. Occasional small flights enter San Francisco Bay, reaching as far as Angel and Alcatraz islands. Dates on which such movements have been observed are July 20, 21 and 22, August 7, and September 8; individual birds have also been found washed up on the "outer beach" (south of the Cliff House), September 14, 16 and 28. For general account see: A. C. Bent, Life Histories of North American Petrels and Pelicans, 1922, p. 85; W. L. Dawson, Birds of California, 1923, p. 2001; F. M. Bailey, Handbook, 1902, p. 36; L. M. Loomis, Proc. Calif. Acad. Sci., 3rd. ser., II, 1900, pp. 278-307; J. Mailliard, Condor, XVIII, 1916, pp. 30, 232, and Condor, XXII, 1920, p. 41.

FORKED-TAILED PETREL
Oceanodroma furcata (Gmelin)

Probably of not uncommon occurrence in fall and winter on the open ocean. Only two records: 15 to 25 miles west of Point Reyes, Marin County, common, and specimens obtained August 10 to 12, 1903; near Farallon Islands, one individual, November 29, 1906 (see L. M. Loomis, Proc. Calif. Acad. Sci., 4th. ser., II, 1918, p. 177). For account see: W. L. Dawson, Birds of California, 1923, p. 2010.

BEAL LEACH PETREL
Oceanodroma leucorhoa beali Emerson

Has also been called Leach Petrel, Kaeding Petrel and Belding Petrel.

Occurs in small numbers on the Farallon Islands. Nesting birds have been found there on June 3 and between July 8 and 16. Birds with eggs were taken from interstices of stone walls and rock piles. The species has been noted casually at four other localities in the Bay region: Año Nuevo Island, San Mateo County, May 12, 1898; Pigeon Point Light, south of Pescadero, San Mateo County, May 7, 1899; cliff near mouth of Russian River, Sonoma County, July 17, 1916; near the Oakland shore of San Francisco Bay, May 7, 1917. For accounts of habits and nesting see: A. C. Bent, Life Histories of North American Petrels and Pelicans, 1922, p. 147; L. M. Loomis, Proc. Calif. Acad. Sci., 2nd. ser., VI, 1896, p. 359; W. L. Dawson, Condor, XIII, 1911, p. 176, and Birds of California, 1923, p. 2013.

BLACK PETREL
Oceanodroma melania (Bonaparte)

Has also been called Black Stormy Petrel.

Rare wanderer from the southward into the Bay region. Only two instances of occurrence are reported: "near San Francisco" (see S. F. Baird, Proc. Acad. Nat. Sci. Phila., 1859, p. 306), and open ocean 15 to 25 miles west of Point Reyes, Marin County, August 10 to 12, 1903 (see L. M. Loomis, Proc. Calif. Acad. Sci., 4th. ser., II, 1918, p. 174). For accounts of habits and nesting see: A. C. Bent, Life Histories of North American Petrels and Pelicans, 1922, p. 156; A. W. Anthony, Nidologist, IV, 1896, p. 16, and Auk, XV, 1898, p. 140; W. L. Dawson, Birds of California, 1923, p. 2027.

ASHY PETREL
Oceanodroma homochroa (Coues)

Fairly common in summer on the Farallon Islands. Elsewhere in the region noted only as a wanderer or an occasional visitant: Point Reyes, Marin County, a single dead bird found; open ocean 15 to 25 miles west of Point Reyes, August 10 to 12, 1903; near Redwood City, San Mateo County, one bird observed November 9, 1909, and another reported on November 16, 1911; Pigeon Point Light, south of Pescadero, San Mateo County, April 26, 1897. On the Farallon Islands the nesting season extends from May to July (egg dates, May 15 to July 13). Nesting birds are to be looked for in crevices beneath loosely piled rocks or under piles of driftwood. For accounts of habits and nesting see: A. C. Bent, Life Histories of North American Petrels and Pelicans, 1922, p. 159; H. B. Kaeding, Condor, V, 1903, p. 125; W. L. Dawson, Condor, XIII, 1911, p. 176; C. Barlow, Nidologist, I, 1894, p. 171; L. M. Loomis, Proc. Calif. Acad. Sci., 2nd ser., VI, 1896, p. 361; W. E. Bryant, Proc. Calif. Acad. Sci., 2nd ser., I, 1888, p. 38; W. L. Dawson, Birds of California, 1923, p. 2024.

FARALLON DOUBLE-CRESTED CORMORANT
Phalacrocorax auritus albociliatus Ridgway

Has also been called White-crested Cormorant, Farallon Cormorant, Townsend Cormorant, Lesser White-tufted Cormorant, and Common Shag.

Common resident. Occurs not only on the ocean, but on brackish and fresh waters inland, as at Petaluma, Sonoma County, Cygnus and Grizzly Island, Solano County, Bay Farm Island and Lake Merritt in Oakland, Alameda County, and Lake Merced, San Francisco County. The largest breeding colony is upon the Farallon Islands; another small colony is located on Seal Rocks at the Golden Gate. The egg-laying season extends from about May 9 to the middle of July. For accounts of habits and nesting see: A. C. Bent, *Life Histories of North American Petrels and Pelicans*, 1922, p. 257; M. S. Ray, *Auk*, XXI, 1904, p. 436; J. Grinnell, *Condor*, x, 1908, p. 189; H. W. Wright, *Condor*, xv, 1913, p. 209; F. M. Bailey, *Condor*, xviii, 1916, p. 105; J. Van Denburgh, *Condor*, xxvi, 1924, p. 69; E. R. Hall, *Condor*, xxviii, 1926, p. 88; W. E. Bryant, *Proc. Calif. Acad. Sci.*, 2nd ser., I, 1888, p. 39; C. Chamberlin, *Nidologist*, III, 1895, p. 29; W. L. Dawson, *Birds of California*, 1923, p. 1937.

BRANDT CORMORANT
Phalacrocorax penicillatus (Brandt)

Abundant resident along the sea-coast, and sporadically common on adjacent bays. To be seen flying in lines low over the water, or in groups at rest in certain chosen rookeries, either on precipitous shores of the mainland or on rocky islands. Breeding rookeries are located on Seal Rocks at the Golden Gate; on Point Reyes, Marin County; at the mouth of the Russian River, Sonoma County; and on the Farallon Islands. The egg-laying season extends from May 21 to the last of July. The nests of the Brandt Cormorant are placed in great colonies on gradual slopes, far less steep than the cliffs chosen by the Baird Cormorant. For general accounts see: A. C. Bent, *Life Histories of North American Petrels and Pelicans*, 1922, p. 265; W. E. Bryant, *Proc. Calif. Acad. Sci.*, 2nd ser., I, 1888, p. 40; L. M. Loomis, *Proc. Calif. Acad. Sci.*, 2nd ser., v, 1895, p. 217; M. S. Ray, *Auk*, XXI, 1904, p. 437; W. L. Finley, *Condor*, VII, 1905, p. 161; G. Willett, *Condor*, XI, 1909, p. 186, and *Condor*, XII, 1910, p. 173; C. W. Townsend, *Condor*, XXVII, 1925, p. 92; W. L. Dawson, *Birds of California*, 1923, p. 1948.

BAIRD PELAGIC CORMORANT
Phalacrocorax pelagicus resplendens Audubon

Has also been called Violet-green Cormorant, and Pelagic Cormorant.

Fairly common resident, though less numerous than the two preceding species. To be found along the outer, exposed coast line and ocean, as at Point Reyes, Marin County, Pedro Island, San Mateo County, and on the Farallon Islands. Has been seen occasionally in San Francisco Bay, but in only small numbers. Nesting season is from about the first of May to the middle of July. Nests, either in small groups or singly, are situated in well-nigh inaccessible crannies of ocean-facing cliffs. For general accounts see: A. C. Bent, *Life Histories of North American Petrels and Pelicans*, 1922, p. 276; M. S. Ray, *Auk*, XXI, 1904, p. 438; W. E. Bryant, *Proc. Calif. Acad. Sci.*, 2nd ser., I, 1888, p. 41; W. L. Dawson, *Birds of California*, 1923, p. 1956.

AMERICAN WHITE PELICAN
Pelecanus erythrorhynchos Gmelin

Has also been called American Pelican and Rough-billed Pelican.

Migrant and casual visitant. Has been observed on Tomales Bay, Marin County, on San Francisco Bay, and at Cygnus, Solano County. In 1899, several individuals, doubtless bewildered by the fog, were observed at Hayward, Alameda County, on December 24, and in Redwood Creek Canyon, Alameda County, on December 30 (see W. O. Emerson, *Condor*, II, 1900, p. 34). On the salt marshes near Baumberg, Alameda County, September 12, 1926, about 160 White Pelicans were seen (see *The Gull*, VIII, October, 1926, p. 3). Sometimes seen in migration in flocks overhead; as, for instance, above Berkeley, April 11 (1925). For accounts of habits and nesting see: A. C. Bent, *Life Histories of North American Petrels and Pelicans*, 1922, p. 282; S. H. Goodwin, *Condor*, VI, 1904, p. 126; W. L. Finley, *Condor*, IX, 1907, p. 35; J. Grinnell, *Condor*, X, 1908, p. 187; M. P. Skinner, *Condor*, XIX, 1917, p. 178 (in Yellowstone Park); F. M. Bailey, *Condor*, XX, 1918, p. 29, and *Condor*, XXII, 1920, p. 70 (in North Dakota); H. B. Ward, *Condor*, XXVI, 1924, p. 136; L. Mills, *Condor*, XXVII, 1925, p. 32; E. R. Hall, *Condor*, XXVII, 1925, p. 148; F. M. Chapman, *Camps and Cruises*, 1908, p. 367; W. L. Dawson, *Birds of California*, 1923, p. 1961.

CALIFORNIA BROWN PELICAN
Pelecanus occidentalis californicus Ridgway

Has also been called Brown Pelican and Gray Pelican.

Visitant from the south, chiefly in summer, fall and early winter along the outer sea coast, but occasionally entering the Bay. Stragglers reported from Oakland waterfront, Oakland harbor and from Roberts' Landing, below Hayward, Alameda County. Formerly seen in numbers on Alcatraz Island, and has been observed on the Farallon Islands, but not with certainty known to nest here. Small groups or single individuals may be observed in flight low over the water, or perched on rocks off-shore, or resting on open beaches. For accounts of habits and nesting see: A. C. Bent, *Life Histories of North American Petrels and Pelicans*, 1922, p. 301; W. L. Dawson, *Birds of California*, 1923, p. 1970; A. B. Howell, *Condor*, XIV, 1912, p. 188; H. W. Wright, *Condor*, XI, 1909, p. 99; F. M. Bailey, *Condor*, XVIII, 1916, p. 107; S. B. Peyton, *Condor*, XIX, 1917, p. 102; C. H. Woodward, *Condor*, XXIII, 1921, p. 137; W. E. Allen, *Condor*, XXIV, 1922, p. 213, and *Condor*, XXV, 1923, p. 107; H. R. Taylor, *Nidologist*, I, 1893, p. 37.

PACIFIC MAN-O'-WAR-BIRD
Fregata minor palmerstoni (Gmelin)

Has also been called Frigate Bird and Frigate Pelican.

Very rare, irregular visitant. Instances of occurrence, of single individuals, are known from the Bay region as follows: Black Point, at mouth of Petaluma Creek, Marin County (June 20, 1905); "Santa Clara"; "San Francisco"; Farallon Islands. For detailed accounts of habits and nesting see: A. C. Bent, *Life Histories of North American Petrels and Pelicans*, 1922, p. 306; W. K. Fisher, *Condor*, VI, 1904, p. 57; F. M. Chapman, *Camps and Cruises*, 1908, p. 217; S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, II, 1884, p. 128; R. H. Beck, *Condor*, VI, 1904, p. 9.

AMERICAN MERGANSER
Mergus americanus Cassin

Has also been called Fish Duck, Sawbill, Goosander, and Sheldrake.

Winter visitant in fair numbers. Has been found near Alameda and Newark, Alameda County (January 22, February 24, and March 24), near Tiburon, Marin County (January 1), and on fresh water marshes near Suisun, Solano County. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 79; A. C. Bent, *Life Histories of North American Wild Fowl, Order Anseres (Part)*, 1923, p. 1. These accounts contain other references to literature, of which note particularly: C. W. Townsend, *Auk*, xxxiii, 1916, p. 10; H. S. Swarth, *Univ. Calif. Publ. Zool.*, vii, 1911, p. 39. See also: E. R. Hall, *Condor*, xxviii, 1926, p. 90; W. L. Dawson, *Birds of California*, 1923, p. 1743; J. C. Phillips, *Natural History of Ducks*, iv, 1926, p. 256.

RED-BREASTED MERGANSER
Mergus serrator Linnaeus

Has also been called Red-breasted Sheldrake, Fish Duck, and Sawbill.

Presumably common winter visitant along open ocean shores; also visits inside bays and salt water lagoons. Has been reported definitely from Bodega, Sonoma County, from San Francisco and San Francisco Bay, from near Berkeley, Alameda County, and from the Farallon Islands. Observed on Lake Merced, San Francisco County, April 11, 1920. There is also one record of occurrence in summer: two birds (male and female) observed on Russian River, one mile from the ocean, on July 17, 1924 (see W. A. Squires, *Condor*, xviii, 1916, p. 232). For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 84; A. C. Bent, *Life Histories of North American Wild Fowl, Order Anseres (Part)*, 1923, p. 13. These accounts contain numerous other references to literature. See also: W. L. Dawson, *Birds of California*, 1923, p. 1747; J. C. Phillips, *Natural History of Ducks*, iv, 1926, p. 279.

HOODED MERGANSER
Lophodytes cucullatus (Linnaeus)

Has also been called Hooded Sheldrake.

Now a rather rare winter visitant, though previous to 1885 seen frequently in parts of Marin and Sonoma counties. Noted chiefly on fresh water. Localities from which it has been definitely reported are: Black Point, Marin County; Mark West Creek and Sobre Vista, Sonoma County; San Francisco and San Francisco Bay; Pescadero and Redwood City, San Mateo County; Bay Farm Island and Alvarado, Alameda County; Suisun marshes and Putah Creek, Solano County. Recorded dates of observation extend from October to April (latest, the 27th). For detailed accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 89; A. C. Bent, *Life Histories of North American Wild Fowl, Order Anseres (Part)*, 1923, p. 22; W. L. Dawson, *Birds of California*, 1923, p. 1749; J. C. Phillips, *Natural History of Ducks*, iv, 1926, p. 241.

COMMON MALLARD
Anas platyrhynchos platyrhynchos Linnaeus

Has also been called Greenhead.

Common resident of fresh water marshes, ponds and streams. Becomes abundant during winter due to influx of a large winter-visiting contingent. At this season small numbers occasionally visit salt water, as, for example, Lake Merritt, in Oakland.

Localities at which the Mallard has nested are: Lake Merced and lakes of Golden Gate Park, in San Francisco; Cygnus and Wheeler Island, Solano County; Alvarado and Hayward, Alameda County; San Jose, Santa Clara County. Nesting season extends from the last of April (the 28th) to early June (eggs on the 5th). Nests are situated on the ground in tules or weeds of marshes or in grasses or low shrubbery on the shores of lakes or ponds. For detailed account of habits, nesting and food see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 92; this includes many other citations to literature. See also: J. C. Phillips, *Natural History of Ducks*, II, 1923, p. 3; A. C. Bent, *Life Histories of North American Wild Fowl*, Order Anseres (Part), 1923, p. 34; W. L. Dawson, *Birds of California*, 1923, p. 1751.

GADWALL

Chaulelasmus streperus (Linnaeus)

Has also been called Gray Duck.

Rare winter visitant to fresh water marshes. Has been definitely reported only from Point Reyes Station, Marin County, Bodega, Sonoma County, vicinity of San Francisco, and Cygnus, Solano County. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 103; J. C. Phillips, *Natural History of Ducks*, II, 1923, p. 138; A. C. Bent, *Life Histories of North American Wild Fowl*, Order Anseres (Part), 1923, p. 77; L. C. Sanford, L. B. Bishop and T. S. Van Dyke, *The Water-fowl Family*, 1903, p. 87. For shorter accounts of habits and nesting see: H. C. Bryant, *Condor*, XVI, 1914, p. 222; F. M. Bailey, *Condor*, XVIII, 1916, p. 15; W. L. Dawson, *Birds of California*, 1923, p. 1758.

EUROPEAN WIDGEON

Mareca penelope (Linnaeus)

Has also been called Red-headed Widgeon.

Occasional winter visitant. Single individuals have been found from November to February of different years on San Francisco Bay, on Lake Merritt in Oakland, and at Rio Vista, Solano County. Is said to have been of frequent occurrence around the south arm of San Francisco Bay in the 80's. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 111; J. C. Phillips, *Natural History of Ducks*, II, 1923, p. 167; A. C. Bent, *Life Histories of North American Wild Fowl*, Order Anseres (Part), 1923, p. 86.

BALDPATE

Mareca americana (Gmelin)

Has also been called Widgeon and American Widgeon.

Abundant winter visitant, arriving in September and remaining until March. Once observed as late as June 5, on Stow Lake in Golden Gate Park, San Francisco. Found mostly on fresh water, but considerable numbers sometimes visit salt water, as at Lake Merritt in Oakland, and on Tomales Bay, Marin County. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 106; A. C. Bent, *Life Histories of North American Wild Fowl*, Order Anseres (Part), 1923, p. 89; J. C. Phillips, *Natural History of Ducks*, II, 1923, p. 189; W. L. Dawson, *Birds of California*, 1923, p. 1761.

GREEN-WINGED TEAL

Nettion carolinense (Gmelin)

Has also been called Green-wing and Common Teal.

Common winter visitant, arriving in September and leaving in March. Most numerous and widely distributed in November, December and January. Prefers

fresh water marshes, ponds and lakes, though occasionally found on salt water, as at Lake Merritt in Oakland. Has also been found in summer, nesting in fresh water marshes near Alvarado, Alameda County. Young of varying sizes have been observed there from June 22 to July 14 (see W. N. Dirks, Calif. Fish and Game, II, 1916, p. 46). For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 113; A. C. Bent, Life Histories of North American Wild Fowl, Order Anseres (Part), 1923, p. 102; J. C. Phillips, Natural History of Ducks, II, 1923, p. 231.

BLUE-WINGED TEAL

Querquedula discors (Linnaeus)

Rare visitant to the Bay region. Only two instances of occurrence are known: Napa, Napa County (see W. E. Bryant, Zoe, II, 1891, p. 128); Vallejo, Solano County (W. H. Kobbe, in F. M. Bailey, Handbook of Birds of Western United States, 1902, p. xlix). Unfortunately, dates of these occurrences are not available. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 120; A. C. Bent, Life Histories of North American Wild Fowl, Order Anseres (Part), 1923, p. 111; J. C. Phillips, Natural History of Ducks, II, 1923, p. 373; W. L. Dawson, Birds of California, 1923, p. 1769.

CINNAMON TEAL

Querquedula cyanoptera (Vieillot)

Has also been called Red-breasted Teal.

Found sparingly as a summer resident on fresh water ponds and sloughs. Present from April 15 to September 5. Rarely has an individual been recorded in winter, for example, at Vallejo, Solano County. Nesting birds have been observed on marshes near College Park, Santa Clara County, Alvarado and Irvington, Alameda County, and at Wheeler Island, Solano County. Nests are to be looked for in marsh grass on boggy ground or in tules standing in shallow water. Dates for eggs found in the above named localities range from April 15 to May 13. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 123; A. C. Bent, Life Histories of North American Wild Fowl, Order Anseres (Part), 1923, p. 122. These include further references to literature, among which note especially: F. A. Schneider, Nidologist, I, 1893, p. 20; H. C. Bryant, Condor, XVI, 1914, p. 222. See also J. C. Phillips, Natural History of Ducks, II, 1923, p. 390; W. L. Dawson, Birds of California, 1923, p. 1771.

SHOVELLER DUCK

Spatula clypeata (Linnaeus)

Has also been called Spoonbill and Spoonie.

Common winter visitant to fresh water; occasionally found also on salt or brackish water. A very few pairs stay through the summer and nest. Eggs or young have been found on the Bay marshes near Hayward, Alameda County, March 28 and April 25; at Alvarado, Alameda County, April 15 and 23, May 25, and June 17; and at Wheeler Island, Solano County, May 8. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 129; A. C. Bent, Life Histories of North American Wild Fowl, Order Anseres (Part), 1923, p. 135; J. C. Phillips, Natural History of Ducks, III, 1925, p. 10; W. L. Dawson, Birds of California, 1923, p. 1778. For an original account of nesting in our region see: W. O. Emerson, Condor, III, 1901, p. 116. For status on Lake Merritt, Oakland, see A. S. Kibbe, Condor, XXVII, 1925, p. 57.

AMERICAN PINTAIL DUCK
Dafla acuta tzitzihoa (Vieillot)

Has also been called Sprig and Sprigtail.

Abundant winter visitant. Arrives in great numbers the first part of September, although smaller numbers, of undoubted migrants, have been seen as early as August 4 (at Alvarado); winter visitants stay until March. Prefers fresh water, but is to be found also on salt water, as at Lake Merritt in Oakland, and on brackish sloughs, as at Cordelia, Solano County. A few pairs remain through the summer and nest in fresh water marshes, as near Hayward (eggs, April 18) and near Alvarado (eggs, April 21), both localities in Alameda County. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 134; A. C. Bent, *Life Histories of North American Wild Fowl, Order Anseres (Part)*, 1923, p. 144. Note especially the included references: E. Coues, *Birds of the Northwest*, 1874, p. 561; J. Grinnell, *Pacific Coast Avifauna* no. 1, 1900, p. 14; R. B. Rockwell, *Condor*, XIII, 1911, p. 186; H. C. Bryant, *Condor*, XVI, 1914, p. 220. See also: F. C. Lincoln, *Condor*, XXVI, 1924, p. 88; A. S. Kibbe, *Condor*, XXVII, 1925, p. 57; J. C. Phillips, *Natural History of Ducks*, II, 1923, p. 306; W. L. Dawson, *Birds of California*, 1923, p. 1784.

WOOD DUCK
Aix sponsa (Linnaeus)

Has also been called Summer Duck.

Formerly present in some numbers, but not known in a wild state from any part of the Bay region in recent years. Localities at which it formerly occurred are: Creeks in vicinity of Santa Rosa, Sonoma County (up to 1898); Gallinas (nested in 1872 or 1873), Paper Mill and Lagunitas (up to about 1886) creeks, Marin County; Napa River, Napa County; Cordelia and Cygnus (last about 1908), Solano County; San Francisco; "San Mateo County"; Oakland, Alameda County (January 23, 1882). For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 140; A. C. Bent, *Life Histories of North American Wild Fowl, Order Anseres (Part)*, 1923, p. 158. These accounts include many other references to literature. See also: J. Dixon, *Condor*, XXVI, 1924, p. 41.

REDHEAD DUCK
Nyroca americana (Eyton)

Winter visitant in small numbers on both fresh and salt water. Most numerous in early spring, on San Francisco and San Pablo bays. Also, known to have nested in the region, at Alvarado (eggs on April 23) and near Irvington (eggs on June 3 and 16), on the east side of San Francisco Bay, in Alameda County. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 146; A. C. Bent, *Life Histories of North American Wild Fowl, Order Anseres (Part)*, 1923, p. 175, and *Auk*, XIX, 1902, p. 7; J. C. Phillips, *Natural History of Ducks*, III, 1925, p. 163; A. Wetmore, *Auk*, XXXVII, 1920, p. 243; R. B. Rockwell, *Condor*, XIII, 1911, p. 191; W. L. Dawson, *Birds of California*, 1923, p. 1800.

CANVAS-BACK DUCK
Nyroca valisineria (Wilson)

Abundant winter visitant to bays and salt water marshes. Early arrivals reach us during the first part of October and some birds remain until the first part of April (last, the 22nd); most plentiful from late November to early March. To be looked

for mostly on open, deeper water, especially when resting; when foraging, to be seen nearer shore, on the inner bays and the marshes. Resorts in numbers to Lake Merced and lakes in Golden Gate Park in San Francisco, and to Lake Merritt, in Oakland. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 150; A. C. Bent, *Life Histories of North American Wild Fowl*, Order Anseres (Part), 1923, p. 189. These accounts include further references to literature. See also: J. C. Phillips, *Natural History of Ducks*, III, 1925, p. 121; J. Dixon, *National Geographic Magazine*, October, 1919, p. 331, and A. S. Kibbe, *Condor*, XXVII, 1925, p. 57 (ducks on Lake Merritt); W. L. Dawson, *Birds of California*, 1923, p. 1803.

GREATER SCAUP DUCK
Nyroca marila (Linnaeus)

Has also been called Big Blue-bill and Big Black-head.

Winter visitant to bays and salt water marshes. Similarity in appearance to the Lesser Scaup (see next account) makes field identification difficult, so that it is not possible to determine how common, relatively, this duck is. However, it has been recorded definitely for the following localities: San Francisco Bay from Oakland to Port Costa; Lake Merritt, Oakland; Alameda (February 21 to April 25); San Pablo Bay; the lagoon at San Gregorio, San Mateo County; Bodega, Sonoma County; Olema and San Rafael, Marin County. For general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 156. Of included references, note especially: E. W. Nelson, Report upon Natural History Collections in Alaska, 1887, p. 71. See also A. C. Bent, *Life Histories of North American Wild Fowl*, Order Anseres (Part), 1923, p. 207; W. L. Dawson, *Birds of California*, 1923, p. 1807; J. C. Phillips, *Natural History of Ducks*, III, 1925, p. 248.

LESSER SCAUP DUCK
Nyroca affinis (Eyton)

Has also been called Blue-bill, Little Black-head, and Broad-bill.

Abundant winter visitant to bays and salt marshes, occurring in greatest numbers from October to April. The commonest duck ordinarily to be seen in the neighborhood of the ferry slips on the east side of San Francisco Bay and between Sausalito and Mill Valley. Common throughout the winter on Lake Merritt, Oakland. Small numbers are to be found throughout the summer also. A few families of young observed on Stow Lake in Golden Gate Park and on Lake Merced in San Francisco, indicate occasional nesting in the region (though probably by birds unable to migrate). For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 159; A. C. Bent, *Life Histories of North American Wild Fowl*, Order Anseres (Part), 1923, p. 217; W. L. Dawson, *Birds of California*, 1923, p. 1810; J. C. Phillips, *Natural History of Ducks*, III, 1925, p. 272. Also see: J. Mailliard, *Condor*, XVII, 1915, p. 235.

RING-NECKED DUCK
Nyroca collaris (Donovan)

Has also been called Ring-bill, Black-jack, and Black-head.

Rather uncommon, but fairly regular, winter visitant. Earliest seen in the fall on October 7, at Berkeley, Alameda County, and latest seen in spring on March 7, on a lake in Golden Gate Park, San Francisco. On intervening dates individuals or small groups have been observed on fresh-water lakes or reservoirs—the preferred habitat of the species—at the following additional localities: Lake Merritt, Oakland,

Alameda County; Menlo Park, Redwood City, and ridge back of Black Mountain, San Mateo County; Phoenix and Lagunitas lakes, Marin County; Suisun, Solano County. For general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 164; this includes other references to literature. See also: A. C. Bent, *Life Histories of North American Wild Fowl, Order Anseres (Part)*, 1923, p. 224; J. C. Phillips, *Natural History of Ducks*, III, 1925, p. 182; J. Mailliard, *Condor*, XXIV, 1922, p. 101; W. L. Dawson, *Birds of California*, 1923, p. 1812.

AMERICAN GOLDEN-EYE

Glaucionetta clangula americana (Bonaparte)

Has also been called Whistler.

Fairly common visitant during the winter, from November (6th) to April (25th). To be looked for on bays and salt marshes. Localities at which it has been found are: Point Reyes Station, Marin County; Tubbs Island and Bodega, Sonoma County; on San Pablo and San Francisco bays; Stege Station, Contra Costa County; Lake Merritt, in Oakland, and Alameda, Alameda County; near Redwood City, San Mateo County. For general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 167. This includes other references to literature, among which note particularly: W. Brewster, *Condor*, XIII, 1911, p. 22, and *Auk*, XVII, 1900, p. 207; C. W. Townsend, *Auk*, XXVII, 1910, p. 177. See also: A. S. Kibbe, *Condor*, XXVII, 1925, p. 57; W. L. Dawson, *Birds of California*, 1923, p. 1814; J. C. Phillips, *Natural History of Ducks*, III, 1925, p. 298.

BARROW GOLDEN-EYE

Glaucionetta islandica (Gmelin)

Has also been called Rocky Mountain Golden-eye and Whistler.

Rare winter visitant. Has been found on San Francisco Bay on several occasions from the middle of November to "early spring". Definite localities at which it has been reported as observed are: salt marshes of Marin County, at Ross Landing and Point San Pedro; and salt marshes of San Mateo County, near Redwood City. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 173; J. C. Phillips, *Natural History of Ducks*, III, 1925, p. 324. For other accounts see: J. A. Munro, *Condor*, XX, 1918, p. 3; F. M. Bailey, in *Wild Animals of Glacier National Park* (U. S. Dept. Interior), 1918, p. 122; H. C. Bryant, *Calif. Fish and Game*, VI, 1920, p. 37.

BUFFLE-HEAD DUCK

Charitonetta albeola (Linnaeus)

Has also been called Butter-ball and Dipper.

Common winter visitant on salt or brackish water of San Francisco Bay and of other bays in the region, with their bordering marshes. Observed also regularly on lakes at Golden Gate Park in San Francisco, and on Lake Merritt in Oakland. Arrives some time in October (October 15 at Cygnus, Solano County), and remains until some time in April. For a general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 177. This includes various other references to accounts of the species. See also: J. Dixon, *Condor*, XXIII, 1921, p. 165; A. S. Kibbe, *Condor*, XXVII, 1925, p. 57; W. L. Dawson, *Birds of California*, 1923, p. 1819; J. C. Phillips, *Natural History of Ducks*, III, 1925, p. 334.

OLD-SQUAW DUCK
Clangula hyemalis (Linnaeus)

Has also been called Long-tailed Duck.

Found in mid-winter, rarely, from the middle of November to February. Restricted to salt water. On the ocean shore has been observed at Point Reyes, Marin County. On San Francisco Bay has been observed as follows: at San Francisco (repeatedly); near Redwood City, San Mateo County (December 17 and January 25); near San Rafael, Marin County; at Alviso, Santa Clara County; and also on the Suisun marshes, Solano County. For general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 181; note the following list of included citations: E. H. Forbush, *Game Birds, Wild-Fowl and Shore Birds of Mass.*, 1912, p. 139; E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 72; W. Palmer, *The Avifauna of the Pribilof Islands*, 1899, p. 378; L. C. Sanford, L. B. Bishop and T. S. Van Dyke, *The Water-fowl Family*, 1903, p. 153. In addition, see: G. H. Mackay, *Auk*, ix, 1892, p. 330; A. M. Bailey, *Condor*, xxvii, 1925, p. 170; W. L. Dawson, *Birds of California*, 1923, p. 1822; J. C. Phillips, *Natural History of Ducks*, iii, 1925, p. 347.

WESTERN HARLEQUIN DUCK
Histrionicus histrionicus pacificus W. S. Brooks

Irregular visitant, in varying numbers, to outer, open ocean shores. Large numbers observed in scattering flocks on Tomales Bay, Marin County, in the fall of 1913; others seen at the same time on the ocean off Tomales Point; numbers seen on ocean beyond the surf at Point Reyes, Marin County, in June, 1880. Have also been found on Bodega Bay, Marin County; and once within San Francisco Bay, at Belvedere, October 2, 1903. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 186. Note especially the following included references: L. Belding, *Zoe*, ii, 1891, p. 98; H. B. Kaeding, *Osprey*, ii, 1898, p. 77; F. M. Bailey, *Handbook*, 1902, p. 61. See also: A. H. Norton, *Auk*, xiii, 1896, p. 229; C. W. Michael and E. Michael, *Auk*, xxxix, 1922, p. 14; H. C. Bryant, *Condor*, xxiii, 1921, p. 35; W. B. Johnstone, *Condor*, xxiii, 1921, p. 98; J. Grinnell, *Condor*, xxiv, 1922, p. 180; D. D. McLean, *Condor*, xxvii, 1925, p. 116; W. L. Dawson, *Birds of California*, 1923, p. 1825; J. C. Phillips, *Natural History of Ducks*, iii, 1925, p. 367.

KING EIDER
Somateria spectabilis (Linnaeus)

Rare straggler in winter. Only two definite instances of occurrence are known: Found "off Black Point, San Francisco", in the winter of 1879-80; a female obtained on the Suisun marshes, Solano County, in the winter of 1902-03. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 192. Note included account: E. H. Forbush, *Game Birds, Wild-Fowl and Shore Birds of Mass.*, 1912, p. 151. See also the following accounts: G. A. Hill, *Condor*, xxv, 1923, p. 103; E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 79; J. C. Phillips, *Natural History of Ducks*, iv, 1926, p. 114.

AMERICAN SCOTER
Oidemia americana Swainson

Has also been called Black Scoter.

Very rare mid-winter visitant. Only four instances of occurrence are known: "San Francisco" (see J. S. Newberry, *Pacific Railroad Reports*, vi, 1857, p. 104); San

Francisco Bay, near Redwood City Creek, San Mateo County, January 17, 1909 (see C. Litt'ejohn, *Condor*, xiv, 1912, p. 41); San Francisco Bay near Menlo Park, San Mateo County, December 11, 1911 (specimen in coll. Stanford Univ.); San Francisco Bay, off San Bruno, San Mateo County, December 30, 1922 (J. Moffitt, MS). For detailed accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 194; J. C. Phillips, *Natural History of Ducks*, iv, 1926, p. 3.

WHITE-WINGED SCOTER

Melanitta deglandi (Bonaparte)

Has also been called White-winged Coot and Velvet Duck.

Abundant winter visitant. Arrives in September and October and is common until the latter part of April. To be looked for on salt water only—the open water of bays, and the ocean. On San Francisco Bay, to be seen about the piling of ferry slips while foraging; otherwise usually noted at rest on the water at some distance from shore. Through the summer months small numbers of non-breeding birds are present, sometimes on fresh water, as at Lake Merced in San Francisco. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 197. Note the included references: G. H. Mackay, *Auk*, viii, 1891, p. 279; H. K. Job, *Auk*, xvi, 1899, p. 163; A. C. Bent, *Auk*, xix, 1902, p. 170; S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, ii, 1884, p. 93. See also: F. M. Bailey, *Condor*, xviii, 1916, p. 55; B. Torrey, *Field Days in California*, 1913, p. 28; W. L. Dawson, *Birds of California*, 1923, p. 1831; J. C. Phillips, *Natural History of Ducks*, iv, 1926, p. 26.

SURF SCOTER

Melanitta perspicillata (Linnaeus)

Has also been called Surf Duck and Sea Coot.

An abundant winter visitant, from October to April. Restricted to salt water and occurs both on the bays and the open ocean. On the ocean, when at rest, may most often be observed on the quiet water beyond the line of surf; or when actively feeding, frequently seen at the point at which the breakers comb over. Decrepit individuals, "hold-overs", are to be seen all summer. For a detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 201. This includes a number of citations to literature, of which note particularly the following: F. M. Bailey, *Condor*, xviii, 1916, p. 108; E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 81; G. H. Mackay, *Auk*, viii, 1891, p. 279; E. H. Forbush, *Game Birds, Wild-Fowl and Shore Birds of Mass.*, 1912, p. 163; S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, ii, 1884, p. 98. See also: B. Torrey, *Field Days in California*, 1913, p. 29; W. L. Dawson, *Birds of California*, 1923, p. 1835; J. C. Phillips, *Natural History of Ducks*, iv, 1926, p. 45.

RUDDY DUCK

Erismatura jamaicensis (Gmelin)

Permanent resident on fresh-water lakes and ponds. Localities at which nests, eggs or young have been found are: Lake Merced, and various lakes in Golden Gate Park, San Francisco; Alvarado, Irvington and Niles, Alameda County. Nesting dates for the Bay region are: May 8 (eggs); May 21 (eggs); June 12 (young); June 16 (eggs); June 29 (young). Nests are concealed in tules, close to or floating on the water. In winter, numbers greatly increased by winter-visiting individuals. At this season, more widely distributed, being found on brackish and salt water as well as on fresh. One of the commonest ducks on the Bay. For a detailed account see:

J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 205. This account includes further citations to literature. See also: A. J. van Rossem, *Condor*, xxv, 1923, p. 131; A. D. Henderson, *Condor*, xxvi, 1924, p. 32; A. S. Kibbe, *Condor*, xxvii, 1925, p. 57; W. L. Dawson, *Birds of California*, 1923, p. 1840; J. C. Phillips, *Natural History of Ducks*, iv, 1926, p. 159.

LESSER SNOW GOOSE

Chen hyperboreus hyperboreus (Pallas)

Formerly found at "San Francisco" (see S. F. Baird, *Pacific Railroad Reports*, ix, 1858, p. 760). A specimen taken near Redwood City, San Mateo County, March 22, 1896 (in coll. Stanford Univ.). Of regular winter occurrence on the Suisun marshes and in the Sacramento Valley in vicinity of Rio Vista. At Cygnus, Solano County, the first appear generally in early November. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 210. See also: W. L. Dawson, *Birds of California*, 1923, p. 1845.

ROSS SNOW GOOSE

Chen rossii (Cassin)

Rare straggler in winter, formerly. Was once reported to occur in vicinity of San Francisco (see E. Coues, *Birds of the Northwest*, 1874, p. 553). There is a chance that this record was based on a market specimen (see H. W. Henshaw, *Bulletin Nuttall Orn. Club*, iv, 1879, p. 126). Has been found as a straggler twice near Redwood City, San Mateo County (November 24, 1915, and October 27, 1917), and at Rio Vista, Solano County (October 26, November 11 and 17, 1910, specimens in coll. Stanford Univ.). For a detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 215. See also: H. C. Bryant, in W. L. Dawson, *Birds of California*, 1923, p. 1850.

COMMON WHITE-FRONTED GOOSE

Anser albifrons albifrons (Scopoli)

Has also been called Checker-breast, Speckle-belly, and Gray Goose.

Common winter visitant, appearing frequently in flight overhead. Forages on grassy prairie land, and resorts to marshy ground and sequestered ponds for loafing. Definite occurrence at Berkeley, October 20, 1921. Regularly present from Suisun marshes eastward. First noted at Rio Vista in 1914 on October 10; near Suisun in 1923 on October 23, in 1920 on October 3, and in 1925 on October 1. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 218; E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 83; H. C. Bryant, in W. L. Dawson, *Birds of California*, 1923, p. 1853; H. B. Conover, *Auk*, XLIII, 1926, p. 173 (in Alaska).

TULE WHITE-FRONTED GOOSE

Anser albifrons gambeli Hartlaub

Winter visitant on the Suisun marshes, Solano County, where observed (J. Moffitt, MS), definitely but sparingly, on Joyce Island, near Suisun, as follows: November 23, 1919; November 7, 1920; November 20, and December 11 and 14, 1921. For accounts see: H. S. Swarth and H. C. Bryant, *Univ. Calif. Publ. Zool.*, xvii, 1917, p. 209; J. Moffitt, *Condor*, xxviii, 1926, p. 241.

HONKER CANADA GOOSE

Branta canadensis canadensis (Linnaeus)

Winter visitant. Of regular occurrence in Sacramento Valley in vicinity of Rio Vista. Only two definite instances known west of Solano County: Two birds taken in the vicinity of Bodega, Sonoma County (see S. F. Baird, Pacific Railroad Reports, IX, 1858, p. 764); one bird taken near Redwood City, San Mateo County, January 2, 1896 (in coll. Stanford Univ.). For detailed account of the species see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 222. An important included reference is: M. S. Ray, Condor, XIV, 1912, p. 67. See also: W. L. Dawson, Birds of California, 1923, p. 1858.

HUTCHINS CANADA GOOSE

Branta canadensis hutchinsii (Richardson)

Fairly common winter visitant to marshes and prairie lands, especially around San Pablo and Suisun bays and thence eastward through Solano County. Known localities of occurrence are Cygnus, Dixon, and Rio Vista. Was formerly a common visitor in San Francisco and San Mateo counties, but in the latter county had "totally disappeared" by 1916 (see C. Littlejohn, in Condor, XVIII, 1916, p. 39). For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 230. This account includes further references to literature, an important early one of which, relating to Suisun Bay, is: A. L. Heermann, Pacific Railroad Surveys, X, 1859, pt. IV, no. 2, p. 67. See also: H. C. Bryant, in W. L. Dawson, Birds of California, 1923, p. 1863.

CAKTLING CANADA GOOSE

Branta canadensis minima Ridgway

A rare winter visitant. There are two records of its occurrence, both for "San Francisco", and both previous to 1906; also an occurrence (backed by a specimen in Stanford Univ. coll.) at Rio Vista, Solano County, February 10, 1905. For accounts of the species see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 234; E. W. Nelson, Report upon Natural History Collections in Alaska, 1887, p. 86; H. C. Bryant, in W. L. Dawson, Birds of California, 1923, p. 1867; H. B. Conover, Auk, XLIII, 1926, p. 175; F. C. Lincoln, Condor, XXVIII, 1926, p. 153.

BLACK SEA BRANT

Branta nigricans (Lawrence)

Winter visitant. Found in numbers on Tomales Bay only, though formerly fairly common on San Francisco Bay also. Only at all recent occurrence on the latter bay is of a flock of about twenty-five observed by C. Littlejohn, February 24, 1900, in the vicinity of Redwood City, San Mateo County. First arrivals appear in the fall in October, the bulk in November, and the species remains till the last week in April. For general account see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 237. Note included accounts as follows: S. F. Baird, T. M. Brewer and R. Ridgway, Water Birds of N. Amer., I, 1884, p. 471; E. W. Nelson, Bulletin Nuttall Orn. Club, VI, 1881, p. 131, and Report upon Natural History Collections in Alaska, 1887, p. 87; L. C. Sanford, L. B. Bishop and T. S. Van Dyke, The Water-fowl Family, 1903, p. 544. See also: A. M. Bailey, Condor, XXVII, 1925, p. 203; W. L. Dawson, Birds of California, 1923, p. 1869.

EMPEROR GOOSE

Philacte canagica (Sevastianoff)

Very rare straggler into the region in winter. Occurrences of only four individuals are known: one shot at Rio Vista, November 3, 1910, and three (date not known) at Dixon; both localities in Solano County. For an account in detail see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 243. See also: E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 89; H. B. Conover, *Auk*, XLIII, 1926, p. 177.

FULVOUS TREE-DUCK

Dendrocygna bicolor (Vieillot)

Summer visitant in limited numbers about the southern end of San Francisco Bay. Has been observed on marshes near Mt. Eden, Alameda County, near Alviso and Mountain View, Santa Clara County, and near Redwood City, San Mateo County. In the latter place, on one occasion, the birds had nested, as several downy young were found. Formerly, up to the early 80's, was observed in Marin County, and about San Francisco. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 246. This contains the following citations to interesting accounts: A. M. Shields, *Bulletin Cooper Orn. Club*, I, 1899, p. 9; F. S. Barnhart, *Condor*, III, 1901, p. 67. See also: H. C. Bryant, *Condor*, XVI, 1914, p. 224; J. C. Phillips, *Natural History of Ducks*, I, 1922, p. 128; D. R. Dickey and A. J. van Rossem, *Condor*, XXV, 1923, p. 39; W. L. Dawson, *Birds of California*, 1923, p. 1876.

WHISTLING SWAN

Cygnus columbianus (Ord)

Irregularly common winter visitant to marshes of Suisun Bay, in Solano County. Has been observed also in small flocks at the Alameda Gun Club in Sonoma County, on Tomales Bay, Marin County, and on Lake Merced, San Francisco (on several occasions). Was also formerly noted in the vicinity of Redwood City, San Mateo County. Earliest date of appearance, seasonally, is December 7 (on Tomales Bay) and last date of presence is February 15 (in Sonoma County). For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 256. This includes other references, among which note particularly: E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 91; B. Torrey, *Field Days in California*, 1913, p. 80; L. C. Sanford, L. B. Bishop and T. S. Van Dyke, *The Water-fowl Family*, 1903, p. 261; E. H. Forbush, *Game Birds, Wild-Fowl and Shore Birds of Mass.*, 1912, p. 194. See also: M. H. McAllister, *Calif. Fish and Game*, III, 1917, p. 88; A. M. Bailey, *Condor*, XXVII, 1925, p. 206; W. L. Dawson, *Birds of California*, 1923, p. 1882.

NOTE.—*Cygnus buccinator*, the Trumpeter Swan, was recorded by A. L. Heermann (in *Pacific Railroad Reports*, x, 1859, *Zoology*, p. 68) in the following words.

"Occasionally seen in the air following each other in single file, and sounding their trumpet-like note as they advance. I observed a few in Suisun and Sacramento valleys, and found them frequently in the San Francisco market."

But since the Whistling Swan was not mentioned by Heermann, there is considerable probability that he confused the names and had really encountered the Whistling, not the Trumpeter Swan.

ROSEATE SPOONBILL

Ajaia ajaja (Linnaeus)

Noted only previous to 1849: "Small flocks of this beautiful bird have several times extended up the coast even as far as San Francisco" (W. Gambel, *Journ. Acad.*

Nat. Sci. Phila., ser. 2, 1, 1849, p. 222). For general account, see J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 262.

WHITE-FACED GLOSSY IBIS
Plegadis guarauna (Linnaeus)

Rare visitant during migration. Has been found twice only: a flock of half a dozen visited the Farallon Islands in the spring of 1884 (see W. E. Bryant, *Proc. Calif. Acad. Sciences*, ser. 2, 1, 1888, p. 42); Irvington, Alameda County, May 18, 1923 (H. W. Carriger, MS). For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 269. Included citations to other accounts of special interest are: L. Belding, *Condor*, VII, 1905, p. 112; G. Willett and A. Jay, *Condor*, XIII, 1911, pp. 158, 159; F. M. Bailey, *Condor*, XIX, 1917, p. 157; A. M. Shields, *Nidologist*, 1, 1894, p. 108. See in addition: W. L. Dawson, *Condor*, XVI, 1914, pp. 4, 9, 10, and *Birds of California*, 1923, p. 1924; F. M. Chapman, *Camps and Cruises*, 1908, pp. 292, 293.

WOOD IBIS
Mycteria americana Linnaeus

Rare straggler into the region. Up to the early 80's observed at times in flight over San Francisco Bay, and a single individual obtained at San Leandro, Alameda County (see J. G. Cooper, *Auk*, IV, 1887, p. 90). No dates given, but occurrences probably in summer. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 266. This includes further references of interest, among which note in particular: J. J. Audubon, *Birds of America*, VI, 1843, p. 65. See also: E. Coues, *Birds of the Northwest*, 1874, p. 513; H. C. Bryant, *Condor*, XXI, 1919, p. 236.

AMERICAN BITTERN
Botaurus lentiginosus (Montagu)

Has also been called "Stake-driver".

Resident of tule-covered, fresh-water marshes and sloughs. Observed at various times throughout the year at the following localities: Bodega, Sonoma County; Lake Merced, in San Francisco (young, in June); Cygnus and Suisun, Solano County; Mare Island; Martinez and Richmond, Contra Costa County; Irvington, Alameda County (small young, May 18, 1923); Palo Alto and San Jose, Santa Clara County. For accounts of habits, voice and nesting see: F. M. Bailey, *Handbook*, 1902, p. 73; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 20; W. L. Dawson, *Birds of California*, 1923, p. 1916; R. B. Rockwell, *Condor*, XIV, 1912, p. 117 (in Colorado); B. Torrey, *Auk*, VI, 1889, p. 1 (in Mass.); M. Hardy, *Auk*, VI, 1889, p. 187 (in Maine); W. Brewster, *Auk*, XXVIII, 1911, p. 90 (in Mass.).

WESTERN LEAST BITTERN
Ixobrychus exilis hesperus Dickey and van Rossem

Casual visitant to the San Francisco Bay region during fall and spring migrations. Has been reported on but few occasions, as follows: "San Francisco" (previous to 1839); Golden Gate Park, in San Francisco, May 12, 1917, and June 14, 1925; Berkeley, September 20, 1921; Alvarado, Alameda County, September 8, 1907. For accounts of habits, etc., see: W. L. Dawson, *Birds of California*, 1923, p. 1920; F. M. Bailey, *Handbook*, 1902, p. 74; G. Willett and A. Jay, *Condor*, XIII, 1911, pp. 157, 159; F. M. Chapman, *Handbook of Birds of Eastern N. Amer.*, 1912, p. 222.

CALIFORNIA GREAT BLUE HERON
Ardea herodias hyperonca Oberholser

Often called, locally, "Blue Crane".

Resident around south arm of San Francisco Bay: One nesting colony (formerly) near Redwood City, San Mateo County; another (formerly) near Alvarado, Alameda County; and one near Sargents, Santa Clara County. A small colony also existed, in 1901, near Napa, Napa County. Otherwise observed as a winter visitant or as a vagrant; has visited the Farallon Islands. To be looked for on marshes, whether fresh or salt, thence visiting lakes or ponds almost anywhere, such as Lake Merritt, in Oakland. The nesting season extends from the first of March to the first of July. Nests are placed high up in trees, usually sycamores, or else on the ground at the edges of sloughs (as in the Redwood City colony). For accounts of habits and nesting see: S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, I, 1884, p. 13; E. K. Taylor, *Nidologist*, IV, 1897, p. 100; L. Hottel, *Condor*, III, 1901, p. 116; H. W. Carriger and J. R. Pemberton, *Condor*, X, 1908, p. 78; W. L. Finley, *Condor*, VIII, 1906, p. 35, and *American Birds*, 1907, p. 221; W. L. Dawson, *Birds of California*, 1923, p. 1888; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 256.

AMERICAN EGRET
Casmerodius egretta (Gmelin)

Recurrent visitant to the Bay region. Previous to 1880 "one or two to every marsh" were to be found, around both San Francisco and San Pablo bays. A single individual observed in January, 1880, in San Rafael, Marin County, at a point that is now "near the heart of the town, and on one of the principal streets" (see J. Mailliard, *Condor*, XIII, 1911, p. 50). Not reported again until 1925, when on November 16 no less than 12 were seen on the Suisun marshes between Benicia and Cordelia (see E. A. Stoner, *Condor*, XXVIII, 1926, p. 175). Also, individuals seen in same territory subsequently up to February 14, 1926. For accounts of habits and nesting see: S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, I, 1884, p. 23; H. C. Bryant, *California Fish and Game*, I, 1915, p. 238; J. Mailliard, *Condor*, XIV, 1912, p. 74; J. G. Tyler, *Condor*, XVIII, 1916, p. 196; A. Wetmore, *Condor*, XXI, 1919, p. 73; W. L. Dawson, *Birds of California*, 1923, p. 1896.

COMMON SNOWY HERON
Egretta thula thula (Molina)

Has also been called Snowy Egret.

Rare straggler in the Bay region. Three individuals were seen on one occasion (in spring or early summer) on the Farallon Islands; and it has been found in San Mateo County (dates not known). For accounts of habits and nesting see: S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, I, 1884, p. 28; W. L. Dawson, *Condor*, XVII, 1915, p. 97, and *Birds of California*, 1923, p. 1901; F. T. Bicknell, *Condor*, XXIV, 1922, p. 213.

ANTHONY GREEN HERON
Butorides virescens anthonyi (Mearns)

Fairly common in summer locally; stays mostly along willow-bordered, slow-moving streams and about tree-girt ponds. Some nesting localities are: Russian River, Sonoma County; near Olema, Marin County; at Glen Ellen (eggs, May 23 and June 13), and along Sonoma Creek between Glen Ellen and Shellville, in Sonoma

County; near Irvington (eggs, June 3), in Alameda County. Occurs more widely as a spring and fall transient; for example, on the Islais marshes and Lake Merced (April 23), San Francisco; near Hayward (May 24 and September 5), Alameda County; on Lake Merritt, Oakland (September 15); at Cazadero, Sonoma County (September 14). For accounts of habits and nesting see: J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 21; S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, I, 1884, p. 50; W. L. Dawson, *Birds of California*, 1923, p. 1907; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 258.

BLACK-CROWNED NIGHT HERON

Nycticorax nycticorax naevius (Boddaert)

Resident in considerable numbers at a few points in the region: One well-known nesting colony was, until very recently, located within the city of Alameda, and another, at least formerly, at the "lower end of San Francisco Bay" (in Alameda County). Observed in several other localities, either as a transient or winter visitant: Petaluma and Russian River, Sonoma County; San Geronimo, Marin County; Suisun and Cygnus, Solano County; Lake Merced, in San Francisco; Baumberg, Alvarado and Berkeley, Alameda County; Palo Alto, Santa Clara County. To be looked for in marshy places where there is either stagnant or slow-running water. Roosts in small groups or in colonies in tall trees, not necessarily close to marshy ground. The nesting season extends from the first of April to as late as September (young heard in nest September 15 at Alameda). Nests are built in cypress, willow, sycamore or alder, from twenty-five to sixty feet above the ground, near the ends of the upper branches. For descriptions of habits, nesting and food see: W. L. Dawson, *Birds of California*, 1923, p. 1910; W. L. Finley, *Condor*, VIII, 1906, p. 36, and *American Birds*, 1907, p. 221; D. A. Cohen, *Condor*, II, 1900, p. 10; G. E. Kelly, *Condor*, XXII, 1920, p. 159; A. O. Gross, *Auk*, XL, 1923, pp. 1, 191 (in Massachusetts); R. B. Rockwell, *Condor*, XII, 1910, p. 113 (in Colorado); F. M. Bailey, *Condor*, XXI, 1919, p. 157 (in Dakota).

LITTLE BROWN CRANE

Megalornis canadensis (Linnaeus)

Has also been called Sandhill Crane.

A transient and winter visitant in the Bay region, probably formerly fairly common. Specimens definitely determined to be of this species have been recorded from San Rafael and San Francisco. Not identified within our limits for many years now. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 273; H. B. Conover, *Auk*, XLIII, 1926, p. 303 (in Alaska).

NOTE: There is a probability that the true Sandhill Crane (*Megalornis mexicana*) occurs also, or did occur at one time, within our territory; but we have no specific evidence of this.

CALIFORNIA CLAPPER RAIL

Rallus obsoletus Ridgway

Has also been called Red-breasted Rail, San Mateo Rail, Water-hen, Marsh-hen, Salt-water Marsh-hen.

Common resident around the south arm of San Francisco Bay, in San Mateo, Alameda and Santa Clara counties. Was formerly a common resident also elsewhere about the Bay, but in recent years reported thence only rarely: at Tomales Bay, near Point Reyes Station, Marin County, November 22, 1914; at Manzanita, Marin County, May 8, 1920; at San Pablo, Contra Costa County, October 26, 1919. Noted

once, November 18, 1886, on the Farallon Islands. An inhabitant of the salt-water marshes. Nesting season extends from the middle of March to the last of June. Nests are situated on the banks of sloughs, concealed by small bushes or bunches of grass, and are made of salt grass or dry pickleweed. For a full account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 283. Note also some of the included references: H. R. Taylor, *Nidologist*, 1, 1894, p. 153; W. O. Emerson, *Ornithologist and Oologist*, x, 1885, p. 142; W. E. Bryant, *Bulletin Nuttall Orn. Club*, v, 1880, p. 124. See also W. L. Dawson, *Birds of California*, 1923, p. 1530.

VIRGINIA RAIL

Rallus virginianus Linnaeus

Fairly common resident in the Bay counties, chiefly on fresh water marshes. Seen at different times throughout the year at the following localities: Freestone and Bodega, Sonoma County; Tomales Bay and Olema, Marin County; San Francisco; Berkeley, Alameda, Hayward, Niles, and Alvarado, Alameda County; Redwood City, San Mateo County; Palo Alto, Santa Clara County; Vacaville, Rio Vista, Cygnus, Grizzly Island, Suisun and Cordelia, Solano County. Evidences of nesting have been observed in late April at Lake Merced, San Francisco, and at Alvarado, Alameda County; in June at Freestone, Sonoma County; and "in spring" at Olema, Marin County. As with other rails, is more often to be heard than seen because of keeping well within the shelter of dense marsh vegetation. For a full account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 291. See also: W. Brewster, *Bird-Lore*, iv, 1902, p. 47 (in Massachusetts); F. M. Chapman, *Handbook of Birds of Eastern N. Amer.*, 1912, p. 233; D. D. McLean, *Condor*, xviii, 1916, p. 229; W. L. Dawson, *Birds of California*, 1923, p. 1537; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 260.

SORA RAIL

Porzana carolina (Linnaeus)

Has also been called Carolina Rail, and simply Sora.

Fairly common resident on marshlands, where more often brought to notice through hearing the song or call than by sight of the birds themselves. Found in nesting season among tules at Lake Merced, San Francisco; and eggs found (April 23) in fresh water marshes near Alvarado, Alameda County. Nest is concealed in marsh vegetation and is constructed of dead tules or dry grasses. Noted in winter, on various dates from September 18 to March 2, in the vicinity of the following places: Cazadero, Sonoma County; Cordelia Slough, on Suisun marshes, Solano County; Martinez, Contra Costa County; Alameda marshes, San Leandro and Hayward, Alameda County; Palo Alto and Gilroy, Santa Clara County. Has also been a casual visitant to the Farallon Islands. For a detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 296. For other accounts see: F. M. Bailey, *Handbook*, 1902, p. 81; F. M. Chapman, *Handbook of Birds of Eastern N. Amer.*, 1912, p. 234; W. M. Pierce, *Condor*, xviii, 1916, p. 178; R. B. Rockwell, *Condor*, xiv, 1912, p. 119 (in Colorado); A. A. Saunders, *Condor*, xv, 1913, p. 128 (in Montana); L. C. Sanford, L. B. Bishop, and T. S. Van Dyke, *The Water-fowl Family*, 1903, p. 284; W. L. Dawson, *Birds of California*, 1923, p. 1540.

YELLOW RAIL

Coturnicops noveboracensis (Gmelin)

Rare fall and winter visitant. Has been noted on a number of occasions from October 9 to January 22. Restricted to fresh or brackish water marshes, where ob-

ervation is difficult because of its secretive habits. Particular localities in the Bay region at which it has been observed are: near Point Reyes Station, Marin County; Rincon Valley, near Santa Rosa, Sonoma County; Cygnus and Cordelia Slough, on Suisun marshes, Solano County; Martinez, Contra Costa County; Alvarado, and near Alameda, Alameda County; Berryessa, Mayfield and Alviso, Santa Clara County; Redwood City, San Mateo County. For a general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 301. See also: W. L. Dawson, *Journ. Mus. Comp. Ool. (Santa Barbara)*, 1922, p. 32, and P. B. Peabody, the same, p. 33; W. L. Dawson, *Birds of California*, 1923, p. 1544.

CALIFORNIA BLACK RAIL

Creciscus jamaicensis coturniculus (Ridgway)

Has also been called Farallon Rail.

Fairly common fall and winter visitant. Earliest fall date is August 23, and last winter date is February 2. Noted at the following localities: Point Reyes Station and Marshall, on Tomales Bay, Marin County; San Francisco; Redwood City, San Mateo County; Palo Alto and Alviso, Santa Clara County; Newark, Alameda and near Berkeley, Alameda County; Martinez, Contra Costa County; Suisun marshes, Solano County; Farallon Islands. The Black Rail's favorite haunt is the growth of pickleweed on the salt marshes around the Bay shore. Observation is largely a matter of chance, as the birds are hard to flush from the sheltering vegetation. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 304. Note the following included references: H. R. Taylor, *Osprey*, II, 1898, p. 79; F. Stephens, *Condor*, XI, 1909, p. 47; A. M. Ingersoll, *Condor*, XI, 1909, p. 123; L. M. Huey, *Condor*, XVIII, 1916, p. 58. See also: W. L. Dawson, *Birds of California*, 1923, p. 1549.

FLORIDA GALLINULE

Gallinula chloropus cachinnans Bangs

Rare. Has been reported from but two places in the Bay region: San Francisco, observed "on one occasion" in November, 1855, and a single bird observed in Golden Gate Park at intervals from October 12 to November 13, 1916 (see H. E. Hansen, *Condor*, XIX, 1917, p. 22); Mt. Eden (near Hayward), Alameda County, two immature birds, July 4, 1904 (specimens in Calif. Acad. Sci.). For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 309. See also: J. G. Tyler, *Pac. Coast Avifauna* no. 9, 1913, p. 23; W. L. Dawson, *Birds of California*, 1923, p. 1554.

AMERICAN COOT

Fulica americana Gmelin

Also called Mud-hen.

Abundant resident of marshes, lakes and ponds throughout the Bay region. Especially conspicuous about Lake Merced and on the lakes of Golden Gate Park, San Francisco, and at Lake Merritt, Oakland. The nesting season is long—from early April (young observed) to the middle of August (fresh eggs on the 10th). Nests are to be found on masses of reeds where tule thickets border open water. For general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 313. For further references, not included in the above, see: F. M. Bailey, *Handbook*, 1902, p. 83, *Condor*, XX, 1918, pp. 35, 36, and *Condor*, XXI, 1919, pp. 4, 108, 159 (in Dakota); F. W. Henshaw, *Condor*, XX, 1918, p. 92; B. W. Evermann, *Osprey*, VI, 1902, p. 58; W. L. Dawson, *Birds of California*, 1923, p. 1557.

RED PHALAROPE

Phalaropus fulicarius (Linnaeus)

Has also been called Gray Phalarope and Whale-bird.

Of irregular occurrence during migrations; sometimes fairly common. In fall has been seen from August 14 to November 22; in the spring has been seen from April 29 to June 5. Has been found at the following localities: mouth of Russian River, Sonoma County; Bolinas, Sausalito and Tomales Bay, Marin County; San Francisco; Roberts Landing near Hayward, Bay Farm Island, and Alameda, Alameda County; Richmond, Contra Costa County; Mussel Rock, San Mateo County; and the Farallon Islands. Most frequently observed in scattering flocks on tide pools and on sandy beaches of the outer, ocean, coast. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 320; note especially the following included references: E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 97; J. Grinnell, *Pacific Coast Avifauna* no. 1, 1900, p. 20. For other accounts see: W. L. Dawson, *Condor*, xiii, 1911, p. 178; J. H. Bowles and A. B. Howell, *Condor*, xiv, 1912, p. 6; A. M. Bailey, *Condor*, xxvii, 1925, p. 233; L. C. Sanford, L. B. Bishop and T. S. Van Dyke, *The Water-fowl Family*, 1903, p. 320; R. C. Ross, *Condor*, xxiv, 1922, p. 66; W. L. Dawson, *Birds of California*, 1923, p. 1171.

NORTHERN PHALAROPE

Lobipes lobatus (Linnaeus)

Has also been called Lobefoot.

Abundant during both fall and spring migrations. In the fall has been seen from August 26 to October 23; in the spring, from April 4 to June 2. Localities at which it has been observed are: Mill Valley and Tomales and Bolinas bays, Marin County; Petaluma, Sonoma County; Lake Merced, San Francisco; Redwood City and San Mateo, San Mateo County; Palo Alto, Santa Clara County; Oakland, Berkeley, Bay Farm Island, Hayward, Alvarado and "Lower San Francisco Bay", Alameda County; Richmond, Contra Costa County; the Farallon Islands. Usually to be observed in flocks on sheltered coves or on salt-water ponds of the marshes around the Bay. For a detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 326. Note the following included references: B. Torrey, *Field Days in California*, 1913, p. 52; J. Grinnell, *Pacific Coast Avifauna* no. 1, 1900, p. 21; E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 99; F. M. Chapman, *Camps and Cruises*, 1908, p. 268; J. H. Bowles and A. B. Howell, *Condor*, xiv, 1912, p. 6. See also: R. C. Ross, *Condor*, xxvi, 1924, p. 90; W. L. Dawson, *Birds of California*, 1923, p. 1178; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 261.

WILSON PHALAROPE

Steganopus tricolor Vieillot

Also called Needle-billed Snipe.

Rare visitor in summer and fall. Has been observed twice: Cemeteries, San Mateo County, one individual "wading in a shallow lake", September 9, 1909 (see J. R. Pemberton, *Condor*, xi, 1909, p. 207; fresh-water overflow lands near Hayward, Alameda County, adult pair July 3, 1904 (W. O. Emerson, MS). For a detailed account of the species see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 332; included references of special interest are: E. W. Nelson, *Bulletin Nuttall Orn. Club*, ii, 1877, p. 38; W. P. Taylor, *Univ. Calif. Publ. Zool.*,

vii, 1912, p. 359; M. S. Ray, Condor, xv, 1913, pp. 113, 114; F. M. Bailey, Handbook, 1902, p. 85. For additional accounts see: J. G. Tyler, Condor, xix, 1917, p. 167; R. C. Ross, Condor, xxvi, 1924, p. 90; W. L. Dawson, Birds of California, 1923, p. 1184.

AMERICAN AVOCET
Recurvirostra americana Gmelin

Has also been called Blue-stocking.

Irregularly common visitor to the region, the south arm of the Bay chiefly, in autumn and winter. Has been observed on various dates from September 14 to May 3, at the following localities: Novato, Marin County; Suisun, Solano County; San Francisco; Berkeley, Hayward, Baumberg, and "lower San Francisco Bay", Alameda County; Redwood City, San Mateo County. To be found solitarily, or in flocks numbering from about a dozen to thirty members, wading in shallow stagnant water or foraging on damp bare ground. For a detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 337. This contains references to other accounts, among which note especially: F. M. Chapman, Camps and Cruises, 1908, p. 288; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 24, and Condor, xv, 1913, p. 16; W. O. Emerson, Condor, ii, 1900, p. 34; A. C. Bent, Auk, xxiv, 1907, p. 424; E. Coues, Birds of the Northwest, 1874, p. 460. For other accounts see: R. C. Ross, Condor, xxvi, 1924, p. 91; W. L. Dawson, Birds of California, 1923, p. 1191.

BLACK-NECKED STILT
Himantopus mexicanus (Müller)

Also called Longshanks.

Found in limited numbers in the immediate vicinity of San Francisco Bay, in summer and fall; stragglers occur rarely in winter. First spring arrivals observed on April 12, at Baumberg, Alameda County. Eggs have been seen on May 3, and young on June 11, near Niles; adults still present on July 28, near Alvarado; both of these localities also in Alameda County. In fall, as a migrant perhaps, observed August 29 to September 17, in the vicinity of Baumberg. In winter, observed at Mt. Eden, Alameda County, on November 17; and at Miller, Marin County. To be looked for at the edges of shallow stagnant or brackish water, in pairs or small scattering flocks. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 344. This includes further references to literature, of which note particularly: H. C. Bryant, Condor, xvi, 1914, p. 226; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 25; F. M. Chapman, Camps and Cruises, 1908, p. 288. See also: F. M. Bailey, Handbook, 1902, p. 86, and Condor, xix, 1917, p. 157; L. H. Miller, Condor, xx, 1918, p. 126; W. L. Dawson, Birds of California, 1923, p. 1204.

WILSON SNIPE
Capella delicata (Ord)

Has also been called Jack Snipe and American Snipe.

Common visitant, locally, in fall, winter and spring. From September 16 to May 3 has been seen, one year or another, at the following localities: Bodega, Sonoma County; Fairfax and Nicasio, Marin County; "lower San Francisco Bay", Hayward, Pleasanton and Baumberg, Alameda County; Cygnus, Solano County; Winters Island, Contra Costa County; Palo Alto, Santa Clara County; Lake Merced, San Francisco. To be flushed singly, as a rule, from the weeds or grass at the edges of slow-running streams, from marshes, or sometimes from dry grassy meadows. For a full account

see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 350; this includes other references to literature. See also accounts of nesting, voice and flight: B. W. Evermann, *Condor*, *xxi*, 1919, p. 121; E. Wall, *Condor*, *xxi*, 1919, p. 207; A. M. Bailey, *Condor*, *xxvii*, 1925, p. 235; J. T. Nichols, *Auk*, *xxxvii*, 1920, p. 522; R. Hoffmann, *Condor*, *xxvi*, 1924, p. 175; L. E. Taylor, *Condor*, *xxvii*, 1925, p. 224; W. L. Dawson, *Birds of California*, 1923, p. 1215.

LONG-BILLED DOWITCHER

Limnodromus griseus scolopaceus (Say)

Has also been called Gray Snipe and Red-breasted Snipe.

Common migrant along the Bay shores. During fall migration seen in varying numbers from the middle of July (earliest, July 9) to the last week in October (latest, October 26); during spring migration seen from the middle of March (earliest, March 9) to late in May (last, June 2). One winter record: January 11. Observed most frequently in open flocks of six to twenty-four or more individuals at the edges of pools or in shallow water on salt marshes and tide flats. Noted within recent years at Alameda, on Bay Farm Island, and near Alvarado, in Alameda County. For a detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 358. Other important references are: E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 100; E. Coues, *Birds of the Northwest*, 1874, p. 476; W. L. Dawson, *Birds of California*, 1923, p. 1221; H. B. Conover, *Auk*, *xlIII*, 1926, p. 305.

AMERICAN KNOT

Canutus canutus rufus (Wilson)

Has also been called Robin Snipe and Red-breasted Snipe.

Migrant, at times rather common. Has been observed near Redwood City, San Mateo County (October 30); also at Alameda, on Bay Farm Island, and in other places on the east shore of San Francisco Bay. During spring migration has been seen there on many dates between, and including, April 4 and May 24; during fall migration has been seen on August 1 and 10, and on September 6. Usually to be looked for on sandy beaches, following retreating waves while foraging; less often found on mud flats and marshes. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 363. This includes other references to literature, of which note the following: G. H. Mackay, *Auk*, *x*, 1893, p. 25; E. H. Forbush, *Game Birds, Wild-Fowl and Shore Birds of Mass.*, 1912, p. 262; L. C. Sanford, L. B. Bishop and T. S. Van Dyke, *The Water-fowl Family*, 1903, p. 357; E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 102; R. C. Ross, *Condor*, *xxvi*, 1924, p. 91.

PECTORAL SANDPIPER

Pisobia maculata (Vieillot)

Rare fall migrant in the Bay region. Has been observed as follows: At Redwood City, San Mateo County, August 22 and September 13 and 16, 1908, and October 7, 1915; at Oakland, Alameda County, October 8, 1883; at Mill Valley Junction, near Sausalito, Marin County, September 14, 1896; and, casually, on the Farallon Islands, September 4, 1884. Frequents wet grassy ground near the Bay shore. For a detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 368; this includes further references to literature concerning this species: note especially, E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 108. See also: W. L. Dawson, *Birds of California*, 1923, p. 1231; H. B. Conover, *Auk*, *xlIII*, 1926, p. 307.

LEAST SANDPIPER
Pisobia minutilla (Vieillot)

Has also been called Peep and Little Sandpiper.

Abundant during both migrations; common during the winter as well. The autumn migration is most in evidence in September and October, although a few individuals have been observed as early as July 28, at Alvarado, Alameda County. Last birds seen in spring migration April 27, at Bay Farm Island, Alameda County. Has been found also on the Farallon Islands. To be looked for throughout the region, where such occur, on muddy or sandy tide-flats, sea beaches, marshes and river bars, foraging at the edge of the water in small companies or in great flocks. For a detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 376. This includes other references to literature; see particularly: R. T. Moore, *Auk*, xxix, 1912, p. 210; S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, I, 1884, p. 236; E. Coues, *Birds of the Northwest*, 1874, p. 482. See also: W. L. Dawson, *Birds of California*, 1923, p. 1238.

RED-BACKED DUNLIN
Pelidna alpina sakhalina (Vieillot)

Has also been called American Dunlin, Red-backed Sandpiper, Black-bellied Sandpiper, and Black-breasted Snipe.

Common spring and fall migrant; in lesser numbers, a winter visitant. In the Bay region, the fall migration is most noticeable the latter part of September and during October. Has been seen on the Farallon Islands also, at this season. An unusually early occurrence for the southward migration is July 28, at Alvarado, Alameda County. During spring migration has been seen at Bay Farm Island and Alvarado, Alameda County, on many dates between, and including, March 28 and May 16. To be looked for foraging in close flocks on muddy tide-flats and sandy beaches. For a detailed description of behavior and habits see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 381; note particularly the references to E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 110, and J. Grinnell, *Pacific Coast Avifauna* no. 1, 1900, p. 23. See also: W. L. Dawson, *Birds of California*, 1923, p. 1243; A. M. Bailey, *Condor*, xxviii, 1926, p. 33.

WESTERN SANDPIPER
Ereunetes mauri Cabanis

Has also been called, when in flocks, Peeps and Pigmies.

Abundant spring and fall migrant; a smaller number remain through the winter. South-bound migrants are common from about the middle of July (earliest, July 8, at Alameda) until the last of October. North-bound migrants in the spring have been seen as late as May 24 (on Bay Farm Island, Alameda County). To be looked for foraging in flocks on tide flats, marshes and beaches of the Bay, and on beaches and sand bars of the ocean shore, everywhere in our territory such kinds of habitat occur. For a detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 386. See also: S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, I, 1884, p. 206; E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 113; W. L. Dawson, *Birds of California*, 1923, p. 1246.

SANDERLING
Calidris alba (Pallas)

Has also been called Beach Bird and Surf Snipe.

Migrant and winter visitant, in varying numbers. Earliest date of arrival is August 24, at Alameda; latest seen in spring, May 11, at Bay Farm Island, Alameda County. Other localities at which it has been found are: Point Reyes and Bolinas, Marin County; vicinity of Oakland, Alameda County; ocean beach, San Francisco. To be observed on open sandy beaches, foraging at the edges of retreating waves. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 391. Note other references to literature cited in this account, especially: B. Torrey, *Field Days in California*, 1913, pp. 23-28; E. H. Forbush, *Game Birds, Wild-Fowl and Shore Birds of Mass.*, 1912, p. 290; S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, 1, 1884, p. 249. See also: W. L. Dawson, *Birds of California*, 1923, p. 1253.

MARBLED GODWIT
Limosa fedoa (Linnaeus)

Has also been called Marlin and Straight-billed Curlew.

Common migrant; a smaller number remain through the winter. Has been observed on many occasions from July 7 until May 30, of different years, around the south arm of San Francisco Bay, as at Bay Farm Island, Alameda and Baumberg, in Alameda County. Observed also at Bodega, Sonoma County, Point Bonita, Marin County, and in the vicinity of San Francisco. To be looked for foraging at the edge of the surf on open beaches, or wading in salt-water marshes. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 396. For other accounts see: A. C. Bent, *Auk*, xxiv, 1907, p. 160; F. M. Bailey, *Condor*, xviii, 1916, p. 101; S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, 1, 1884, p. 255; W. L. Dawson, *Birds of California*, 1923, p. 1258.

GREATER YELLOW-LEGS
Totanus melanoleucus (Gmelin)

Has also been called Tell-tale and Greater Yellow-shanks.

Fairly common migrant, a few also remaining through the winter. Has been found on various dates between July 28 and May 30, at the following localities on the shores of San Francisco Bay: vicinity of San Francisco; El Cerrito, Contra Costa County; vicinity of Oakland, Alameda, Bay Farm Island, Baumberg and Alvarado, Alameda County. Of six birds seen near Irvington, Alameda County, June 16, 1922 (H. W. Carriger, MS), it is difficult to say whether they were late northbound or early southbound migrants. Noted also at Sebastopol, Sonoma County, and on the Suisun marshes, at Cygnus and Grizzly Island, Solano County. To be observed singly or in small scattering groups, foraging in shallow water of either salt or fresh water marshes and sloughs. For a detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 401. See also: F. M. Bailey, *Handbook*, 1902, p. 96; F. M. Chapman, *Handbook of Birds of Eastern N. Amer.*, 1912, p. 256; L. C. Sanford, L. B. Bishop and T. S. Van Dyke, *The Water-fowl Family*, 1903, p. 407; W. L. Dawson, *Birds of California*, 1923, p. 1263.

LESSER YELLOW-LEGS
Totanus flavipes (Gmelin)

Has also been called Summer Yellow-legs.

Rare migrant. Found on only three occasions in the San Francisco Bay region: Two birds were obtained near Redwood City, San Mateo County, November 28, 1915, by Mr. Chase Littlejohn (see C. Littlejohn, *Condor*, xx, 1918, p. 44); satisfactorily observed near Baumberg, Alameda County, September 14, 1924, and September 16, 1923 (Mrs. G. E. Kelly, MS). For a general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 408; this account includes further references to the literature. See also: W. L. Dawson, *Birds of California*, 1923, p. 1266.

WESTERN WILLET
Catoptrophorus semipalmatus inornatus (Brewster)

Has also been called Candlestick Plover.

Common south-bound migrant, in August and September, with occasional individuals seen as early as July 7. Less commonly seen in spring migration, up to May 30. A few linger in the Bay region through the winter, having been noted from November to January. To be observed especially at localities around the south arm of San Francisco Bay: vicinity of Berkeley, Alameda, Bay Farm Island, Baumberg and Alvarado, in Alameda County; near Palo Alto, Santa Clara County; vicinity of Redwood City, in San Mateo County; Lake Merced and the Presidio, in San Francisco. Has also been found at Bodega, Sonoma County. Usually to be seen in small groups, or in flocks up to about twenty-five individuals, feeding in vegetation of salt marshes, along muddy sloughs, or at the edge of the water on sandy beaches. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 416; see also the following included references: B. Torrey, *Field Days in California*, 1913, p. 45; F. M. Bailey, *Condor*, xviii, 1916, p. 102, and *Condor*, xx, 1918, p. 113; J. Van Denburgh, *Condor*, xxi, 1919, p. 39; S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, I, 1884, p. 285. See also: W. L. Dawson, *Birds of California*, 1923, p. 1271.

WANDERING TATTLER
Heteroscelus incanus (Gmelin)

Fairly common spring and fall transient along the ocean shore of the mainland, and on Año Nuevo and the Farallon islands. An early seasonal record is for May 7 (1899) at Pigeon Point Light, San Mateo County; a late one is for October 2 (1898) at Pescadero. Individuals have been observed during every summer month also. Found, as a rule, on open, rocky shores, such as those in the vicinity of Point Reyes, foraging on seaweed-covered rocks exposed by the tide. There is one record of "inside" occurrence: Alameda, May 11 (1911). For a detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 422. This includes several references to the literature, among which note particularly: B. Torrey, *Field Days in California*, 1913, p. 132; W. L. Dawson, *Condor*, xiii, 1911, p. 180; W. E. Bryant, *Proc. Calif. Acad. Sci.*, 2nd ser., I, 1888, p. 43; E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 118. See also: W. L. Dawson, *Birds of California*, 1923, p. 1274.

SPOTTED SANDPIPER
Actitis macularia (Linnaeus)

Also called Teeter, Teeter-tail and Tip-up.

Fairly common as a migrant, and occasional in winter, along both fresh and salt water shores. Seen at the following localities: Tiburon (March 21), Angel Island, and Lake Lagunitas (November 11), Marin County; Lake Merced, San Francisco (in "spring"); San Andreas Lake (February 17), San Mateo County; Berkeley (May 9) and Alameda (May 16 and 22); Bay Farm Island (October 2), Alameda County. Also, both adults and young have been observed from the last of May to the middle of August at various points along the Russian River in Sonoma County, such as Guerneville, Cosmo and Duncan Mills. To be looked for on pebbly beaches and gravel bars, or flying low in semicircular course out over the water. For a general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 431; this includes references to other accounts. See also: E. H. Forbush, *Game Birds, Wild-Fowl and Shore Birds of Mass.*, 1912, p. 322; J. T. Nichols, *Auk*, xxxvii, 1920, p. 535; C. Gignoux, *Condor*, xxiv, 1922, p. 185; A. Brooks, *Condor*, xxvii, 1925, p. 208; F. M. Bailey, *Handbook*, 1902, p. 100; H. K. Job, *Bird-Lore*, xiii, 1911, p. 221; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 263.

LONG-BILLED CURLEW
Numenius americanus Bechstein

Has also been called Brown Curlew, Sickle-billed Curlew, and Curve-bill.

Fairly common fall migrant. Has been observed on various dates from July 6 to November 24. To be looked for around the south arm of San Francisco Bay, at such localities as Bay Farm Island, Alameda County, and Alviso, Santa Clara County. Stragglers occasionally reach the Farallon Islands. One spring record, for Alameda, April 20. Marshes and tide flats are favorite haunts of these curlew; here they may be seen and heard flying back and forth singly or in small-sized flocks. For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 438; P. M. Silloway, *Condor*, ii, 1900, p. 79; C. W. Wickersham, *Auk*, xix, 1902, p. 353; A. C. Bent, *Auk*, xxiv, 1907, p. 427; E. S. Cameron, *Auk*, xxiv, 1907, p. 254; F. M. Bailey, *Handbook*, 1902, p. 101; C. Keeler, *Bird Notes Afield*, 1907, p. 54; W. L. Dawson, *Birds of California*, 1923, p. 1282.

HUDSONIAN CURLEW
Phaeopus hudsonicus (Latham)

Also called Short-billed Curlew and Jack Curlew.

Common migrant. In spring, observed during the latter part of March and through April into May (latest May 30); in fall, observed between the middle of July (earliest July 7) and the last of October. Visits mud flats and marshes along the Bay shore, and open ocean beaches, in flocks or in small groups. Has been seen at the Presidio, San Francisco; vicinity of Oakland, Alameda, Bay Farm Island and Alvarado, in Alameda County; and on the Farallon Islands. For general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 445. This covers other references to literature, including the following important ones: G. H. Mackay, *Auk*, ix, 1892, p. 345; J. Grinnell, *Pacific Coast Avifauna* no. 1, 1900, p. 27; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 30; B. Torrey, *Field Days in California*, 1913, pp. 33, 85. See also: A. C. Bent, *Bird-Lore*, xv, 1913, p. 59; S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, i, 1884, p. 315; W. L. Dawson, *Birds of California*, 1923, p. 1285.

AMERICAN BLACK-BELLIED PLOVER

Squatarola squatarola cynosurae Thayer and Bangs

Has also been called Black-breasted Plover, Whistling Field Plover, Beetle-head, Bull-head, and Swiss Plover.

Common spring and fall migrant; also remains in some numbers, some years, through the winter. In fall migration observed as early as July 9, and in spring migration as late as May 26. Has been definitely reported from Bodega, Sonoma County; Cliff House, San Francisco; Berkeley, Alameda, Bay Farm Island and Hayward, Alameda County; Pescadero, San Mateo County. Frequents sandy beaches and tide flats where it may be seen foraging near the edge of the water; also visits marshes, at high tide. For general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 452. For other accounts see: G. H. Mackay, *Auk*, ix, 1892, p. 143; S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, I, 1884, p. 132; E. H. Forbush, *Game Birds, Wild-Fowl and Shore Birds of Mass.*, 1912, p. 335; L. C. Sanford, L. B. Bishop and T. S. Van Dyke, *The Water-fowl Family*, 1903, p. 456; W. Rowan, *Condor*, xxv, 1923, p. 21; W. L. Dawson, *Birds of California*, 1923, p. 1290.

AMERICAN GOLDEN PLOVER

Pluvialis dominica dominica (Müller)

Very rare migrant or winter visitant. But few instances of occurrence are known for the San Francisco Bay region: found one or more times (previous to 1884) near San Francisco, several times (September 16 and 23, 1899, September 2, 1900, and September 19, 1914) near Redwood City, San Mateo County, once (about 1901?) at Vallejo, Solano County, once (November 11, 1921) at El Cerrito, Contra Costa County, and once (January 15, 1922) at Bay Farm Island, Alameda County. For full account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 458. This includes other references, among which note particularly: G. H. Mackay, *Auk*, viii, 1891, p. 17 (in Mass.; see also *Auk*, ix-xvi, for shorter accounts of seasonal occurrence in Mass.); S. F. Baird, T. M. Brewer and R. Ridgway, *Water Birds of N. Amer.*, I, 1884, p. 139; E. H. Forbush, *Game Birds, Wild-Fowl and Shore Birds of Mass.*, 1912, p. 340; N. S. Goss, *Birds of Kansas*, 1891, p. 209. See also H. W. Henshaw, *Auk*, xxvii, 1910, p. 245; W. Rowan, *Condor*, xxv, 1923, p. 21; E. W. Nelson, *Report upon Natural History Collections in Alaska*, 1887, p. 123.

NORTHERN KILLDEER

Oxyechus vociferus vociferus (Linnaeus)

Also called Killdee and Killdeer Plover.

Common resident locally. More widely distributed and more numerous in winter through addition of winter-visiting individuals. Occurs at times, in the fall, on the Farallon Islands. Frequents pebbly or sandy bars and margins of streams, weedy borders of ponds, pastures and ploughed lands in wet weather, and marshes of either fresh or brackish water. At times, in winter, visits extensive lawns, such as those of Golden Gate Park, San Francisco, of Lakeside Park, Oakland, and at Stanford University. Has been found nesting in Alameda County (June 30, 1904), and in Golden Gate Park (spring of 1915 and of 1916). The eggs are laid in depressions in bare sand or gravel, in meadow grass, or on ploughed ground. For general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 463. For other accounts see: J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 31; B.

Torrey, Field Days in California, 1913, p. 12; W. L. McAtee and F. E. L. Beal, U. S. Dept. Agric., Farmers Bulletin no. 497, 1912, p. 16; W. L. Dawson, Birds of California, 1923, p. 1299; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 265; J. A. Calder, Condor, xxviii, 1926, p. 176; G. Pickwell, Auk, XLII, 1925, p. 485.

SEMIPALMATED PLOVER

Charadrius semipalmatus Bonaparte

Has also been called Semipalmated Ring Plover and Ring Plover.

Common as a through migrant; in lesser numbers, a winter visitant. The fall migration begins early; earliest observed on July 8; in the spring observed up to May 22. Localities at which the birds have been found are: Bodega Bay and Petaluma, Sonoma County; Mare Island, in San Pablo Bay; Richmond and El Cerrito, Contra Costa County; Oakland, Alameda, Bay Farm Island, Alvarado, and Hayward, Alameda County; San Bruno, San Mateo County; Presidio, San Francisco. May be observed on sandy beaches or on mud flats, either singly, in pairs, or in small groups, often mingling with other shore-birds. For a general account see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 469. This includes other references to literature, of which the following are most noteworthy: S. F. Baird, T. M. Brewer and R. Ridgway, Water Birds of N. Amer., I, 1884, p. 154; E. H. Forbush, Game Birds, Wild-Fowl and Shore Birds of Mass., 1912, p. 352. See also: B. Torrey, Field Days in California, 1913, p. 27; W. L. Dawson, Birds of California, 1923, p. 1310.

LITTLE RINGED PLOVER

Charadrius dubius curonicus Gmelin

Very rare, accidental visitor. But one record of occurrence in the region is known: a single individual in winter plumage was obtained at San Francisco, previous to 1874, by (or for) E. F. Lorquin (see R. Ridgway, Amer. Naturalist, VIII, 1874, p. 109).

WESTERN SNOWY PLOVER

Charadrius nivosus nivosus (Cassin)

Fairly common resident, locally, along the ocean and bay shores. Has been observed near Point Reyes, Marin County; on the Presidio beach at San Francisco; at Pescadero, San Mateo County; at Berkeley, Alameda, Bay Farm Island, and Alvarado, Alameda County. To be found, usually in small groups, on the dry upper portions of sandy beaches beyond the reach of ordinary tides. In the vicinity of Alvarado can be observed foraging about the edges of salt ponds. Has nested commonly at the salt works near Alvarado; has also been found nesting at Pescadero, and near Point Reyes (eggs April 19 [E. J. Booth, MS]). Nests are shallow depressions in dry sand above ordinary tide line. For a general account see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 473. Other special accounts are: B. Torrey, Field Days in California, 1913, p. 9; H. W. Henshaw, Report Wheeler Survey, 1876, p. 268; W. L. Chambers, Condor, VI, 1904, p. 139; W. L. Dawson, Birds of California, 1923, p. 1314.

MOUNTAIN PLOVER

Eupoda montana (J. K. Townsend)

Has also been called Bull-head Snipe.

Rare winter visitant. Has been reported definitely only as follows: Berryessa, Santa Clara County, November 29, 1891; Concord, Contra Costa County, January 10, 1894; Rio Vista, Solano County, November 12 and 19, 1911; "vicinity of San

Francisco Bay", January 26, 1898. To be looked for on dry grass-lands. For full account see J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 481. This includes further references to literature; note the following: E. R. Warren, *Condor*, xiv, 1912, p. 90 (in Colorado); E. S. Cameron, *Auk*, xxiv, 1907, p. 255 (in Montana); W. C. Bradbury, *Condor*, xx, 1918, p. 157 (in Colorado). See also: W. L. Dawson, *Birds of California*, 1923, p. 1329.

SURF-BIRD

Aphriza virgata (Gmelin)

Occasional spring and fall migrant. In the fall has been observed in September and November on the San Francisco shore, and in October near Berkeley, Alameda County. Has been seen on the Farallon Islands in June, and has been reported from Tomales Point, Marin County, February 22, from Bodega Bay, Sonoma County, in March, and from Pescadero, San Mateo County, November 29. Frequents rocky outcrops or pebbly shores where seen standing motionless or else foraging actively at the edges of the retreating waves. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 485. This includes further references to literature, among which note especially: B. Torrey, *Field Days in California*, 1913, p. 136; W. L. Dawson, *Condor*, xv, 1913, p. 5; F. M. Bailey, *Condor*, xviii, 1916, p. 102; G. W. Schussler, *Condor*, xix, 1917, p. 101. See also: W. L. Dawson, *Birds of California*, 1923, p. 1333.

RUDDY TURNSTONE

Arenaria interpres morinella (Linnaeus)

Has also been called Calico-back, Checkered Snipe, Red-legged Plover, and Common Turnstone.

Fairly common migrant and occasional winter visitant. Observed on the Farallon Islands in May and in August; at Stege, Contra Costa County, in August (the 13th); at Bay Farm Island and Alameda, in Alameda County, from April 25 to May 11, and from July 20 to September 18; in the vicinity of Redwood City, San Mateo County (August 27 and October 26); and on the north shore of San Francisco Bay in winter (January 28). To be looked for on partly submerged rocks, on tide bars, and on sandy beaches of open ocean shores. For a detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 489, which includes further references to literature; note especially the following: B. Torrey, *Condor*, xi, 1909, p. 174; E. H. Forbush, *Game Birds, Wild-Fowl and Shore Birds of Mass.*, 1912, p. 360; L. C. Sanford, L. B. Bishop and T. S. Van Dyke, *The Waterfowl Family*, 1903, p. 485; W. A. Bryan, *Auk*, xx, 1903, p. 210. See also: W. L. Dawson, *Birds of California*, 1923, p. 1337.

BLACK TURNSTONE

Arenaria melanocephala (Vigors)

Occasional in San Francisco Bay in mid-winter and during migrations; individuals have been observed on Angel Island, Red Rock and other small islands in the upper end of the Bay, and at the salt ponds near Alvarado, Alameda County (October 2), and near Redwood City, San Mateo County (August 21). Has also been seen on Tomales Bay, Marin County. Of more common occurrence on the Farallon Islands, where observed from May to August, and November 15. Frequents rocky shores and adjacent sandy beaches along the ocean, where it may be seen foraging among seaweed at the edge of the water. For detailed account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 493, which includes further refer-

ences to literature. Note especially: B. Torrey, *Field Days in California*, 1913, p. 37; W. L. Kells, *Nidologist*, II, 1895, p. 64. See also: W. L. Dawson, *Birds of California*, 1923, p. 1342.

BLACK OYSTER-CATCHER
Haematopus bachmani Audubon

Has also been called Bachman Oyster-catcher and Townsend's Oyster-catcher.

Observed in the Bay region only on the Farallon Islands, where reported present twice in June, and at Tomales Point, Marin County (eggs June 10, 1923 [J. Moffitt, MS]). For detailed account of the species see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 498. Among further references note particularly: G. Willett, *Condor*, XI, 1909, p. 186; H. Heath, *Condor*, XVII, 1915, p. 40; A. B. Howell, *Pacific Coast Avifauna* no. 12, 1917, p. 51. See also: W. L. Dawson, *Birds of California*, 1923, p. 1346.

COAST MOUNTAIN QUAIL
Oreortyx picta picta (Douglas)

Has also been called Painted Quail, Plumed Quail, and Plumed Partridge.

Permanent resident in certain restricted areas north of San Francisco Bay. In Sonoma County has been found in Alpine Valley near Santa Rosa, at Cazadero and Guerneville, and on Mount St. Helena; in Napa County has been observed near Calistoga; in Solano County, in Gates Canyon, west of Vacaville. Lives on steep, brushy hillsides and the walls of wooded canyons. Nests with eggs have been found in Alpine Valley, May 15 and 24; they are to be looked for on the ground where protection is afforded by some bush, grass clump, rock or log. For information see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 513, and p. 504 (general account under "Mountain Quail"). For other accounts of the Mountain Quail (one or another of its subspecies) see: C. Barlow and W. W. Price, *Condor*, III, 1901, p. 158; J. J. Williams, *Condor*, IV, 1902, p. 65; C. R. Keyes, *Condor*, VII, 1905, p. 14; L. Belding, *Condor*, V, 1903, p. 18, and Zoe, III, 1892, p. 233; S. D. Judd, *U. S. Biological Survey Bulletin* no. 21, 1905, p. 58; C. Bendire, *Life Histories of N. Amer. Birds*, I, 1892, p. 14; F. M. Bailey, *Handbook*, 1902, p. 117; W. L. Dawson, *Birds of California*, 1923, p. 1570; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 267.

COAST CALIFORNIA QUAIL
Lophortyx californica californica (Shaw)

Has also been called California Partridge, and Valley Quail.

Abundant resident of the "fog belt", which includes the whole of Marin, San Francisco and San Mateo counties, and those parts of all the other counties which border the Bay. For a period of seven years previous to 1904 a few individuals lived and nested upon the Farallon Islands. Frequents brushy hillsides and canyons, and dry, weedy, level areas with adjacent brush or shrubbery sufficient for protection. Often present in city gardens and parks, such as Lakeside Park, in Oakland, and Golden Gate Park, San Francisco. To be observed in flocks of varying size, except when paired during the nesting period. April 10, at Hayward, Alameda County, is the earliest nesting date, seasonally, for the region, while the latest date is July 18, at Oakland. Nests are usually placed on the ground within the shelter of vines, bushes, hedges, tangles of brush, or old logs. For general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 537. For accounts of nesting, habits and food see: H. R. Taylor, *Ornithologist and Oologist*, x, 1885,

p. 142; T. J. Hoover, Bulletin Cooper Orn. Club, 1, 1899, p. 75; J. Mailliard, Condor, iv, 1902, p. 19; J. W. Mailliard, Condor, xiv, 1912, p. 73; J. Van Denburgh, Proc. Amer. Philos. Soc., xxxviii, 1899, p. 157; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 9; C. Bendire, Life Histories of N. Amer. Birds, 1, 1892, p. 23; W. L. Dawson, Birds of California, 1923, p. 1575.

INTERIOR CALIFORNIA QUAIL

Lophortyx californica vallicola (Ridgway)

Has also been called Valley Partridge, and Valley Quail.

This race (or intergrades between it and the Coast California Quail) is a permanent resident in the drier, interior part of the region, back from the fog belt. In Napa County has been found on Mt. St. Helena; in Solano County, at Vacaville; in Contra Costa County, at Walnut Creek and Mount Diablo. Its favorite haunts are brushy hillsides and canyon bottoms, brushy, weed-grown fields, vineyards, and the shrubbery of parks and gardens. For detailed account of habits, voice, nesting and food see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 514. For other accounts see: F. M. Bailey, Handbook, 1902, p. 120; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 32; J. J. Williams, Condor, v, 1903, p. 146; T. S. Van Dyke, Outing, vol. 19, 1892, p. 485, and vol. 53, 1908, p. 375; E. S. Cummins, Outing, vol. 12, 1888, p. 50; F. H. Crosby, Outing, vol. 60, 1912, p. 309; J. F. Kessel, Condor, xxiii, 1921, p. 167; J. Muir, Our National Parks, 1901, p. 223; S. D. Judd, U. S. Biological Survey Bulletin no. 21, 1905, p. 47; W. L. Dawson, Birds of California, 1923, p. 1575; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 270.

SOOTY DUSKY GROUSE

Dendragapus obscurus fuliginosus (Ridgway)

Resident locally in coniferous forests near the seacoast of Sonoma County. Has been reported from "Bodega" (in 1854), from the "Russian River mountains" (in 1860), and from near Seaview (in 1915). For general accounts see: J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 552; J. M. Edson, Condor, xxvii, 1925, p. 226 (in Washington); W. L. Dawson, Birds of California, 1923, p. 1589; C. Bendire, Life Histories of N. Amer. Birds, 1, 1892, p. 43.

RING-NECKED PHEASANT

Phasianus colchicus torquatus Gmelin

Also called China Pheasant, and Denny Pheasant.

This non-native species has been introduced in the vicinity of San Jose, Santa Clara County, and is now to be found well established there and around Milpitas. Its preferred habitat is open ground, either cultivated to grain, or covered with wild grasses and weeds, and adjacent to willow thickets. For extended accounts see: W. Beebe, Pheasants, 1926, II, p. 42; J. Grinnell, H. C. Bryant and T. I. Storer, Game Birds of California, 1918, p. 572. See also: I. L. Koppel, Calif. Fish and Game, iv, 1918, p. 201.

NORTHERN BAND-TAILED PIGEON

Columba fasciata fasciata Say

Has also been called Wild Pigeon.

Common resident locally in the coast belt; also winter visitant, irregularly, sometimes in large numbers and widely spread, wherever oaks, toyon or madrone offer special attraction in the way of food. Has been reported in summer from the following

localities: Stewarts Point, Seaview, near Fort Ross (many among thistles at roadside, June 23, 1926), and Willow Creek, Sonoma County; Tennessee Cove (June 11) and Lagunitas (nest with egg July 30, 1912), Marin County; Woodside, San Mateo County (nest and young July 3, 1914); Redwood City, San Mateo County (nest and egg August 23, 1914). Nests are situated 8 to 30 feet above the ground in oaks, exceptionally in Douglas spruce and wild lilac. Has been observed in winter at the following localities: San Geronimo, Marin County; hills near Berkeley, Alameda County; Concord, Contra Costa County; Palo Alto, Los Gatos and San Jose, Santa Clara County; Farallon Islands. In the Santa Clara Valley the earliest in the fall were noted October 6 (1889) and the last in the spring May 9 (1890). For general account see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 575. This includes many citations to literature, some of which are: F. M. Bailey, *Handbook*, 1902, p. 138; J. Grinnell, *Auk*, xxii, 1905, p. 382; C. S. Sharp, *Condor*, v, 1903, p. 16, and *Condor*, xxi, 1919, p. 40; M. F. Gilman, *Condor*, v, 1903, p. 134; W. L. Chambers, *Condor*, xiv, 1912, p. 108; J. Mailliard, *Condor*, xiv, 1912, p. 194; J. Grinnell, *Condor*, xv, 1913, p. 25; L. Huey, *Condor*, xv, 1913, p. 151. See also: J. H. Wales, *Condor*, xxviii, 1926, p. 42; W. L. Dawson, *Birds of California*, 1923, p. 1153; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 275.

WESTERN MOURNING DOVE

Zenaidura macroura marginella (Woodhouse)

Also called, variously, Wild Dove, Common Dove, Turtle Dove, and Carolina Dove.

Common in the Bay region except during the late-winter months. More numerous in the interior than coastwise. Arrives in the vicinity of Los Gatos by the end of March, and has been observed in the vicinity of Berkeley as late as December 4 (1884). Has been observed in small numbers on the Farallon Islands in May and in August. Forages in open fields, over rolling "bald" hills especially where there are trees here and there, along willow-bordered streams, and in weed patches at the sides of roads and at the edges of cultivated ground. The nesting season is very extended, from March 31 (at Pleasanton) to August 11 (at Hayward). Nests may be placed almost anywhere: on the ground, in low bushes, or in trees up to a height of forty feet. For extended account, including other citations to literature, see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 588. Note especially: J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 35; F. M. Bailey, *Handbook*, 1902, p. 140. See also: W. L. Dawson, *Birds of California*, 1923, p. 1159; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 278.

MEXICAN GROUND DOVE

Chamaepelia passerina pallescens Baird

Rare wanderer into the San Francisco Bay region. Only two instances of occurrence are known: One bird observed at San Francisco in May, 1870; and at Pescadero, San Mateo County, February 27, 1898, a flock of eleven took refuge in the shelter of a woodpile where they stayed during a three days' storm (see C. Littlejohn, *Bulletin Cooper Orn. Club*, i, 1899, p. 73). For a general account of the species see: J. Grinnell, H. C. Bryant and T. I. Storer, *Game Birds of California*, 1918, p. 606. This includes further citations to literature; see especially: M. F. Gilman, *Condor*, xiii, 1911, p. 54 (in Arizona).

CALIFORNIA CONDOR

Gymnogyps californianus (Shaw)

Does not occur anywhere in the Bay region at the present time. The latest record of occurrence is for a point in southern San Mateo County, some miles west of Stanford University, known as "Basaltic Columns". Here one bird was seen the latter part of January, 1904 (see W. K. Fisher, *Condor*, vi, 1904, p. 50). There are older records, for San Rafael, Marin County, for Pescadero and Redwood City, San Mateo County, and for Los Gatos and San Jose, Santa Clara County, all previous to 1880. The species was "common" in parts of San Mateo County in 1865 (C. Littlejohn, MS). For accounts of habits of the California Condor see: W. L. Finley, *Condor*, viii, 1906, p. 135, *Condor*, x, 1908, pp. 5, 59, and *Condor*, xii, 1910, p. 5; H. R. Taylor, *Nidologist*, ii, 1895, p. 74; C. Bendire, *Life Histories of N. Amer. Birds*, i, 1892, p. 157; W. L. Dawson, *Birds of California*, 1923, p. 1717.

NORTHERN TURKEY VULTURE

Cathartes aura septentrionalis Wied

Also called Turkey Buzzard.

Summer visitant; commonest interiorly. Arrives by the middle of March (March 11, at Palo Alto), and remains until the last of October. To be observed soaring over hillside, field or meadow, or standing about on the ground, singly or in groups. Nesting season begins soon after arrival, and eggs have been found from April 9 (near Alameda) until the last week in May. Nests are placed on ledges of high, rocky hillsides, especially where concealment is afforded by trees or brush. For accounts of habits and food see: F. M. Bailey, *Handbook*, 1902, p. 145; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 37; C. Keeler, *Bird Notes Afield*, 1907, p. 133; J. R. Pemberton, *Condor*, xxvii, 1925, p. 38; C. Bendire, *Life Histories of N. Amer. Birds*, i, 1892, p. 161; W. L. Dawson, *Birds of California*, 1923, p. 1736; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 279.

NORTH AMERICAN WHITE-TAILED KITE

Elanus leucurus majusculus Bangs and Penard

Has also been called Black-shouldered Hawk and White-tailed Hawk.

Resident; now rather rare. Until the late 90's was common in parts of the region, particularly those immediately adjoining the Bay marshes. Localities where it was once found, more or less commonly, are: Santa Rosa, Sebastopol, and Forestville, Sonoma County; Bolinas, San Rafael, Novato, Kentfield and Manzanita, Marin County; Napa, Suisun, Cordelia, and Cygnus, Solano County; Lake Merced, San Francisco County; Edendale and Berkeley, Alameda County; Palo Alto and San Jose, Santa Clara County. One winter (1886-1887) several visited the Farallon Islands. Outside of the Santa Clara Valley, the only records of nesting in recent years come from Novato, Marin County (April 6, 1901, and March 31 and April 20, 1902); Kentfield, Marin County (June 5, 1917); Lake Merced, San Francisco County (June 5, 1917); near Suisun, Solano County (April, 1926). Nesting season extends from the first of March (eggs, March 9) to the first of June (young, June 5). Nests are situated in the top branches of live oaks and (rarely) sycamores, usually well hidden by surrounding foliage, from twenty to forty feet above the ground. For accounts of habits, nesting and food see: C. Barlow, *Auk*, xiv, 1897, p. 14; L. Peyton, *Condor*, xvii, 1915, p. 230; H. R. Taylor, *Ornithologist and Oologist*, xii, 1887, p. 135, and *Ornithologist and Oologist*, xiv, 1889, p. 90; S. C. Evans, *Ornithologist and Oologist*, xii, 1887, p. 93; M. S. Ray, *Condor*, vi, 1904, p. 139; L. Miller, *Condor*, xxviii, 1926, p. 172; C. Bendire, *Life Histories of N. Amer. Birds*, i, 1892, p. 173; W. L. Dawson, *Birds of California*, 1923, p. 1648.

MARSH HAWK

Circus hudsonius (Linnaeus)

Has also been called Harrier.

Common as a winter visitant throughout the region. Observed once on the Farallon Islands, in May, 1885. Known also as a summer resident, locally: vicinity of Point Reyes, Marin County (eggs found June 20, 1917); Alviso, Santa Clara County (nest and eggs found). Frequents open meadows and marshes over which individuals may be observed beating back and forth, foraging. For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 150; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 39; A. A. Saunders, Condor, xv, 1913, p. 99 (in Montana); H. S. Swarth, Univ. Calif. Publ. Zool., vii, 1911, p. 59 (in Alaska); A. K. Fisher, Hawks and Owls, 1893, p. 26; C. Bendire, Life Histories of N. Amer. Birds, i, 1892, p. 183; W. L. Dawson, Birds of California, 1923, p. 1652; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 281.

SHARP-SHINNED HAWK

Accipiter velox (Wilson)

Common winter visitant to all parts of the region. Earliest appearance in the autumn is for August 28, at Hayward, Alameda County, and latest in the spring is April 30, in Sutro Forest, San Francisco. Has been known to remain through the summer and nest in some instances: for example, near San Lorenzo, Alameda County (eggs, May 24, 1921), and at Berkeley, Alameda County (one-third grown young in nest June 16, 1923). Most plentiful in or along the edges of woods and along tree-lined stream courses. Usually to be seen in flight over the tree tops or else darting through shrubbery or foliage. Frequently seen in shade trees of city streets and gardens, and about poultry yards. For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 151; H. J. Rust, Condor, xvi, 1914, p. 14 (in Idaho); J. Mailliard, Science, n. s., lv, Feb. 24, 1922, p. 208; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 40; A. K. Fisher, Hawks and Owls, 1893, p. 32; C. Bendire, Life Histories of N. Amer. Birds, i, 1892, p. 186; W. L. Dawson, Birds of California, 1923, p. 1657; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 282.

COOPER HAWK

Accipiter cooperii (Bonaparte)

Sparse and local resident; more widely and numerous present during the winter. Typical localities of winter occurrence are: San Geronimo, Marin County; Benicia and Vacaville, Solano County; Berkeley and Livermore, Alameda County; San Francisco; Bear Creek, Contra Costa County; and Los Gatos and Black Mountain, Santa Clara County. At Berkeley, the earliest known date of arrival is September 15. The species remains through the summer at Inverness, Marin County, and Cazadero and Guerneville, Sonoma County. In the latter locality a family of young was noted August 5, 1913. Usually to be seen in swift direct flight over or among trees. For accounts of habits, nesting and food see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 41; J. Mailliard, Condor, x, 1908, p. 129; C. W. Michael, Condor, xxiii, 1921, p. 68; J. Grinnell and H. S. Swarth, Univ. Calif. Publ. Zool., x, 1913, p. 235; J. Grinnell, Univ. Calif. Publ. Zool., xii, 1914, p. 124; A. K. Fisher, Hawks and Owls, 1893, p. 38; C. Bendire, Life Histories of N. Amer. Birds, i, 1892, p. 192; W. L. Dawson, Birds of California, 1923, p. 1663; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 284.

AMERICAN GOSHAWK
Astur atricapillus (Wilson)

Has also been called Western Goshawk.

Rare winter visitant to the Bay region. Two definite instances of occurrence known: North Palo Alto, San Mateo County, one adult bird taken January 6, 1907 (see H. Grey, *Condor*, xv, 1913, p. 129); Berkeley, Alameda County, March 2, 1917 (one adult male, in *Mus. Vert. Zool.*, shot in a city yard). Has also been reported from Marin County and, in the early days, from San Francisco. For general accounts see: F. M. Bailey, *Handbook*, 1902, p. 153; J. Grinnell, *Condor*, xix, 1917, p. 70 (relates to "Eastern" Goshawk in California); M. S. Ray, *Condor*, xxviii, 1926, p. 258 (nesting in Sierras); A. K. Fisher, *Hawks and Owls*, 1893, p. 43; C. Bendire, *Life Histories of N. Amer. Birds*, I, 1892, p. 199; W. L. Dawson, *Birds of California*, 1923, p. 1668; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 286.

NOTE: The existence of a "Western" race of Goshawk as distinct from an Eastern one is now somewhat in doubt.

WESTERN RED-TAILED HAWK
Buteo borealis calurus Cassin

Has also been called Western Red-tail and Red-tailed Black Hawk.

The most numerous large hawk in the San Francisco Bay region. Common resident of more or less wooded rolling hills, canyon sides, and mountain ridges. Most frequently observed soaring high in the air; less often seen perching in tall trees or on stumps. Stragglers visit the Farallon Islands during April and May. Occasionally seen in the city of San Francisco, at Twin Peaks and in Sutro Forest. The large stick nests are located from twenty-five to seventy-five feet up, in pines, redwoods, oaks, large alders or maples. In these, eggs are deposited, from the first of March to the middle of April. For accounts of habits, nesting and food see: F. M. Bailey, *Handbook*, 1902, p. 156; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 41; W. L. Finley, *American Birds*, 1907, p. 57, and *Condor*, vii, 1905, p. 3; C. Keeler, *Bird Notes Afield*, 1907, p. 112; W. L. Atkinson, *Condor*, ii, 1900, p. 18; H. W. Marsden, *Condor*, vii, 1905, p. 53; J. Dixon, *Condor*, viii, 1906, p. 92; J. Van Denburgh, *Proc. Amer. Philos. Soc.*, xxxviii, 1899, p. 160; A. K. Fisher, *Hawks and Owls*, 1893, p. 48; W. L. Dawson, *Birds of California*, 1923, p. 1674; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 287.

RED-BELLIED RED-SHOULDERED HAWK
Buteo lineatus elegans Cassin

Has also been called Elegant Hawk.

Rather rare resident locally. Keeps chiefly in the vicinity of groves of willows along stream bottoms in the interior valleys. In Napa County, observed near Mt. St. Helena; in Marin County, at Point Reyes and San Geronimo; and in Santa Clara County, at Palo Alto, Mayfield, Santa Clara, and near Milpitas. Stragglers, young-of-the-year, have been shot by the "park hunter" in Golden Gate Park, San Francisco, October 12 (1922) and January 31 (1917). Has also been found, nesting, at Sargents, in the southern part of Santa Clara County (eggs in April, 1896), and near Sonoma, Sonoma County (eggs found from March 29 to April 17, in different years). For accounts of habits, nesting and food see: C. S. Sharp, *Condor*, viii, 1906, p. 144; H. W. Carriger, *Nidologist*, iv, 1897, p. 61, and *Bulletin Cooper Orn. Club*, I, 1899, p. 51; W. M. Pierce, *Condor*, xxi, 1919, p. 127; H. C. Bryant, *Condor*, xxiii, 1921, p. 65; F. M. Bailey, *Handbook*, 1902, p. 157; W. L. Dawson, *Birds of California*, 1923, p. 1683.

SWAINSON HAWK

Buteo swainsoni Bonaparte

Has also been called Brown Hawk, Swainson Buzzard, and Harlan Hawk.

Very rare spring or summer visitant. Only two definite localities of occurrence known: Palo Alto, Santa Clara County (in migration?); extreme eastern Contra Costa County, between Brentwood and Oakley, nest and three eggs 60 feet above the ground in a cottonwood, May 9, 1915 (H. W. Carriger, MS). For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 159; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 42; J. Mailliard, Condor, II, 1900, pp. 123, 124; C. S. Sharp, Condor, IV, 1902, p. 116; A. van Rossem, Condor, XVI, 1914, p. 92; A. K. Fisher, Hawks and Owls, 1893, p. 72; W. L. Dawson, Birds of California, 1923, p. 1689; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 290.

AMERICAN ROUGH-LEGGED HAWK

Archibuteo lagopus sancti-johannis (Gmelin)

Also called St. John Black Hawk.

Very rare, midwinter visitant. Definitely known to have been found at the following localities in this region: Bodega, Marin County; San Francisco; Redwood City, San Mateo County; near Suisun, Solano County (March 14, 1923); Berkeley ("winter"), Alameda County; Berryessa ("winter") and San Jose (November 31, 1888), Santa Clara County. To be looked for foraging over open ground inhabited plentifully by rodents. For accounts of habits and food see: A. K. Fisher, Hawks and Owls, 1893, p. 86; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 43; F. M. Bailey, Handbook, 1902, p. 162; L. M. Huey, Condor, XXVI, 1924, p. 74; C. Bendire, Life Histories of N. Amer. Birds, I, 1892, p. 256.

FERRUGINOUS ROUGH-LEGGED HAWK

Archibuteo ferrugineus (Lichtenstein)

Also called Rusty Squirrel Hawk and California Squirrel Hawk.

Rare and irregular winter visitant. Has been seen at Cotati, Sonoma County (November 24, 1912); Nicasio (January 12, 1897), Olema (October 13, 1894), and Bodega, Marin County; Richmond (October 12 and November 22, 1919), and Concord (December 14, 1921), Contra Costa County; Hayward (October 6, 1911), Alameda County; Berryessa, Santa Clara County (in winter); in San Mateo County; and on the Farallon Islands. To be observed flying over open country where ground squirrels are plentiful. For accounts of habits, nesting and food see: A. K. Fisher, Hawks and Owls, 1893, p. 91; H. C. Bryant, Condor, XV, 1913, p. 92; F. M. Bailey, Condor, XVII, 1915, p. 223 (in Dakota); S. G. Jewett, Condor, XXVIII, 1926, p. 245 (nesting in Oregon); C. Bendire, Life Histories of N. Amer. Birds, I, 1892, p. 259; W. L. Dawson, Birds of California, 1923, p. 1698.

GOLDEN EAGLE

Aquila chrysaetos (Linnaeus)

Also called Ring-tailed Eagle and American Golden Eagle.

Resident. Found in limited numbers, locally, in the inner mountain ranges with open growths of oak. Usually to be seen in flight high overhead. Is known to nest on Mission Ridge in southern Alameda County, in the vicinity of Mt. Hamilton, and near Sargent, Santa Clara County; has also been reported as nesting in past years at Mt. St. Helena, Napa County, and in the hills near Berkeley. The nesting season in this region is at its height during March, with an early date for eggs, February 22, near Sunol, Alameda County, and a late date, April 18, in the same district. Huge

stick nests are built in the tops of old pine, sycamore or oak trees, sometimes as high as eighty feet above the ground. For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 163; W. L. Finley, American Birds, 1907, p. 235, and Condor, VIII, 1906, p. 5; W. L. Atkinson, Bulletin Cooper Orn. Club, I, 1899, p. 50; R. H. Beck, Condor, III, 1901, p. 59; L. Miller, Condor, XX, 1918, p. 212; W. P. Taylor, Condor, XXV, 1923, p. 28; H. R. Taylor, Ornithologist and Oologist, XIII, 1888, p. 172; A. K. Fisher, Hawks and Owls, 1893, p. 93; H. C. Oberholser, U. S. Biological Survey Bulletin no. 27, 1906, p. 20; C. Bendire, Life Histories of N. Amer. Birds, I, 1892, p. 263; W. L. Dawson, Birds of California, 1923, p. 1701; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 292.

SOUTHERN BALD EAGLE

Haliaeetus leucocephalus leucocephalus (Linnaeus)

Also called White-headed Eagle.

Very rare in late years. Common in 1865 along the Bay shore near Redwood City (C. Littlejohn, MS). Single individuals observed at Sargent (March 19, 1899) and near Coyote, in Santa Clara County (see C. Barlow, Condor, II, 1900, p. 131). Known to have nested near La Honda, San Mateo County, about 1915 (C. Littlejohn, MS), and many years previously in Santa Clara County (Cooper, Pac. Railroad Reports, XII, 1860, p. 152). For accounts of habits, nesting and food see: A. B. Howell, Pacific Coast Avifauna no. 12, 1917, p. 55; H. C. Burt, Condor, XIII, 1911, p. 164; A. K. Fisher, Hawks and Owls, 1893, p. 97; C. Bendire, Life Histories of N. Amer. Birds, I, 1892, p. 274; W. L. Dawson, Birds of California, 1923, p. 1711; F. H. Herrick, Auk, XLI, 1924, pp. 89, 213, 389, 517.

PRAIRIE FALCON

Falco mexicanus Schlegel

Also called Prairie Hawk.

Resident in limited numbers in the drier, interior parts of the region, mostly south and east of the Bay. Has been found nesting near Sargent, Santa Clara County, near Berkeley, Alameda County, and near Redwood Canyon and Mt. Diablo, Contra Costa County. In the latter locality the nesting season is from the last of March (March 25) to the first of May (May 6). Nests are located on ledges or in cavities near the tops of cliffs, often as much as 80 feet above their bases. More widely distributed in winter, single individuals having been observed at the following localities: Petaluma, Sonoma County; Martinez, Contra Costa County; Alameda and Livermore, Alameda County; Presidio, San Francisco; Redwood City, Menlo Park and Pescadero, San Mateo County; Berryessa, Santa Clara County; the Farallon Islands. For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 166; O. W. Howard, Condor, IV, 1902, p. 57 (in Arizona); D. A. Cohen, Condor, V, 1903, p. 117; J. G. Tyler, Condor, XXV, 1923, p. 90; J. P. Norris, Ornithologist and Oologist, XV, 1890, p. 19; W. L. Dawson, Condor, XV, 1913, p. 55, and Birds of California, 1923, p. 1608; A. K. Fisher, Hawks and Owls, 1893, p. 104; C. Bendire, Life Histories of N. Amer. Birds, I, 1892, p. 288.

AMERICAN DUCK HAWK

Falco peregrinus anatum Bonaparte

Also called Peregrine Falcon and Western Duck Hawk.

Rare resident locally, in Marin, San Mateo, Santa Clara and Contra Costa counties. Known to nest on rugged, precipitous cliffs along the sea-coast, near Point Reyes and Tomales Point, Marin County, on the bay marshes of San Mateo and

Santa Clara counties, and on the cliffs of Mount Diablo, Contra Costa County. In winter more widely distributed over the marshes around the Bay. A single straggler was found on the Farallon Islands, December 15, 1886. For accounts of habits, nesting and food see: D. A. Cohen, *Condor*, v, 1903, p. 120; J. Dixon, *Condor*, VIII, 1906, p. 94, and *Condor*, x, 1908, p. 198 (in Alaska); A. B. Howell, *Condor*, XII, 1910, p. 186, and *Condor*, XIV, 1912, p. 189 (islands off Lower California coast); H. Heath, *Condor*, XVII, 1915, p. 25 (in Alaska); G. Nicholson and W. M. Pierce, *Condor*, XXIII, 1921, p. 99; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 44; A. K. Fisher, *Hawks and Owls*, 1893, p. 106; C. Bendire, *Life Histories of N. Amer. Birds*, I, 1892, p. 292; W. L. Dawson, *Birds of California*, 1923, p. 1624; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 294.

WESTERN PIGEON HAWK
Falco columbarius bendirei Swann

Rather uncommon winter visitant. Definite instances of occurrence are as follows: One seen at Berryessa, September 25, 1891, and one found near San Jose [November 27, 1891], both localities in Santa Clara County (see C. Barlow, *Condor*, II, 1900, p. 131); Redwood City, San Mateo County, in different years on various dates from October 27 to January 15 (twelve specimens in coll. Stanford Univ.); Hayward, Alameda County, one October 26, 1902; San Geronimo, Marin County, one December 26, 1897; Sonoma, Sonoma County, one November 4, 1906 (last three records based upon specimens in Calif. Acad. Sci.). In earlier years reported from Petaluma, San Francisco, San Jose and Santa Clara. For accounts of habits and food see: A. K. Fisher, *Hawks and Owls*, 1893, p. 109; C. Bendire, *Life Histories of N. Amer. Birds*, I, 1892, p. 298.

DESERT SPARROW HAWK
Falco sparverius phalaena (Lesson)

Has also been called American Sparrow Hawk.

Common resident throughout the region. Its favorite haunts are fields, meadows and open hillsides, where individuals may be seen perched on fence posts, telegraph wires, or on the tips of trees, or hovering in mid-air. Frequently observed around tall buildings, for example at the top of the Campanile on the Berkeley campus. Nesting normally is in full swing by the first of April and extends through May; an unusually early date for eggs is February 4, 1894, at Hayward. Cavities in trees, either natural or previously excavated by woodpeckers, are used for nests; oaks seem to be preferred. For accounts of habits, nesting and food see: F. M. Bailey, *Handbook*, 1902, p. 171; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 46; H. G. Rising, *Condor*, III, 1901, p. 129; P. Bonnot, *Condor*, XXIII, 1921, p. 136; J. Mailliard, *Condor*, XXVI, 1924, p. 34; F. A. Merriam, *Auk*, XIII, 1896, p. 116; A. K. Fisher, *Hawks and Owls*, 1893, p. 115; C. Bendire, *Life Histories of N. Amer. Birds*, I, 1892, p. 309; W. L. Dawson, *Birds of California*, 1923, p. 1636; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 296.

AMERICAN OSPREY
Pandion haliaëtus carolinensis (Gmelin)

Also called Fish Hawk.

Very rare resident. Only known to have nested in a limited section in Sonoma County: near Hilton, and in the vicinity of Monte Rio and Cape Horn, all being points along the lower course of Russian River. One, or possibly two, used nests, situated on dead, broken tops of redwoods, were observed on July 22, 1916, and in

August, the same year. Vagrant individuals have been noted on several occasions at other points in the region: Bodega Bay, Sonoma County; Lake Lagunitas, Marin County (three observed); Sutro Forest, San Francisco (one in May); Farallon Islands (one seen December 15, 1886). For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 172; M. S. Ray, Condor, xvii, 1915, p. 70; M. P. Skinner, Condor, xix, 1917, p. 117 (for Yellowstone Park); C. Gignoux, Condor, xxii, 1920, p. 205 (for Yellowstone Park); C. G. Abbott, The Home-life of the Osprey, 1911, 54 pp. (in New York); A. K. Fisher, Hawks and Owls, 1893, p. 130; C. Bendire, Life Histories of N. Amer. Birds, i, 1892, p. 320; W. L. Dawson, Birds of California, 1923, p. 1644.

AMERICAN BARN OWL

Tyto alba pratincola (Bonaparte)

Also called Monkey-faced Owl and Golden Owl.

Common resident. Most numerous east of the Bay; least so toward the sea-coast (though frequent in parts of San Francisco). To be seen or heard at twilight or after dark, in flight, over fields and open hillsides, and about buildings even in cities. Nesting season is normally from the middle of March to the first of June. At San Jose, eggs were once found so early as January 25 (1885). Nests may be situated in cavities of trees, in holes in earth banks, and in old buildings. For accounts of habits, nesting and food see: W. L. Finley, American Birds, 1907, p. 81, and Condor, viii, 1906, p. 83; W. O. Emerson, Zoe, ii, 1891, p. 22; D. A. Cohen, Condor, iii, 1901, p. 114; J. K. Potter and J. A. Gillespie, Auk, xlii, 1925, p. 177; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 47, and Condor, xvii, 1915, p. 57; G. L. Foster, Condor, xxviii, 1926, p. 130; A. K. Fisher, Hawks and Owls, 1893, p. 132; C. Bendire, Life Histories of N. Amer. Birds, i, 1892, p. 325; W. L. Dawson, Birds of California, 1923, p. 1070; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 298.

AMERICAN LONG-EARED OWL

Asio wilsonianus (Lesson)

Resident, sparsely and locally, in the coastal portions of the region, where restricted to wooded areas. Observed thus at Sebastopol and Bodega, Sonoma County, and Nicasio, Marin County. Found nesting in the vicinity of Alameda, Alameda County, in March (1885), and in the hills south of Novato, Marin County, in April (1903 and 1904). Single individuals observed at Ingleside, San Francisco County, in May, 1892, at Black Mountain, Santa Clara County, February 18, 1893, and near Berkeley, Alameda County, March 31, 1923. For accounts of habits, voice, nesting and food see: F. M. Bailey, Handbook, 1902, p. 175; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 48, and Condor, xv, 1913, p. 17; H. R. Taylor, Ornithologist and Oologist, x, 1885, p. 141; W. L. Dawson, Condor, xvi, 1914, p. 56; A. K. Fisher, Hawks and Owls, 1893, p. 140; C. Bendire, Life Histories of N. Amer. Birds, i, 1892, p. 328; W. L. Dawson, Birds of California, 1923, p. 1080; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 300.

NORTHERN SHORT-EARED OWL

Asio flammeus flammeus (Pontoppidan)

Common in winter. Found chiefly on the marshes surrounding San Francisco Bay, but also on meadowlands elsewhere. Usually flushed from patches of tules or tall grass. To be observed on the darker days beating back and forth over their forage grounds. Has been found at Petaluma, Sonoma County; San Geronimo, Marin County; Napa Valley, Napa County; Suisun, Solano County; Berkeley, Oakland and

Bay Farm Island, Alameda County; Palo Alto and Los Gatos, Santa Clara County. Single individuals have been seen on two occasions on the Farallon Islands, both times in spring. A few remain through the summer on the Bay marshes; eggs near Redwood City, April 20, 1926 (H. W. Carriger, MS). For accounts of habits, voice, nesting and food see: F. M. Bailey, Handbook, 1902, p. 177; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 48; J. Grinnell, Pacific Coast Avifauna no. 1, 1900, p. 38; A. A. Saunders, Condor, xv, 1913, p. 121 (in Montana); W. A. Goelitz, Condor, xx, 1918, p. 101 (in Saskatchewan); R. Hunt, Condor, xxii, 1918, p. 125; E. A. Kitchin, Condor, xxi, 1919, p. 21 (in Washington); L. M. Huey, Auk, xlIII, 1926, p. 96; A. K. Fisher, Hawks and Owls, 1893, p. 145; C. Bendire, Life Histories of N. Amer. Birds, I, 1892, p. 332; W. L. Dawson, Birds of California, 1923, p. 1087.

NORTHERN SPOTTED OWL

Strix occidentalis caurina (Merriam)

Very rare. Observed three times only, each instance being at a locality in Marin County: Point Reyes (no date); Mt. Tamalpias (May 23, 1896); and San Geronimo (October 20, 1919). For accounts of this species see: C. I. Clay, Condor, xiii, 1911, p. 75; C. E. Bendire, Ornithologist and Oologist, vii, 1882, p. 99; L. Peyton, Condor, xii, 1910, p. 122; D. R. Dickey, Condor, xvi, 1914, p. 193; J. S. Ligon, Auk, xlIII, 1926, p. 421; W. L. Dawson, Birds of California, 1923, p. 1090; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 304. The last six citations relate to the closely similar Southern Spotted Owl.

SAW-WHET OWL

Cryptoglaux acadica (Gmelin)

Also called Acadian Owl.

Rare, irregular visitant in winter. North of the Bay, has been observed once in Sonoma County, December 16 (1898); and three times in Marin County, at Point Reyes Station, December 11 and 23 (1901), and at San Geronimo, October 28 (1906). On the San Francisco peninsula, observed once in San Mateo County (no date or exact locality available). For general accounts see: C. Bendire, Life Histories of N. Amer. Birds, I, 1892, p. 350; A. K. Fisher, Hawks and Owls, 1893, p. 160; H. W. Carriger, Bulletin Cooper Orn. Club, I, 1899, p. 73; F. M. Bailey, Handbook, 1902, p. 180; M. S. Ray, Condor, xvi, 1914, p. 65.

CALIFORNIA COAST SCREECH OWL

Otus asio bendirei (Brewster)

Also called California Mottled Owl and Cat Owl.

Common resident of more or less wooded districts throughout the region, showing preference for oak belts. Dwells in holes in trees, but occasionally discovered in the daytime roosting in thick foliage; more often heard calling, after dusk. Nesting season begins by the second week in March and extends into the first part of June. Nests are situated from four to forty feet above the ground. Old flicker holes in tree trunks prove to be favorite sites, but "natural" cavities in dead limbs or stumps are also used. For accounts of habits, voice, nesting and food see: A. K. Fisher, Hawks and Owls, 1893, p. 163; A. I. McCormick, Condor, iii, 1901, p. 101; P. Bonnot, Condor, xxiv, 1922, p. 30; E. D. Clabaugh, Condor, xxviii, 1926, p. 43; W. O. Emerson, Ornithologist and Oologist, x, 1885, p. 173; W. L. Dawson, Birds of California, 1923, p. 1101.

PACIFIC GREAT HORNED OWL
Bubo virginianus pacificus Cassin

Also called Great Horned Owl, Coast Horned Owl, and Dusky Horned Owl.

Permanent resident, in fair numbers, in most of the region. Has been observed at Guerneville, Sonoma County; Inverness and Nicasio, Marin County; Sutro Forest, San Francisco; Vacaville, Solano County; Berkeley, Piedmont and Hayward, Alameda County; Walnut Creek and Mount Diablo, Contra Costa County; La Honda, San Mateo County; Palo Alto and Milpitas, Santa Clara County. May be seen in flight or on conspicuous perches at dusk, or heard "hooting" at night. Nests in February, March and April, in recesses in cliffs, or in such trees as oak and redwood, usually from forty to fifty feet above the ground. For accounts of habits, voice, nesting and food see: A. K. Fisher, *Hawks and Owls*, 1893, p. 174; J. Van Denburgh, *Proc. Amer. Philos. Soc.*, xxxviii, 1899, p. 161; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 50; N. Carpenter, *Condor*, ix, 1907, p. 20; J. B. Dixon, *Condor*, xvi, 1914, p. 47; R. Hunt, *Condor*, xx, 1918, p. 125; W. L. Dawson, *Birds of California*, 1923, p. 1112; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 309.

NOTE: This account is intended to cover not only typical *pacificus* but also those individuals which are intermediate between *pacificus* and the northwest coast race, *saturatus*; some of these intermediate examples have been recorded under the latter name, or else under another name, "*icelus*".

SNOWY OWL
Nyctea nyctea (Linnaeus)

Casual mid-winter visitant. So far as known, has invaded this region during but the one year of 1896, when a few individuals were seen at widely separated points. One bird was found on a sandy stretch near the beach at Bay Farm Island, Alameda County, December 2, and another was reported to have been seen near there. During the same week three Snowy Owls were observed in Sonoma County (see D. A. Cohen, *Condor*, iii, 1901, p. 185, and *Osprey*, i, 1897, p. 71). For general accounts see: C. Bendire, *Life Histories of N. Amer. Birds*, i, 1892, p. 389; A. K. Fisher, *Hawks and Owls*, 1893, p. 182; R. Deane, *Bulletin Nuttall Orn. Club*, ii, 1877, p. 9; A. M. Bailey, *Condor*, xxviii, 1926, p. 125.

NORTHERN BURROWING OWL
Speotyto cunicularia hypugaea (Bonaparte)

Also called Billy Owl, Cuckoo Owl, and Ground Owl.

Fairly common resident in the drier, unsettled, interior parts of the region; most numerous in parts of Alameda, Contra Costa and Santa Clara counties. Outside of this area has been observed sparingly, at Santa Rosa, Sonoma County; near Mt. St. Helena, Napa County; near Rio Vista, Solano County; in the drier portions of Marin County; and, as wanderers, near Lake Merced, in San Francisco, and on the Farallon Islands (in the spring of 1887, and in May, 1911). Restricted to treeless fields and pastures inhabited by ground squirrels; individuals forage abroad at dusk, or, on sunny days, sit upon mounds at entrances to burrows they have appropriated. For nesting purposes the birds make use of these same burrows. For accounts of habits, voice, nesting and food see: C. Bendire, *Life Histories of N. Amer. Birds*, i, 1892, p. 395; A. K. Fisher, *Hawks and Owls*, 1893, p. 189; F. M. Bailey, *Handbook*, 1902, p. 189; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 51, and *Condor*, xv, 1913, p. 18; W. L. Dawson, *Birds of California*, 1923, p. 1120; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 310.

COAST PIGMY OWL

Glaucidium gnoma grinnelli Ridgway

Has also been called California Pigmy Owl.

Permanent resident of certain wooded districts. Has been observed on Mt. St. Helena, at Eldridge, near Sonoma, and on Austin Creek, Sonoma County; at San Geronimo and Nicasio, Marin County; at Pescadero, San Mateo County; and at Los Gatos, Santa Clara County. To be located by its voice, during the day, when perched in the shelter of thick foliage; observed more readily when actively foraging abroad, as it does in the early morning hours and at dusk. Nesting season comprises the months of May and June. Nests are to be found in old woodpecker holes in stumps or trees, ranging in height from twenty to seventy-five feet. For accounts of habits, voice, nesting and food see: A. K. Fisher, *Hawks and Owls*, 1893, p. 196; C. E. Bendire, *Auk*, v, 1888, p. 366, and *Bulletin Nuttall Orn. Club*, VIII, 1883, p. 242; C. A. Allen, *Bulletin Nuttall Orn. Club*, III, 1878, p. 193; H. W. Carriger, *Nidologist*, II, 1895, p. 172; W. A. Cooper, *Bulletin Nuttall Orn. Club*, IV, 1879, p. 86; F. M. Bailey, *Handbook*, 1902, p. 190; J. Mailliard, *Condor*, XXIV, 1922, p. 31, and *Condor*, XXVIII, 1926, p. 171; W. L. Dawson, *Birds of California*, 1923, p. 1128.

CALIFORNIA ROAD-RUNNER

Geococcyx californianus (Lesson)

Also called Chaparral Cock, Ground Cuckoo, and Paisano.

Rare or sparse resident in a few, more open, interior localities. Has been found nesting in Vacaville, Solano County, in Santa Clara County at Palo Alto (May 14, 1892) and at Los Gatos (May 31, 1888), and in Alameda County, at Leona Heights near Oakland (nest and four young, April 27, 1915), and near Pleasanton (eggs April 5, 1924). In the next to the last named locality the nest discovered was placed in a "scrubby live oak about five feet from the ground, at the head of a little ditch . . . and at the edge of heavy chamisal" (H. W. Carriger, MS). Other localities than the above, at which individuals have been observed one or more times, are: Sebastopol, Sonoma County; San Geronimo and San Rafael, Marin County; Lake Merced, San Francisco County; Berkeley hills, Alameda County; Bear Falls, Contra Costa County; Portola, San Mateo County; San Jose, Santa Clara County. At present, increasingly rare throughout the Bay region. Restricted to dry upland with scanty or interrupted growths of brush. For descriptions of habits, nesting, voice and food see: F. M. Bailey, *Handbook*, 1902, p. 193; F. W. Kelsey, *Condor*, v, 1903, p. 132; M. F. Gilman, *Condor*, XVII, 1915, p. 87; J. R. Pemberton, *Condor*, XVIII, 1916, p. 203, and *Condor*, XXVII, 1925, p. 35; A. B. Howell, *Condor*, XVIII, 1916, p. 211; R. Hunt, *Condor*, XXII, 1920, p. 186; H. H. Sheldon, *Condor*, XXIV, 1922, p. 180; A. Leopold, *Condor*, XXIV, 1922, p. 183; J. E. Law, *Condor*, XXV, 1923, p. 133; J. Van Denburgh, *Proc. Amer. Philos. Soc.*, XXXVIII, 1899, p. 162; W. E. Bryant, *Zoe*, II, 1891, p. 57; G. Holterhoff, *Bulletin Nuttall Orn. Club*, VIII, 1883, p. 182; H. C. Bryant, *Univ. Calif. Publ. Zool.*, XVII, 1916, p. 21; A. W. Anthony, *Auk*, XIV, 1897, p. 217; C. Bendire, *Life Histories of N. Amer. Birds*, II, 1895, p. 13; W. L. Dawson, *Birds of California*, 1923, p. 1137.

CALIFORNIA YELLOW-BILLED CUCKOO

Coccyzus americanus occidentalis Ridgway

Also called Yellow-billed Cuckoo.

Summer visitant, for the most part rare. Earliest known date of arrival is May 31, and latest seasonal date is August 3, both near Sebastopol, Sonoma County. Restricted to willow thickets bordering streams and lagoons. Has been observed, nest-

ing, near San Jose, Santa Clara County, and near Sebastopol, Sonoma County. Nests are situated in forks of willow trees from three to twenty-five feet above the ground. Eggs have been found from June 17 to July 4. Single individual birds have been reported also from Oakland and Hayward, Alameda County, and Palo Alto, Santa Clara County. For accounts of habits, voice and nesting see: W. L. Atkinson, Bulletin Cooper Orn. Club, I, 1899, p. 95; J. J. Schneider, Condor, II, 1900, p. 34; A. C. Shelton, Condor, XIII, 1911, p. 19; A. Jay, Condor, XIII, 1911, p. 69; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 53; W. L. Dawson, Birds of California, 1923, p. 1148.

WESTERN BELTED KINGFISHER
Megaceryle alcyon caurina (Grinnell)

Fairly common resident along the larger, permanent streams, those that contain fish. North of the Bay, has been found on the Gualala River, in Russian Gulch, along the Russian River, and at Freestone, Bodega and Cazadero, in Sonoma County; at Tomales Bay, Inverness, Muir Woods (nesting), and Nicasio, Marin County. On the San Francisco peninsula, has been observed at La Honda, San Mateo County, and along the shore of Lake Merced and in Golden Gate Park (December 11), San Francisco. On the east side of the Bay wandering individuals have been observed in Alameda County, at Berkeley, August 20, September 4, and November 5 and 16; at Baumberg, September 14; and in Niles Canyon, April 17. Has been encountered also along the larger streams of Santa Clara County. In winter, visits rocky ocean shores; and is occasionally seen among the shipping in harbors (Oakland Estuary, for example). Has been seen once on the Farallon Islands, August 16, 1887. The nesting season, as observed at Lake Merced, begins in the latter part of March (freshly dug burrow, March 19). Nest burrows are excavated in sandy banks or bluffs over water. For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 198; W. L. Finley, American Birds, 1907, p. 139; N. K. Carpenter, Condor, XIX, 1917, p. 22; J. Mailliard, Condor, XXIII, 1921, p. 194; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 53; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 34; W. L. Dawson, Birds of California, 1923, p. 1049; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 313.

CABANIS HAIRY WOODPECKER
Dryobates villosus hyloscopus Cabanis and Heine

Has also been called, in part, Harris Woodpecker.

Fairly common resident in timbered portions of the region. Has been found in Sonoma County, at Petaluma, Guerneville, Cazadero and Freestone; in Marin County, at Inverness, Muir Woods, Nicasio and San Rafael; in Napa County, on Mt. St. Helena; in Solano County, on ridge near Vacaville; in Contra Costa County, near Mt. Diablo; in Alameda County, rarely, at Berkeley, Alameda and Hayward; in San Mateo County, at La Honda; in Santa Clara County, at head of Alameda Creek, and at or near Berryessa, Santa Clara, San Jose and Sargent. To be looked for in open stands of spruce and redwood, or else in deciduous trees along stream courses. Nests are to be found the last of May, six feet or more above the ground in decayed or dying stumps or limbs of pines. For accounts of habits and food see: J. Dixon, Condor, VII, 1905, p. 139; J. Grinnell, Univ. Calif. Publ. Zool., V, 1908, p. 61; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 15; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 53; W. L. Dawson, Birds of California, 1923, p. 987.

NOTE: Birds from the humid coastal parts of Marin and Sonoma counties show in varying degree some of the peculiarities of the race *harrisi*, which is resident still farther north on the Pacific coast. Indeed, some individuals have been recorded under that name.

WILLOW DOWNY WOODPECKER

Dryobates pubescens turati (Malherbe)

Also called Downy Woodpecker and Gairdner Woodpecker.

Fairly common resident locally. Inhabits chiefly tracts of willow along stream courses; but also frequents live oaks, orchards, and shade trees. Some localities of occurrence are: Mt. St. Helena, Napa County; Santa Rosa, Freestone, Guerneville and Petaluma, Sonoma County; Bolinas, Olema and Nicasio, Marin County; Berkeley, Alameda County; Palo Alto, San Jose, Berryessa, and Los Gatos, Santa Clara County; Walnut Creek and Martinez, Contra Costa County; Vacaville, Solano County. The nesting season is at its height during the early part of May. Nesting cavities are situated from two to twenty-five feet above the ground in dead stems of willow, less often in maple, bay, oak, or fruit trees. For brief accounts of habits, nesting and food see: C. S. Thompson, Condor, II, 1900, p. 53 (under "*gairdneri*"); J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 54; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 17 (under "Downy Woodpecker"); W. L. Dawson, Birds of California, 1923, p. 992; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 317.

NUTTALL LADDER-BACKED WOODPECKER

Dryobates nuttallii (Gambel)

Resident in small numbers locally. Has been noted at the following localities: Santa Rosa, Bodega, Sebastopol, and Petaluma, Sonoma County; San Geronimo, Marin County; San Francisco; Livermore and Berkeley, Alameda County; Palo Alto, Santa Clara, Calaveras Valley, and Mount Hamilton, Santa Clara County; Mount Diablo and Walnut Creek, Contra Costa County; near Vacaville, Solano County. Prefers the oak belts; but also visits orchard trees. Nest cavities are excavated in dead and decaying trunks or branches of oaks or elder-berry, 5½ to 24 feet above the ground. The egg-laying season extends from April 15 to May 29. For brief accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 205; C. S. Thompson, Condor, II, 1900, p. 53; N. K. Carpenter, Condor, XXI, 1919, p. 235; B. T. Gault, Ridgway Orn. Club Bulletin, II, 1887, p. 78; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 19, and Bulletin no. 37, 1911, p. 23; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 65; W. L. Dawson, Birds of California, 1923, p. 999.

RED-NAPED SAPSUCKER

Sphyrapicus varius nuchalis Baird

Also called Red-naped Woodpecker and Red-necked Woodpecker.

Rare winter visitant. On February 17, 1893, one was observed in a pepper tree at Palo Alto, Santa Clara County (see J. Van Denburgh, Proc. Amer. Philos. Soc., xxxviii, 1899, p. 162). In the winter of 1894, two birds visited an old orchard at San Geronimo, Marin County, while another was observed in the same place in the winter of 1897 (see J. Mailliard, Auk, xv, 1898, p. 196). For accounts of this sapsucker, see: F. M. Bailey, Handbook, 1902, p. 211; A. A. Saunders, Condor, XII, 1910, p. 200 (in Montana); C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 88.

SIERRA NEVADA RED-BREASTED SAPSUCKER

Sphyrapicus varius daggetti Grinnell

Also called Red-breasted Woodpecker.

Winter visitant in limited numbers in wooded portions of the region. Has been observed in the following localities: Camp Meeker, Austin Creek, Santa Rosa and Sebastopol, Sonoma County; San Anselmo, San Geronimo and Mailliard, Marin

County; San Francisco; Berkeley, Oakland, Alameda, and Hayward, Alameda County; Walnut Creek, Contra Costa County; Berryessa, Palo Alto and Los Gatos, Santa Clara County. Earliest arrival in autumn, observed on September 30, at Berkeley, and last individual in spring seen on April 1, in the same locality. To be looked for upon the trunks of certain coniferous or deciduous trees, either at work making holes in regular, transverse series, or at rest "dipping" sap from holes already pierced. For more or less extended accounts of habits and food see: F. M. Bailey, Handbook, 1902, pp. 211-212 (under "*ruber*"); W. O. Emerson, Bulletin Cooper Orn. Club, I, 1899, p. 28; A. S. Allen, Univ. Calif. Chronicle, 1922, p. 95; J. Grinnell, Univ. Calif. Publ. Zool., v, 1908, p. 63; H. J. Taylor, Condor, xxii, 1920, p. 158; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 21, and Bulletin no. 37, 1911, p. 31 (both under the name *ruber*); W. L. McAtee, U. S. Biological Survey Bulletin no. 39, 1911, pp. 16, 20, 28, 50, etc.; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 92; W. L. Dawson, Birds of California, 1923, p. 1011; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 327.

WESTERN PILEATED WOODPECKER
Geophloeus pileatus picinus (Bangs)

Also called Cock-of-the-woods, Northern Pileated Woodpecker, Log-cock, and Black Woodcock.

Rare. Seen at but few localities in the region within recent years: Seaview and Cazadero, both being in wooded parts of Sonoma County; Larkspur, and along San Geronimo Creek in the vicinity of Lagunitas, Marin County (on various occasions between 1911 and 1918, according to C. Hart Merriam, MS). A statement by J. G. Cooper, that one had been taken near Mount Diablo (previous to 1870) may be taken as indicating its presence there in earlier days, though perhaps only casually. For accounts of habits, nesting and food, in other regions, see: F. M. Bailey, Handbook, 1902, p. 213, and Condor, xix, 1917, p. 46; J. Mailliard, Condor, xx, 1918, p. 13; J. Grinnell and T. I. Storer, in Hall's Handbook of Yosemite National Park, 1921, p. 141; H. C. Bryant, Condor, xviii, 1916, p. 32; H. W. Carriger and G. Wells, Condor, xxi, 1919, p. 153; C. W. Michael, Condor, xxiii, 1921, p. 68; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 102; W. L. Dawson, Birds of California, 1923, p. 1020; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 334.

CALIFORNIA ACORN-STORING WOODPECKER
Balanosphyra formicivora bairdi (Ridgway)

Common resident of wooded territory in all the Bay counties except San Francisco. Some localities where it is conspicuously present are: Sebastopol, Sonoma County; Vacaville, Solano County; Walnut Creek, Contra Costa County; Palo Alto, Santa Clara County. Shows decided dependence upon oaks, but found also in redwoods and other coniferous trees, especially where these are interspersed with oaks. To be observed either in pairs or in small groups. Nesting begins the first of May and extends into August. Nests are situated from eight to thirty feet up, in dead stubs, or in dead limbs of living trees. Oaks are preferred, but "artificial" sites such as telegraph or power poles are sometimes chosen. For descriptions of habits, nesting and food, see: F. M. Bailey, Handbook, 1902, p. 216; C. Keeler, Bird Notes Afield, 1907, p. 102; W. E. Bryant, Zoe, iv, 1893, p. 56; F. A. Merriam, Auk, xiii, 1896, p. 117; C. S. Thompson, Condor, II, 1900, p. 54; W. K. Fisher, Condor, viii, 1906, p. 107; H. W. Myers, Condor, xvii, 1915, p. 183; S. B. Peyton, Condor, xix, 1917, p. 103; W. E. Ritter, Condor, xxiii, 1921, p. 3, and Condor, xxiv, 1922, p. 109; H.

C. Bryant, Condor, xxiii, 1921, p. 33; H. W. Henshaw, Condor, xxiii, 1921, p. 109; C. Gignoux, Condor, xxiii, 1921, p. 118; J. Mailliard, Condor, xxvi, 1924, p. 30; F. A. Leach, Condor, xxvii, 1925, p. 12; C. W. Michael, Condor, xxviii, 1926, p. 68; J. Van Denburgh, Proc. Amer. Philos. Soc., xxxviii, 1899, p. 163; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 22, and Bulletin no. 37, 1911, p. 43; F. E. L. Beal and W. L. McAtee, U. S. Dept. Agric., Farmers' Bulletin no. 506, 1912, p. 7; W. L. Dawson, Birds of California, 1923, p. 1023; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 337.

LEWIS WOODPECKER
Asyndesmus lewisi Riley

Has also been called Crow Woodpecker and Black Woodpecker.

Erratic winter visitant. Individuals, or scattered bands of varying number, appear sporadically in the oak belts, their appearance probably depending upon abundance of the acorn crop here and elsewhere. Reported from the following localities at various times between August 29 and March 14: Mt. St. Helena, Napa County; Point Bonita and San Geronimo, Marin County; Berkeley and Hayward, Alameda County; Walnut Creek, Contra Costa County; and Palo Alto and New Almaden, Santa Clara County. Near Sebastopol, Sonoma County, in 1884, large numbers appeared in the oaks September 16. Most of them hung about until May 1 of the following year; all had disappeared by the 10th of May. In occasional years, the species is known to have remained through the nesting season: In June, 1914, a pair nested in the creek bottom between Pleasanton and Niles, Alameda County; a dead limb forty feet up, in a sycamore, was chosen for nesting purposes. On May 16, 1926, several nests with fresh eggs to small young were found in sycamores and oaks south of Sunol, Alameda County (H. W. Carriger, MS). For descriptions of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 217; C. S. Thompson, Condor, ii, 1900, p. 54; J. M. Welch, Condor, ii, 1900, p. 89; J. J. Williams, Condor, vii, 1905, p. 56; H. W. Marsden, Condor, ix, 1907, p. 27; L. P. Bolander, Condor, xvi, 1914, p. 183; C. Gignoux, Condor, xxvii, 1925, p. 209; C. W. Michael, Condor, xxviii, 1926, p. 68; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 28, and Bulletin no. 37, 1911, p. 45; F. E. L. Beal and W. L. McAtee, U. S. Dept. Agric., Farmers' Bulletin no. 506, 1912, p. 8; C. Bendire, Life Histories of N. Amer. Birds, ii, 1895, p. 117; W. L. Dawson, Birds of California, 1923, p. 1030; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 341.

BOREAL YELLOW-SHAFTED FLICKER
Colaptes auratus borealis Ridgway

Rare winter visitant. Two specimens we consider definitely of this eastern species, were both taken at San Geronimo, Marin County, one December 18, 1893, the other, January 14, 1895 (nos. 6056, 6057, coll. J. and J. W. Mailliard, in Calif. Acad. Sci.).

MONTEREY RED-SHAFTED FLICKER
Colaptes cafer collaris Vigors

Also called Yellow-shafted Flicker (some individuals), High Hole, and Hybrid Flicker.

Common resident almost everywhere throughout the Bay region. Occasional in winter on the Farallon Islands. Found as frequently in orchards and other planted groves as in naturally forested districts. Although doing much foraging upon tree trunks, as do other members of the woodpecker family, Flickers do much feeding on

the ground beneath trees and even in fields and on open grassy hillsides. The bird's fondness for ants often brings it to notice in cultivated gardens and parks. Nesting activities cover a period from the third week of April to the middle of June. Dead trees of various kinds, small as well as large, including alder, sycamore, pine and oak, are commonly used for nesting cavities, circular entrances to which may be seen at heights of from four to forty-five feet above the ground. We include under this race (*collaris*) nearly all those frequent individuals in which the tail or wing shafts, or both, are yellow, and which are by some persons thought to be hybrids between our species (*cafer*) and the eastern species (*auratus*). For descriptions of habits, voice, nesting and food see: W. L. Finley, *American Birds*, 1907, p. 25; C. Keeler, *Bird Notes Afield*, 1907, pp. 61, 62; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 55; C. S. Thompson, *Condor*, II, 1900, p. 54; J. E. Law, *Condor*, XVIII, 1916, p. 85; C. Gignoux, *Condor*, XXIII, 1921, p. 33; E. A. Stoner, *Condor*, XXIV, 1922, p. 54; F. A. Merriam, *Auk*, XIII, 1896, p. 118; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 34, 1910, p. 25, and *Bulletin* no. 37, 1911, p. 59; W. L. McAtee, *U. S. Biological Survey Bulletin* no. 39, 1911, pp. 11, 13, pl. 5 (fig. 1), and *U. S. Dept. Agric., Yearbook*, 1911, p. 240; W. L. Dawson, *Birds of California*, 1923, p. 1039; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 342.

DUSKY POOR-WILL

Phalaenoptilus nuttallii californicus Ridgway

Also called California Poor-will and Nuttall Poor-will.

Observed in limited numbers locally in summer. Has been noted at Guerneville, Sebastopol and Petaluma, Sonoma County; Inverness and Nicasio, Marin County; Berkeley, Alameda County; Mt. Diablo, Contra Costa County; Black Mountain, Santa Clara and Los Gatos, Santa Clara County. Its earliest appearance is for March 1 (at Nicasio) and its latest, for October 29 (at Berkeley). Found on sunny, rocky or gravelly hillsides, sparsely covered with *Adenostoma* or other brush. Brought to attention usually because of accidental flushing. Characteristic call-notes to be heard at dawn, evening, or at intervals through the night. Nesting season is from the first of June to the last of July. No nest is made other than a slight depression in bare, pebbly ground in the shade of a protecting bush. For descriptions of habits and nesting see: F. M. Bailey, *Handbook*, 1902, p. 224 (under "*nuttallii*"); F. M. Palmer, *Condor*, II, 1900, p. 130; J. Mailliard, *Condor*, XI, 1909, p. 45; A. van Rossem and J. H. Bowles, *Condor*, XXII, 1920, p. 61; J. Dixon, *Condor*, XXV, 1923, p. 77; W. L. Dawson, *Birds of California*, 1923, p. 1053; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 343.

PACIFIC VIRGINIA NIGHTHAWK

Chordeiles virginianus hesperis Grinnell

Has also been called Western Nighthawk.

Rare transient. Noted mostly in the fall: at Hayward, Alameda County, one observed in zigzag flight about sunset, October 30, 1898 (see W. O. Emerson, *Bull. Cooper Orn. Club*, I, 1899, p. 28); at San Francisco, on three evenings about dusk, September 18, 21 and 22, 1918, a single bird observed flying east to west over the streets in the business district (see J. Mailliard, *Condor*, XXI, 1919, p. 40); one seen circling over the University campus, Berkeley, April 20, 1924 (H. S. Swarth, MS). For brief accounts see: M. S. Ray, *Condor*, XIV, 1912, p. 14; W. M. Pierce, *Condor*, XVIII, 1916, p. 34; A. H. Miller, *Condor*, XXVII, 1925, p. 141; F. M. Bailey, *Bird-Lore*, V, 1903, p. 43; W. L. Dawson, *Birds of California*, 1923, p. 1059; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 346. For general account (including all western races) see: F. M. Bailey, *Handbook*, 1902, p. 226.

NORTHERN BLACK SWIFT

Nephoecetes niger borealis (Kennerly)

Also called Black Swift and Northern Swift.

A casual visitant to the region. Has been observed only at the following three localities: San Francisco, one individual "in the spring of 1870"; Hayward, Alameda County (13 seen, April 19, 1885); near Santa Clara, Santa Clara County (no date). For descriptions of nesting see: A. G. Vrooman, *Auk*, xviii, 1901, p. 394, and *Condor*, vii, 1905, p. 176; W. L. Dawson, *Condor*, xvii, 1915, p. 8; E. Michael, *Condor*, xxviii, 1926, p. 109; W. L. Dawson, *Birds of California*, 1923, p. 971; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 349.

VAUX SWIFT

Chaetura vauxii (J. K. Townsend)

Has also been called Oregon Swift.

Summer resident, very locally, in parts of the region nearest the coast. Localities in which it has been observed in summer are: Cazadero and Guerneville, Sonoma County; Lagunitas Creek, Marin County; Redwood City and Pescadero, San Mateo County. Occurs more widely as a migrant, and recorded thus from Berkeley, Alameda County; Palo Alto, San Jose and Los Gatos, Santa Clara County; Nicasio, Marin County; and Sebastopol, Sonoma County. Arrives by the third week in April and may remain as late as the third week in September. The numbers vary from year to year. Individuals may be observed foraging high in air over meadows and hilltops in early morning and near sunset. Nest sites are chosen in the hollows of tall burnt-out trees. The nest is "glued" to the side of a cavity, often many feet below the opening. For descriptions of habits and nesting see: F. M. Bailey, *Handbook*, 1902, p. 231; H. R. Taylor, *Condor*, vii, 1905, p. 177; W. L. and I. Finley, *Condor*, xxvi, 1924, p. 6 (in Oregon); C. A. Allen, *Bull. Nuttall Orn. Club*, v, 1880, p. 55; C. Bendire, *Life Histories of N. Amer. Birds*, ii, 1895, p. 183; W. L. Dawson, *Birds of California*, 1923, p. 982.

WHITE-THROATED SWIFT

Aëronautes melanoleucus (Baird)

This striking bird, more generally found in the interior and southern parts of the state, seems to be established in the San Francisco Bay region only in the vicinity of Mount Diablo, Contra Costa County. A colony has its headquarters there in Pine Canyon, where nestlings have been found June 4 and July 5, and eggs (probably in the same canyon) June 6. Foraging pairs or flocks of these swifts have been observed elsewhere east of the Bay, as at Berkeley, April 9, Hayward, Alameda County, January 25, and Milpitas, Santa Clara County, December 12. Nests are situated from 18 to 150 feet above base level, in the most inaccessible, dark, and narrow crevices of cliffs, often out of arm's reach from the opening. For accounts of habits and nesting see: C. Bendire, *Life Histories of N. Amer. Birds*, ii, 1895, p. 185; F. M. Bailey, *Handbook*, 1902, p. 232; W. E. Bryant, *Nidologist*, ii, 1894, p. 7; J. Mailliard, *Nidologist*, ii, 1895, p. 69; J. Mailliard, *Condor*, iv, 1902, p. 95; F. M. Bailey, *Condor*, ix, 1907, p. 169; W. C. Hanna, *Condor*, xi, 1909, p. 77, and *Condor*, xix, 1917, p. 3; H. A. Edwards, *Condor*, xvi, 1914, p. 207; W. C. Bradbury, *Condor*, xx, 1918, p. 103; L. Little, *Condor*, xxi, 1919, p. 235; E. Michael, *Condor*, xxviii, 1926, p. 111; W. L. Dawson, *Birds of California*, 1923, p. 960; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 351.

BLACK-CHINNED HUMMINGBIRD
Archilochus alexandri (Bourcier and Mulsant)

Casual visitant to the Bay region. Its occurrence has been recorded but three times: Hayward, Alameda County, May 4, 1875 (see J. G. Cooper, *Amer. Naturalist*, x, 1876, p. 90), and April 21, 1906 (specimen taken by W. O. Emerson, in *Calif. Acad. Sci.*); San Geronimo, Marin County, March 3, 1912 (see J. Mailliard, *Condor*, xv, 1913, p. 43). For descriptions of habits and nesting see: F. M. Bailey, *Handbook*, 1902, p. 235; R. C. Wueste, *Condor*, iv, 1902, p. 39; N. Carpenter, *Condor*, v, 1903, p. 20, and *Condor*, xxi, 1919, p. 28; J. Grinnell, *Condor*, xiv, 1912, p. 105; H. M. Holland, *Condor*, xviii, 1916, p. 31; W. L. Chambers, xviii, 1916, p. 202; M. H. Lee, *Condor*, xxii, 1920, p. 171; L. M. Huey, *Condor*, xxvi, 1924, p. 229; F. A. Merriam, *Auk*, xiii, 1896, p. 118; J. Grinnell, *Univ. Calif. Publ. Zool.*, xii, 1914, p. 143; W. L. Dawson, *Birds of California*, 1923, p. 955; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 352.

COSTA HUMMINGBIRD
Calypte costae (Bourcier)

Only a straggler in the San Francisco Bay region. Found twice: at Oakland, May 8, 1890 (see R. C. McGregor, *Auk*, xiv, 1897, p. 92), and at Hayward, Alameda County, May 16, 1875 (see J. G. Cooper, *Amer. Naturalist*, x, 1876, p. 90). For history, and descriptions of habits and nesting see: J. Grinnell, *Condor*, xiv, 1912, p. 105; J. B. Dixon, *Condor*, xiv, 1912, p. 75; T. S. Palmer, *Condor*, xx, 1918, p. 114; J. G. Tyler, *Condor*, xxii, 1920, p. 190; R. S. Woods, *Condor*, xxiv, 1922, p. 189, and *Condor*, xxv, 1923, p. 195; B. T. Gault, *Auk*, ii, 1885, p. 310; J. Grinnell, *Univ. Calif. Publ. Zool.*, xii, 1914, p. 145; C. Bendire, *Life Histories of N. Amer. Birds*, ii, 1895, p. 202; W. L. Dawson, *Birds of California*, 1923, p. 946.

ANNA HUMMINGBIRD
Calypte anna (Lesson)

Common resident throughout the entire Bay district. Has been found once on the Farallon Islands. Likely to be met with in any locality where flowers and minute insects afford adequate food supply; familiar about city parks and home gardens; particularly noticeable about eucalyptus trees when in blossom. The nesting season begins earlier than with any other bird of the region. Nesting activities have been observed as early as January 14 (at Oakland) and extend as far into summer as the first week in July (July 4 at Los Gatos). Nests, in most instances lichen-covered, are placed in vines, shrubs and trees, from six to twenty feet up, and, more rarely, even to as great a height as sixty feet. Preference is shown for cypress, eucalyptus, and live oak. For accounts of habits, nesting and food see: F. M. Bailey, *Handbook*, 1902, p. 237; J. Van Denburgh, *Proc. Amer. Philos. Soc.*, xxxviii, 1899, p. 164; C. Keeler, *Bird Notes Afield*, 1907, p. 110; E. Adams, *Bull. Cooper Orn. Club*, i, 1899, p. 28; W. O. Emerson, *Bull. Cooper Orn. Club*, i, 1899, p. 71; A. I. McCormick, *Condor*, iii, 1901, p. 101; W. L. Chambers, *Condor*, iii, 1901, p. 105; M. Bryan, *Condor*, iv, 1902, p. 35; F. C. Clark, *Condor*, v, 1903, p. 18; W. L. Chambers, *Condor*, v, 1903, pp. 78, 133; H. H. Sheldon, *Condor*, ix, 1907, p. 111; J. H. Bowles, *Condor*, xii, 1910, p. 125; L. H. Miller, *Condor*, xxi, 1919, p. 79; F. N. Bassett, *Condor*, xxii, 1920, p. 37, *Condor*, xxiv, 1922, p. 63, and *Condor*, xxvi, 1924, p. 227; R. Hunt, *Condor*, xxii, 1920, p. 109; C. A. Keeler, *Zoe*, ii, 1891, p. 168; W. O. Emerson, *Ornithologist and Oologist*, vii, 1882, p. 165, and *Ornithologist and Oologist*, xi, 1886, p. 70; F. E. L. Beal and W. L. McAtee, *U. S. Dept. Agric., Farmers'*

Bulletin no. 506, 1912, p. 16; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 206; W. L. Dawson, Birds of California, 1923, p. 935; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 353.

RUFIOUS HUMMINGBIRD
Selasphorus rufus (Gmelin)

Has also been called Allen Hummingbird (by mistake) and Red-backed Hummingbird.

Spring and fall migrant in limited numbers in some parts of the Bay region. Most frequently met with in April; earliest authenticated appearance, March 4 at Hayward, Alameda County, and latest for spring, May 11 at Berkeley. Only two definite records of fall migrants are known: Claremont Canyon, Berkeley, August 21, and Hayward, August 18. Other localities at which the Rufous Hummingbird has been recognized are: Sebastopol, Sonoma County; Nicasio, Marin County; Oakland, Alameda County; Palo Alto, Santa Clara County. Close similarity between the Rufous and the Allen Hummingbird (next listed) makes field identification hazardous, so that definite knowledge of the numbers of this less common, non-nesting species is limited. For accounts of distribution, habits, and nesting elsewhere than in California, see: J. Grinnell, Condor, III, 1901, p. 127; J. H. Bowles, Condor, III, 1901, p. 1; W. L. Finley, Condor, VII, 1905, p. 59, and Condor, XI, 1909, p. 183; S. G. Jewett, Condor, XVIII, 1916, p. 76; F. M. Bailey, Condor, XIX, 1917, pp. 52, 96; A. D. DuBois, Condor, XXV, 1923, p. 157 (in Montana); J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 58; W. L. Finley, American Birds, 1907, pp. 3, 176; F. M. Bailey, Handbook, 1902, p. 239; J. Grinnell, Univ. Calif. Publ. Zool., V, 1909, p. 219; W. L. Dawson, Birds of California, 1923, p. 930; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 354.

ALLEN HUMMINGBIRD
Selasphorus alleni Henshaw

Has also been called Rufous Hummingbird, often by mistake.

Common summer resident in the coast belt, that is, within about 25 miles of the sea-coast; occurs in migrations, in lesser numbers, interiorly. One of the most abundant birds in the vicinity of the Chain of Lakes in Golden Gate Park. Is the earliest arrival, of all our birds, in the spring; has appeared as early as February 7 (at Berkeley); remains as late as September 12 (at Berkeley). Found foraging about shrubs, vines and trees wherever these are in flower or harbor minute insects. Nesting season extends from the first of March to the last of May, the earliest nest with eggs having been found on March 7 at Hayward, and the latest on May 31, also at Hayward. Nests are built in tangles of vines, in shrubs, or in trees such as cypress, oak, alder, and spruce; they may be placed from two to fifteen feet above the ground. For accounts of distribution, habits and nesting see: J. Van Denburgh, Proc. Amer. Philos. Soc., XXXVIII, 1899, p. 166 (here called "*rufus*"); C. Keeler, Bird Notes Afield, 1907, pp. 76, 87, 110 (also called "*rufous*"); J. Grinnell, Condor, III, 1901, p. 127; A. B. Howell, Condor, XII, 1910, p. 46; J. H. Bowles, Condor, XIV, 1912, p. 77; J. Mailiard, Condor, XV, 1913, p. 205, and Condor, XXI, 1919, p. 212; M. S. Ray, Condor, XVIII, 1916, p. 227; T. I. Storer, Condor, XXIII, 1921, p. 160; F. N. Bassett, Condor, XXIII, 1921, p. 37, and Condor, XXIV, 1922, p. 63; H. C. Bryant, Condor, XXVII, 1925, p. 98; W. O. Emerson, Ornithologist and Oologist, XI, 1886, pp. 37, 86 (called "*rufous*"); C. Keeler, Zoe, II, 1891, p. 167 (also called "*rufus*"); C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 216; W. L. Dawson, Birds of California, 1923, p. 925.

CALLIOPE HUMMINGBIRD
Stellula calliope (Gould)

Rare migrant east of the Bay. Localities which it is known to have visited are all in Alameda County: east of the Greek Theatre, Berkeley ("fall"); Claremont Canyon, Berkeley (May 11); Oakland (April 28 to May 14); and Hayward (March 29 to April 17). For accounts of habits and nesting see: F. M. Bailey, Handbook, 1902, p. 242; A. A. Saunders, Condor, xvii, 1915, p. 113 (in Montana); W. M. Pierce, Condor, xviii, 1916, p. 179; L. E. Wyman, Condor, xxii, 1920, p. 206; J. W. Mailliard, Condor, xxiii, 1921, p. 75; C. W. Michael, Condor, xxiii, 1921, p. 136; J. Grinnell, Auk, xxii, 1905, p. 384, and Univ. Calif. Publ. Zool., v, 1908, p. 72; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 219; W. L. Dawson, Birds of California, 1923, p. 915; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 356.

WESTERN KINGBIRD
Tyrannus verticalis Say

Also called Arkansas Kingbird, Arkansas Flycatcher, and Bee Martin.

Summer resident, but common only locally and interiorly. Has been observed at the following localities: Sebastopol and Petaluma, Sonoma County; Olema and Nicasio, Marin County; Berkeley and Hayward, Alameda County; Calaveras Valley, Alviso, San Jose and Los Gatos, Santa Clara County; also once on the Farallon Islands (May 28, 1887). Arrives usually by the middle of April, although the extremely early date, March 22, has been recorded for its appearance at San Jose. Departs in August (latest date, August 29, at Berkeley). To be looked for in open country such as the warmer foothills, interior valleys, and plains dotted with oaks. Is often found about farms where it places its nests in man-provided sites suitable to its requirements, such as telephone poles, derricks, windmills, gate posts, and cornices of houses. Also builds in forks of larger branches of trees. Nests are placed from three to forty feet above the ground. For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 248; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 59; J. S. Hunter, Condor, vii, 1905, p. 53; H. W. Myers, Condor, xii, 1910, p. 166; H. S. Swarth, Condor, xiii, 1911, p. 161; H. C. Bryant, Condor, xv, 1913, p. 46; C. Lamb and A. B. Howell, Condor, xv, 1913, p. 116; C. H. Kennedy, Condor, xvii, 1915, p. 66; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 32, and Bulletin no. 44, 1912, p. 19; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 245; W. L. Dawson, Birds of California, 1923, p. 851; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 359.

NORTHERN ASH-THROATED FLYCATCHER
Myiarchus cinerascens cinerascens (Lawrence)

Common summer resident locally of oak-covered hillsides and the drier interior valleys. At times, forages over warm, chaparral-covered slopes near-by, as well as among the scattering broad-leafed trees. Often takes up its quarters in old orchards and around sequestered buildings. Its residence in the Bay region extends from the middle of April (earliest, April 9 at Sebastopol) to the last of August. Nesting season is normally from May 16 (Los Gatos) to June 18 (Los Gatos); an exceptionally early date is April 29, for Alameda County. For nesting sites, chooses natural cavities in the branches of oaks, willows, and old orchard trees; occasionally uses recesses about buildings. Has been observed as a straggler on the Farallon Islands, June 1 and 2, 1911 (see W. L. Dawson, Condor, xiii, 1911, p. 180). For accounts of behavior, voice, nesting and food see: F. A. Merriam, Auk, xiii, 1896, p. 119; W.

O. Emerson, Ornithologist and Oologist, viii, 1883, p. 36, and Condor, vii, 1905, p. 113; H. C. and A. M. Bryant, Condor, xviii, 1916, p. 230; N. K. Carpenter, Condor, xxi, 1919, p. 29; W. C. Hanna, Condor, xxi, 1919, p. 88; J. Van Denburgh, Proc. Amer. Philos. Soc., xxxviii, 1899, p. 166; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 29, and Bulletin no. 44, 1912, p. 28; F. E. L. Beal and W. L. McAtee, U. S. Dept. Agric., Farmers' Bulletin no. 506, 1912, p. 19; C. Bendire, Life Histories of N. Amer. Birds, ii, 1895, p. 266; W. L. Dawson, Birds of California, 1923, p. 862; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 360.

ROCKY MOUNTAIN SAY PHOEBE
Sayornis saya saya (Bonaparte)

Also called Say Flycatcher and Say Pewee.

Sparingly winter visitant. Has been observed at the following localities: Sebastopol, Santa Rosa and Petaluma, Sonoma County; Nicasio, Marin County; San Gregorio, San Mateo County; Berkeley, Oakland and Milpitas, Alameda County; San Jose, Palo Alto and Los Gatos, Santa Clara County; Lafayette, Contra Costa County; Vacaville, Solano County; Mt. St. Helena, Napa County. Has been seen as early as September 13, at Baumberg, Alameda County, and as late as the last week of February (the 27th, at Berkeley). A few pairs spend the summer, and nest, in the neighborhood of Tesla, extreme eastern Alameda County; eggs, April 22, 1922 (H. W. Carriger, MS). For accounts of habits, voice, nesting and food see: F. M. Bailey, Handbook, 1902, p. 255; C. Keeler, Bird Notes Afield, 1907, p. 131; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 61; W. L. Burnett, Condor, ii, 1900, p. 89; C. B. Linton, Condor, ii, 1900, p. 90; J. E. Law, Condor, iii, 1901, p. 186; H. C. Bryant, Condor, xiii, 1911, p. 202; J. Mailliard, Condor, xxi, 1919, p. 75; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 35, and Bulletin no. 44, 1912, p. 36; C. Bendire, Life Histories of N. Amer. Birds, ii, 1895, p. 276; W. L. Dawson, Birds of California, 1923, p. 873.

NORTHERN SAY PHOEBE
Sayornis saya yukonensis Bishop

Rare fall and winter visitant. Only two authenticated instances of occurrence: Tiburon, Marin County, September 26, 1897 (specimen no. x1487, coll. J. and J. W. Mailliard, in Calif. Acad. Sci.); one mile west of Stanford University, December 2, 1923 (specimen no. 45945, Mus. Vert. Zool.; see H. S. Swarth, Condor, xxviii, 1926, p. 45).

BLACK PHOEBE
Sayornis nigricans (Swainson)

Also called Black Flycatcher and Black Pewee.

Common resident throughout every county bordering on the Bay, wherever fresh water is at hand. Frequents canyon stream-sides, borders of lakes and ponds, banks of reservoirs, and the vicinity of water troughs in barn yards and along roadsides; often forages around houses and gardens in the suburbs of towns and cities. Nesting season begins by the middle of April and continues through June. The mud-composed nests are to be looked for in a number of situations, but always near or over water: deserted cabins, faces of rocks, firm earthen banks, and the walls of wells; most often, perhaps, they are placed on supports or beams under bridges, from two to five feet above water. For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 255; W. L. Finley, American Birds, 1907, p. 189; J. G. Tyler,

Pacific Coast Avifauna no. 9, 1913, p. 61; F. B. Jewett, Bull. Cooper Orn. Club, I, 1899, p. 13; W. B. Judson, Condor, III, 1901, p. 186; A. B. Howell, Condor, xxvi, 1924, p. 191; F. A. Merriam, Auk, XIII, 1896, p. 120; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 36, and Bulletin no. 44, 1912, p. 38; W. L. Dawson, Birds of California, 1923, p. 868; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 362.

GREATER OLIVE-SIDED FLYCATCHER

Nuttallornis borealis majorinus Bangs and Penard

Summer resident in small numbers. Is restricted to heavily forested areas of redwood, spruce or pine, or, locally, to certain planted groves of pine, cypress and eucalyptus. In such "artificial" groves it is known to occur at Stanford University, the University of California, the grounds of the State Institution for Deaf and Blind at Berkeley, and Sutro Forest, San Francisco. Arrives late (from April 26 to May 12, in different years, at Berkeley) and remains until the last of August. Recorded as a migrant from Berryessa, Santa Clara County, in September. Nesting takes place during June and July (nests found at Berkeley on June 12 and July 27, 1920). Nests are situated high (from 20 to 75 feet) in coniferous trees, near the ends of drooping or out-swaying branches. For accounts of habits, song and nesting see: F. M. Bailey, Handbook, 1902, p. 257; C. Barlow, Condor, III, 1901, p. 165; J. Dixon, Condor, xxii, 1920, p. 200; A. Wetmore, Condor, xxiii, 1921, p. 61; C. Barlow, Osprey, II, 1897, p. 47; H. B. Kaeding, Nidologist, IV, 1896, p. 19; J. Grinnell, Univ. Calif. Publ. Zool., V, 1908, p. 76; F. E. L. Beal, U. S. Biological Survey Bulletin no. 44, 1912, p. 41; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 282; W. L. Dawson, Birds of California, 1923, p. 901; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 364.

COMMON WESTERN WOOD PEWEE

Mniotilta richardsonii richardsonii (Swainson)

Has also been called Short-legged Pewee.

Summer resident in varying numbers in most wooded portions of the Bay region. Has been found at Freestone, Cazadero and Sebastopol, Sonoma County; Olema and Nicasio, Marin County; Berkeley and Hayward, Alameda County; San Jose and Los Gatos, Santa Clara County; Walnut Creek, Contra Costa County; Vacaville, Solano County; Napa Valley and Mt. St. Helena, Napa County. Has been observed on the Farallon Islands in May and June. Arrives as early as April 21 (at Berkeley) and remains until the latter part of September. Nesting season extends from the first of May to the last of July. Nests may be situated from about eight to forty feet up, usually on tops of dead or living branches of the larger trees such as alder, pine, cypress, and eucalyptus. For accounts of habits, nesting and food see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 62; C. Barlow, Condor, III, 1901, p. 166; W. L. Dawson, Condor, XIII, 1911, p. 180; J. W. Mailliard, Condor, xxiii, 1921, p. 76; C. Gignoux, Condor, xxiii, 1921, p. 191; M. S. Ray, Auk, XX, 1903, p. 184; J. Grinnell, Univ. Calif. Publ. Zool., V, 1908, p. 77; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 39, and Bulletin no. 44, 1912, p. 49; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 291; W. L. Dawson, Birds of California, 1923, p. 905; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 365.

YELLOW-BELLIED WESTERN FLYCATCHER
Empidonax difficilis difficilis Baird

Also called Western Flycatcher.

Abundant summer resident in most of the region. Observed also on the Farallon Islands in May. Arrives during the third week of March (our earliest date, for Palo Alto, March 14), and the majority depart by the last of August, though some individuals remain clear through September (latest, October 8, at Hayward). Establishes its headquarters in well-shaded situations, as in woods or in canyons or ravines; prefers the vicinity of alder and bay trees, rather than the conifers or oaks. The nesting season extends from the last of April to the first of July (April 22, at Berkeley, and July 4, at Los Gatos). Nests are to be found, from the ground up to a height of twenty feet, in a great variety of situations, but nearly always close to streams: cavities and cracks of either living or dead tree-trunks, tops of stumps, beams or posts on buildings, supports under bridges, and hollows in earth banks amid root tangles; in one known instance, a depression in the level ground was used. For accounts of habits, voice, nesting and food see: C. Keeler, *Bird Notes Afield*, 1907, p. 93; H. J. Leland, *Bull. Cooper Orn. Club*, I, 1899, p. 82; F. M. Bailey, *Condor*, VIII, 1906, p. 108, and *Condor*, XIX, 1917, p. 97; M. S. Ray, *Condor*, IX, 1907, p. 175; H. W. Myers, *Condor*, XIII, 1911, p. 87; T. I. Storer, *Condor*, XVI, 1914, p. 144; J. Van Denburgh, *Proc. Amer. Philosophical Soc.*, 1899, p. 167; W. O. Emerson, *Nidologist*, II, 1894, p. 8; J. Mailliard, *Bulletin Nuttall Orn. Club*, VI, 1881, p. 119; G. F. Breninger, *Osprey*, III, 1898, p. 56; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 34, 1910, p. 41, and *U. S. Biological Survey Bulletin* no. 44, 1912, p. 55; C. Bendire, *Life Histories of N. Amer. Birds*, II, 1895, p. 298; W. L. Dawson, *Birds of California*, 1923, p. 878; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 372.

WESTERN TRAILL FLYCATCHER
Empidonax traillii traillii (Audubon)

Also called Little Flycatcher.

Sparingly summer resident in the Bay region. Arrives late: earliest near Berkeley, May 2; our latest date, for Hayward, September 25. Known to have nested in only a few localities: Pleasanton, Alameda County; Alviso, Palo Alto, and vicinity of Santa Clara, Santa Clara County. Common at Antioch, Contra Costa County, June 4. A vagrant found on the Farallon Islands, May 29, 1911 (no. 18077, *Calif. Acad. Sci.*). Restricted to thickets of willows bordering streams or growing in swampy places. Nesting season begins in May and lasts into the first part of August (extremes, May 22 and August 8). Nests are to be looked for in crotches of willow or maple, from about two to five feet above the ground. For accounts of habits, nesting and food, see: F. M. Bailey, *Handbook*, 1902, p. 260; M. S. Ray, *Condor*, XV, 1913, p. 202, and *Auk*, XX, 1903, p. 185; C. Barlow, *Condor*, II, 1900, p. 132; H. W. Henshaw, *Bull. Nuttall Orn. Club*, I, 1876, p. 15; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 44, 1912, p. 60; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 371.

HAMMOND FLYCATCHER
Empidonax hammondi (Xantus)

Rare migrant. Only two verified records of occurrence in the Bay region: Cotati, Sonoma County, April 21, 1895; Pine Canyon, Mount Diablo, Contra Costa County, April 14, 1896 (both from specimens in *Calif. Acad. Sci.*). For brief account of habits see: J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 370.

CALIFORNIA HORNED LARK
Otocoris alpestris actia Oberholser

Also called Mexican Horned Lark, and (locally) Sky Lark.

More or less common resident, locally, on dry plains or open, rolling hills scantily clothed with short grasses. Some localities where this bird may be found are: near Jenner and Cotati, Sonoma County; hills near Tennessee Cove, Mill Valley and San Geronimo, Marin County; Melrose, Hayward and Altamont Pass, Alameda County; Palo Alto, Santa Clara County. Also a nesting species in several parts of San Francisco County, as at Ocean View, Ingleside, Twin Peaks and the Presidio. The nesting season extends through April and May. Nests may be looked for in depressions of the ground, partially sheltered by small plants or clods of earth. For accounts of habits, nesting, song and food see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 62; A. Wetmore, Condor, xviii, 1916, p. 112; M. S. Ray, Condor, xviii, 1916, p. 227; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 44; W. L. McAtee, U. S. Biological Survey Bulletin no. 23, 1905, p. 30; H. W. Henshaw, U. S. Dept. Agric., Farmers' Bulletin no. 513, 1913, p. 22. For interesting accounts of other western races of the Horned Lark, doubtless closely similar in habits to ours, see the following: H. W. Carriger, Bull. Cooper Orn. Club, i, 1899, p. 86; J. H. Bowles, Condor, ii, 1900, p. 30; H. Tullsen, Condor, xiii, 1911, p. 97; C. H. Kennedy, Condor, xv, 1913, p. 135; F. M. Bailey, Handbook, 1902, p. 267; W. L. Dawson, Birds of California, 1923, p. 837; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 374.

NOTE: The race *Otocoris alpestris strigata* Henshaw, Streaked Horned Lark, has been reported from "San Francisco" as a rare straggler in winter, but with some room for doubt as to the correctness of the determination.

YELLOW-BILLED MAGPIE
Pica nuttallii (Audubon)

Now rare or but very local in occurrence, although reported as formerly more or less common resident generally, in the interior, south of the Golden Gate. Definite records are as follows: Lower slopes of Mount St. Helena, Napa County ("sporadic" in 1900); San Francisco (previous to 1858); between San Francisco and San Jose ("very abundant" in January, 1852); San Mateo County, at San Bruno and San Mateo in June, 1850; Santa Clara (in 1855); San Jose (previous to 1858—also five miles southeast of, in 1920); vicinity of Sargents ("large rookery" in 1894 and a few there yet); hills near Pleasanton, in eastern Santa Clara County (a colony of 20 or so pairs in 1920 and 1921); Calaveras Valley and vicinity of Mount Hamilton, farther south, in Santa Clara County (regularly). Nests are built in the upper branches of oak trees; eggs are reported from April 6 to June 2, April 15 being about the average. For brief accounts see: F. M. Bailey, Handbook, 1902, p. 271; C. Barlow, Nidologist, i, 1894, p. 111; L. Bolander, Condor, ix, 1907, p. 25; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 65; H. R. Noack, Condor, iv, 1902, p. 78; J. Grinnell, Condor, xxv, 1923, p. 172; C. Bendire, Life Histories of N. Amer. Birds, ii, 1895, p. 355; W. L. Dawson, Birds of California, 1923, p. 38.

BLUE-FRONTED STELLER JAY
Cyanocitta stelleri frontalis (Ridgway)

Also called Steller Jay.

Birds of this race, or intergrades between it and the Coast Steller Jay, are common residents in a restricted portion of Sonoma County, from the coast in the vicinity of Fort Ross, inland to the limit of the coastal forests; also at the following more or less

isolated stations still farther eastward: Sonoma Mountain and Rincon Valley, in Sonoma County, and Mount St. Helena and Mt. George, east of Napa Valley, in Napa County. Adheres to coniferous woods both for foraging and for nesting. For accounts of habits, nesting and food see: C. Barlow, *Condor*, III, 1901, p. 167; C. A. Moody, *Condor*, IV, 1902, p. 91; W. W. Price, *Condor*, VI, 1904, p. 72; B. W. Evermann, *Condor*, XVII, 1915, p. 58; M. M. Miller, *Condor*, XXII, 1920, p. 188; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 47; C. Bendire, *Life Histories of N. Amer. Birds*, II, 1895, p. 365; W. L. Dawson, *Birds of California*, 1923, p. 65; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 379.

SOUTHERN COAST STELLER JAY
Cyanocitta stelleri carbonacea Grinnell

Also called Steller Jay and Blue-fronted Jay.

A common resident, generally, in wooded parts of the region toward the sea-coast; in the interior, of but local occurrence, or wanting altogether. Particularly numerous in Marin and western Sonoma counties, and in San Mateo and western Santa Clara counties. Local "colonies" are found on the slopes of Mount Diablo, in the Berkeley hills, in Redwood Canyon (back of Oakland), and in certain canyons among the hills of the Mount Hamilton Range from the vicinity of Niles Canyon south. Adheres to evergreen growths—redwood, fir, pine, madrone and bay trees. In the vicinity of Berkeley, the older planted groves of cypress and eucalyptus have met this bird's likes in conspicuous measure. Strangely, not reported from San Francisco County. Nesting is at its height in May (earliest April 14 near Sunol), with nests situated well up in thick evergreens. For accounts of habits, voice and food see: J. Mailliard, *Condor*, II, 1900, p. 126, and *Condor*, X, 1908, p. 133; C. Keeler, *Bird Notes Afield*, 1907, pp. 82, 83; F. M. Bailey, *Handbook*, 1902, p. 272; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 47; W. L. Dawson, *Birds of California*, 1923, p. 65.

NORTHWESTERN CALIFORNIA JAY
Aphelocoma californica oocleptica Swarth

Also called California Jay and Swarth Jay.

Abundant permanent resident in the counties to the north and east of San Francisco Bay, except in the drier, interior parts of Napa and Solano counties, which are occupied by the closely similar Interior California Jay. Found in all more or less tree-covered areas, but especially abundant in the oak belts. The nesting season reaches its height during the month of April; eggs have been found as early as March 25, and still unfeathered young as late as July 7. Nests are most frequently situated in oaks, from five to thirty feet above the ground, but may also be found in alders, cottonwoods, willows, pines, or even in the bushes of the chaparral, such as ceanothus. For accounts of habits, nesting and food see: H. R. Taylor, *Condor*, II, 1900, p. 45; J. Mailliard, *Condor*, II, 1900, pp. 58, 126, and *Condor*, VI, 1904, p. 94; J. W. Mailliard, *Condor*, XIV, 1912, p. 42; T. I. Storer, *Condor*, XXI, 1919, p. 214; F. M. Bailey, *Handbook*, 1902, p. 275; D. A. Cohen, *Osprey*, VI, 1902, p. 1; F. E. L. Beal, U. S. Dept. Agric. Yearbook, 1904, p. 249, and U. S. Biological Survey Bulletin no. 34, 1910, p. 50; H. W. Henshaw, U. S. Dept. Agric., *Farmers' Bulletin* no. 630, 1915, p. 20; C. Bendire, *Life Histories of N. Amer. Birds*, II, 1895, p. 374 (applies to several races); W. L. Dawson, *Birds of California*, 1923, p. 44 (applies to several races).

SOUTHERN CALIFORNIA JAY
Aphelocoma californica californica (Vigors)

Also called California Jay.

Permanent resident on the south side of San Francisco Bay, down the San Francisco peninsula, in San Francisco, San Mateo and Santa Clara counties. Some of the localities where it is more or less common are: Golden Gate Park, Palo Alto, San Jose, Berryessa, College Park and Los Gatos. The nesting season at Los Gatos is recorded as extending from the middle of March (eggs on the 17th) to the middle of May (eggs on the 16th). For accounts of the habits of the California Jay, which probably apply quite as well to this subspecies, see references listed under the preceding head. For the geographic distribution of the races, consult H. S. Swarth, Univ. Calif. Publ. Zool., xvii, 1918, p. 405.

INTERIOR CALIFORNIA JAY
Aphelocoma californica immanis Grinnell

Also called California Jay and Grinnell Jay.

Permanent resident of the less humid, far interior part of the region north of the Bay, namely, in the vicinity of Vacaville, Solano County. This is the race of California Jay which occupies the Sacramento-San Joaquin Valley and adjacent hills, and it penetrates the Bay region only at the point just specified. Within this region it is geographically complementary to the Northwestern and Southern California jays. It is so similar in appearance and habits to these other two races as to be indistinguishable in the field. For brief accounts of the Interior California Jay see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 66; J. Grinnell, Condor, xiii, 1911, p. 109; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 387. For accounts of habits and food, which doubtless apply to this race as well as to the two preceding, see references under Northwestern California Jay.

WESTERN RAVEN
Corvus corax sinuatus Wagler

Also called American Raven and Mexican Raven.

Resident locally. In 1850, "very common along the roadside from San Francisco to San Mateo"; but now rare except around Point Reyes and along the sea-coast of Sonoma County. One or more pairs have been known to live among the rocky cliffs of the Farallon Islands, until the last few years at least; recorded by observers on these Islands six or seven different times, the latest being 1911 (see W. L. Dawson, Condor, xiii, 1911, p. 181). On the mainland, Ravens have been reported from Fort Ross and Stewarts Point (where still common), Sebastopol and Petaluma, Sonoma County; Point Reyes, Inverness, near Muir Woods, and Nicasio, Marin County; and Lake Merced, San Francisco County (pair seen July 23, 1911). Ravens in this territory build their nests only in the most inaccessible places on the faces of cliffs. Newly hatched young found on the Farallones, June 9 (1895). For accounts of habits, nesting and food see: C. Barlow, Nidologist, ii, 1895, p. 166; F. M. Bailey, Handbook, 1902, p. 279; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 66; C. B. Linton, Bull. Cooper Orn. Club, i, 1899, p. 68; G. F. Breninger, Auk, xxi, 1904, p. 220; J. Dixon, Condor, viii, 1906, p. 91; R. C. Ross, Condor, xxvii, 1925, p. 172; R. Hoffmann, Auk, xxxvii, 1920, p. 453; A. B. Howell, Pacific Coast Avifauna no. 12, 1917, p. 69; C. Bendire, Life Histories of N. Amer. Birds, ii, 1895, p. 396; W. L. Dawson, Birds of California, 1923, p. 1.

WESTERN AMERICAN CROW
Corvus brachyrhynchos hesperis Ridgway

Also called Common Crow and California Crow.

Common resident, locally. While some are to be found at a number of localities in various parts of the region, the species is most numerous represented north of the Bay, especially in those portions of Marin County immediately adjacent to salt water. Has been observed at the following places: Rio Vista, Solano County; near Mount St. Helena, Napa County; Petaluma and Sonoma, Sonoma County; Muir Woods, Nicasio, Sausalito, Tiburon, and San Quentin, Marin County; the Presidio and Golden Gate Park, in San Francisco (occasional stragglers, not nesting); Angel Island (near the Marin County shore), San Francisco Bay; Lafayette, Contra Costa County; Calaveras Valley, San Jose and Gilroy, Santa Clara County; Farallon Islands. Curiously, we find no recent record of crows for the Alameda County shores, though in 1872 they nested commonly in the oaks on the University campus, Berkeley. To be looked for on tide flats and on moist pasture lands, where the birds forage in flocks of varying size. Nests are placed from 20 to 30 feet above the ground in oak and bay trees. Eggs have been found from March 31 to May 8, in the vicinity of Tiburon. For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 281; W. L. Finley, American Birds, 1907, p. 69 (in Oregon?); J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 66; E. R. Kalmbach, U. S. Dept. Agric. Bulletin no. 621, 1918, 93 pp. (relating to crows in general); C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 405; W. L. Dawson, Birds of California, 1923, p. 16; L. L. Gardner, Auk, XLIII, 1926, p. 447 (in eastern Washington).

CLARK NUTCRACKER
Nucifraga columbiana (Wilson)

Also called Clark Crow.

Rare straggler in late fall and winter. Has been observed as follows: at Point Reyes, Marin County, one bird, November 19, 1900 (see J. Mailliard, Condor, III, 1901, p. 16); west shoulder of Mt. Tamalpais, four observed about one-half mile from Rock Spring, October 22, 1922 (see The Gull, IV, 1922, p. 4); one killed in Cull's Canyon near Hayward, Alameda County, February 16, 1923 (see W. O. Emerson, Condor, XXVII, 1925, p. 175); one taken near Hayward, March 29, 1924 (W. O. Emerson, MS). For accounts of irregular character of occurrence in winter, habits, and food see: W. K. Fisher, Condor, XXII, 1920, p. 36; G. F. Ferris, Condor, XXII, 1920, p. 39; C. O. Esterly, Condor, XXII, 1920, p. 40; J. L. Schlesinger, Condor, XXII, 1920, p. 41; J. Mailliard, Condor, XXII, 1920, p. 160; F. M. Bailey, Handbook, 1902, p. 282; C. H. Merriam, N. Amer. Fauna no. 16, 1899, p. 119; W. E. Bryant, Zoe, IV, 1893, p. 57; S. D. Judd, U. S. Dept. Agric., Yearbook, 1900, p. 426; W. L. Dawson, Birds of California, 1923, p. 23; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 393. For accounts of the Clark Nutcracker outside of California see: C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 418; H. C. Johnson, Condor, II, 1900, p. 49, and Condor, IV, 1902, p. 87 (in Utah); W. H. Parker, Condor, II, 1900, p. 115 (in Utah); M. P. Skinner, Condor, XVIII, 1916, p. 62 (in Montana); W. C. Bradbury, Condor, XIX, 1917, p. 149 (in Colorado).

PINYON JAY
Cyanocephalus cyanocephalus (Wied)

Also called Maximilian Jay.

Rare straggler. Only one instance of occurrence. A flock numbering about seventy-five individuals was seen flying over Berkeley, October 5, 1911 (see J. Grin-

nell, Condor, xvi, 1914, p. 33). For brief accounts of the Pinyon Jay see: C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 424 (in general); F. M. Bailey, Handbook, 1902, p. 284; H. C. Johnson, Condor, IV, 1902, p. 14 (in Utah); H. Tullsen, Condor, XIII, 1911, p. 93 (in South Dakota); J. Grinnell, Univ. Calif. Publ. Zool., v, 1908, p. 85; W. L. Dawson, Birds of California, 1923, p. 28; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 397.

BOBOLINK

Dolichonyx oryzivorus (Linnaeus)

Of the five known records for the state of California, two pertain to the occurrence of this Eastern species within the San Francisco Bay region. The first record is of a female taken in a vegetable garden at Redwood City, San Mateo County, September 17, 1897 (see C. Littlejohn, Bull. Cooper Orn. Club, I, 1899, p. 73). The other record is of a male taken near San Bruno Lake, San Mateo County, between June 5 and 10, 1911 (see W. P. Taylor, Condor, XIII, 1911, p. 211). For general accounts of the bobolink see: F. M. Chapman, Handbook of Birds of Eastern N. Amer., 1917, p. 358; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 429.

NEVADA COWBIRD

Molothrus ater artemisiae Grinnell

Rare straggler into the region. Only one known instance of occurrence: A single bird observed on two successive days, June 1 and 2, 1911, on the Farallon Islands, being secured on the latter date (see W. L. Dawson, Condor, XIII, 1911, p. 181). For accounts pertaining to habits of cowbirds in general, see: H. Tullsen, Condor, XIII, 1911, p. 101; W. L. McAtee, Condor, XIII, 1911, p. 107; H. W. Myers, Condor, XVIII, 1916, p. 204; W. C. Hanna, Condor, XX, 1918, p. 211; F. M. Bailey, Handbook, 1902, p. 287; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 67; W. L. Dawson, Birds of California, 1923, p. 75.

CALIFORNIA COWBIRD

Molothrus ater californicus Dickey and van Rossem

Has also been called Dwarf Cowbird.

Apparently only of very recent arrival in the Bay region. First reported in 1922, when eggs were found May 23 to June 30 in nests of Golden Pileolated Warbler, Santa Cruz Song Sparrow and Willow American Goldfinch, near Irvington, Alameda County (see H. V. La Jeunesse, Condor, XXV, 1923, p. 31). In 1923, a young bird (no. 43887, Mus. Vert. Zool.) was taken by H. V. La Jeunesse from a nest of California Hutton Vireo in a willow thicket between Niles and Irvington, June 15. In 1926 two eggs of the cowbird were found in a nest of San Francisco Yellow-throat at Lake Merced, San Francisco (H. W. Carriger, MS). In 1925 on Coyote Creek near San Jose a cowbird's egg was found on June 29 in a nest of a Golden Pileolated Warbler; and in 1926, in the same general locality, June 25 to July 3, eggs of cowbirds were found in nests of Yellow-throat, Golden Pileolated Warbler, Russet-backed Thrush and Traill Flycatcher (see C. P. Smith, Condor, XXVIII, 1926, p. 245). The subspecies of Cowbird represented is, of course, only assumed, but on good grounds (see D. R. Dickey and A. J. van Rossem, Condor, XXIV, 1922, p. 208).

YELLOW-HEADED BLACKBIRD

Xanthocephalus xanthocephalus (Bonaparte)

Of rare occurrence in the immediate Bay region, having been reported definitely from but few localities. Has been observed as a resident nesting species in marshes south of San Jose, Santa Clara County (see J. Van Denburgh, Proc. Amer. Philo-

sophical Soc., xxxviii, 1899, p. 168), and near Irvington, Alameda County, eggs, May 8 to 23, 1925 (H. W. Carriger, MS). Found once (on October 17, 1906) near San Geronimo, Marin County (see J. Mailliard, Condor, x, 1908, p. 94); in Alameda County, one near Hayward May 3, 1908 (specimen in Calif. Acad. Sci.), and near Pleasanton, a pair observed about the railroad tracks, March 31, 1915 (see L. P. Bolander, Condor, xvii, 1915, p. 131). More common, in winter, near Rio Vista, Solano County. There are also old records, without details, from Petaluma, San Francisco and San Jose. For accounts of habits, song and nesting see: F. M. Bailey, Handbook, 1902, p. 288; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 68; F. M. Bailey, Condor, xx, 1918, p. 69 (in North Dakota); M. S. Ray, Auk, xx, 1903, p. 186; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 446; W. L. Dawson, Birds of California, 1923, p. 124.

SAN FRANCISCO RED-WINGED BLACKBIRD

Agelaius phoeniceus mailliardorum van Rossem

Also called Bi-colored Blackbird, Red-shouldered Blackbird, California Red-winged Blackbird, and Swamp Blackbird.

Abundant resident locally. Makes its headquarters on marshy ground, or on ground that simply tends to be marshy, like wet pastures, almost wherever such occurs, even temporarily. More wide-spread in seasons of heavy rainfall than in dry years. Large numbers nest in tule patches, willow thickets, and even mustard patches on low ground. Nesting colonies have been found in San Francisco County, in Golden Gate Park, near the Presidio, near Ingleside Beach, and at Lake Merced. Nesting is well under way by the last of April and extends through May. Nests are usually built from five inches to six feet above the ground or water. Nests may also be found in tall standing grain. In rare instances branches of oak trees extending over the water have been chosen for nest sites. For accounts of nesting, plumages, and food of this or closely related subspecies, see: H. F. Duprey, Condor, ix, 1907, p. 149; J. Mailliard, Condor, xi, 1909, p. 127, and xii, 1910, p. 63; J. Grinnell, Condor, xxv, 1923, p. 174; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 69; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 56; W. L. Dawson, Birds of California, 1923, p. 114; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 400.

CALIFORNIA RED-WINGED BLACKBIRD

Agelaius phoeniceus californicus Nelson

This is the subspecies of red-winged blackbird represented in the great San Joaquin-Sacramento Valley, and it occurs abundantly in extreme eastern Solano and Contra Costa counties. The general remarks and citations under the preceding head apply here. For an understanding of the geography of these races, see: A. J. van Rossem, Condor, xxviii, 1926, p. 215.

NOTE: At least two other subspecies of *Agelaius phoeniceus*, which summer to the northward, probably winter in the San Francisco Bay region. But satisfactory determination of actual specimens in hand has not as yet been made.

TRI-COLORED RED-WINGED BLACKBIRD

Agelaius tricolor (Audubon)

Also called Tri-colored Blackbird and Red-and-white-shouldered Blackbird.

Irregularly resident or vagrant in a few parts of the Bay region. Localities from which Tri-colored Blackbirds have been definitely reported are: Rio Vista, Solano County; Sebastopol and Petaluma, Sonoma County; Point Reyes (nesting), Nicasio and Tiburon, Marin County; the Presidio, San Francisco (in 1853); Mowry (nest-

ing), near Newark, Hayward, and near Irvington (eggs April 29, 1923), Alameda County; San Jose, Santa Clara, Alviso and Sargents (nesting), Santa Clara County. Observed in spring and fall, sometimes in considerable numbers, as in the vicinity of Nicasio, Marin County (see J. Mailliard, *Condor*, II, 1900, p. 65). Restricted to the vicinity of growths of tules along edges of ponds, sloughs, and irrigation ditches, and to the fields adjacent. Nesting activities of the Tri-colored Blackbird are carried on during May and June in colonies numbering many scores of individuals. Nests are situated in thick growths of tules, close together, from a few inches to five feet above the ground or water; sometimes they are placed even one above another. For descriptions of nesting and food see: C. Barlow, *Condor*, II, 1900, p. 132; J. Mailliard, *Condor*, II, 1900, p. 122, and *Condor*, XVI, 1914, p. 204; J. G. Tyler, *Condor*, IX, 1907, p. 177, and *Pacific Coast Avifauna* no. 9, 1913, p. 70; B. W. Evermann, *The Gull*, I, 1919, p. 2; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 34, 1910, p. 59; W. L. Dawson, *Birds of California*, 1923, p. 104; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 407.

WESTERN MEADOWLARK
Sturnella neglecta Audubon

Has also been called Western Lark.

Abundant resident of all treeless areas, both close to the seacoast and in the interior. To be looked for on dry weed-covered hillsides, moist meadowland, pastures, grain and alfalfa fields, stubble fields, often un-built-up portions of suburban districts, and even on lawns of city parks. In winter, vagrant individuals have been found on the Farallon Islands. Through the winter months to be seen in flocks composed of from five to fifty or more individuals. Solitary or in pairs during spring and summer. The nesting season extends over a long period, from the last of March (March 31 at Merced Lake, San Francisco) to July. The nest is placed in a depression of the ground, usually at the base of a clump of grass with a runway in the grass leading from it. For accounts of habits, song, nesting and food see: F. M. Bailey, *Handbook*, 1902, p. 293, and *Condor*, XX, 1918, p. 68; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 71; C. A. Keeler, *Zoe*, I, 1890, p. 116; H. Tullsen, *Condor*, XIII, 1911, p. 91 (in South Dakota); C. N. Allen, *Bulletin Nuttall Orn. Club*, VI, 1881, p. 145; L. Belding, *Auk*, XIII, 1896, p. 29; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 34, 1910, p. 65; H. C. Bryant, *Univ. Calif. Publ. Zool.*, XI, 1914, pp. 377-510; W. L. Dawson, *Birds of California*, 1923, p. 129; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 409.

BULLOCK ORIOLE
Icterus bullockii (Swainson)

Has also been called Western Oriole.

Summer resident. Common in the drier, interior portions of the Bay region, such as the southern part of Alameda County, the Santa Clara Valley, and vicinity of Vacaville; less numerous in Sonoma, Marin, San Francisco and San Mateo counties, especially in those parts bordering the sea-coast and bay shores. May be looked for regularly in the following localities: Santa Rosa and Sebastopol, Sonoma County; Tennessee Cove, Nicasio, San Anselmo and San Rafael, Marin County; Berkeley, Piedmont and Hayward, Alameda County; Walnut Creek, Contra Costa County; Calaveras Valley, Palo Alto, San Jose and Los Gatos, Santa Clara County. Arrives ordinarily the first week in April, but as early as March 18 (in 1877), at Hayward, and remains till at least the third week in August (the 17th at Los Gatos). Makes its home in orchard trees and in other trees, mostly deciduous, such as cottonwood,

willow, oak and eucalyptus. The nesting season begins the last part of April and extends through June. Nests of this oriole are placed on overhanging slender branches of trees, from eight to fifty feet above the ground. For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 298; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 72; W. L. Finley, American Birds, 1907, p. 179; J. F. Illingworth, Condor, III, 1901, p. 98; C. S. Sharp, Condor, v, 1903, p. 38; W. O. Emerson, Condor, VI, 1904, p. 78; H. C. Bryant, Condor, XIII, 1911, p. 203; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 68; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 411.

CALIFORNIA BREWER BLACKBIRD

Euphagus cyanocephalus minusculus Grinnell

Also called Brewer Blackbird.

Common resident throughout the region; especially numerous south and east of the Bay. Most noticeable in winter because of habit of foraging and roosting then in large-sized flocks. Flocks occur at this season on the Farallon Islands. Forages widely over meadowlands, open fields (both cultivated and uncultivated), orchards and barnyards; also frequents city lawns and vacant lots. Along the sea-coast, often seen on the beaches. Is one of the common nesting species in parts of San Francisco, small colonies being found in Golden Gate Park, at Sutro Heights, and at Lake Merced. The nesting season begins the last week in April and extends through June. Nests are built in oak, pine or cypress, and may be situated at any height, from close to the ground up to fifty feet. For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 300; W. L. Finley, American Birds, 1907, p. 206; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 74; F. M. Bailey, Wilson Bulletin, XXVIII, 1916, p. 51; C. Barlow, Condor, II, 1900, p. 18; M. S. Ray, Condor, XI, 1909, p. 194, and Condor, XX, 1918, p. 72, and Auk, XX, 1903, p. 186; L. E. Wyman, Condor, XIII, 1911, p. 108; H. C. Bryant, Condor, XIII, 1911, p. 201; A. W. Anthony, Condor, XXV, 1923, p. 106; W. L. Finley, Condor, XXV, 1923, p. 179; H. W. Henshaw, U. S. Dept. Agric., Farmers' Bulletin no. 513, 1913, p. 18; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 59; C. Bendire, Life Histories of N. Amer. Birds, II, 1895, p. 493; W. L. Dawson, Birds of California, 1923, p. 83; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 413.

CALIFORNIA EVENING GROSBEAK

Hesperiphona vespertina californica Grinnell

Also called Western Evening Grosbeak.

Irregular winter visitant. Many years does not appear at all, while in other years flocks of varying sizes may be found in several places at the same time, as will be noted in the following list of localities and dates of occurrence. Has been reported definitely as follows: in Napa County, near St. Helena, April 29, 1901; in Sonoma County, at Sebastopol, December 7, 1885, and at Santa Rosa, February 24, 1901; in Marin County, at Point Reyes Station, October 14, 1898, at Olema, in November, at San Geronimo, November 20, 1900, at San Anselmo, March 20, 1904, and at San Rafael, in the winter of 1900; in San Mateo County, at Pescadero, on numerous occasions ("October to March or April") during the winters from 1899 to 1902, and in 1904; in Alameda County, at Alameda, January 29 and March 6, 1901, at Oakland, February 27, 1920, and at Hayward, December 29, 1900, January 30 and April 9, 1901; in Santa Clara County, on San Francisquito Creek, near Palo Alto, November 25 and subsequently, 1900, at San Jose, January 2, 1899, and near San Jose, January 17, 1899. To be looked for in flocks composed of from six to as many

as fifty birds, feeding usually in maples, sometimes in willows or orchard trees. For descriptions of habits, nesting, song and food see: F. M. Bailey, Handbook, 1902, p. 307; C. Keeler, Bird Notes Afield, 1907, p. 72; E. C. Burton, Condor, II, 1900, p. 111; C. Barlow, Condor, III, 1901, p. 169; W. H. Jackson, Condor, VI, 1904, p. 78; F. C. Willard, Condor, XII, 1910, p. 60; C. I. Clay, Condor, XIV, 1912, p. 74; J. L. Schlesinger, Condor, XXII, 1920, p. 111; L. Zech, Condor, XXII, 1920, p. 111; J. M. Davis, Condor, XXIV, 1922, p. 137; R. H. Beck, Nidologist, IV, 1896, p. 3; W. L. Dawson, Birds of California, 1923, p. 139; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 417.

CALIFORNIA PURPLE FINCH
Carpodacus purpureus californicus Baird

Also called Western Purple Finch.

A common resident of the more humid portion of the San Francisco Bay region, especially in Marin, San Francisco, San Mateo and Alameda counties. Localities where this species may be confidently looked for are: Guerneville, Freestone and Cazadero, Sonoma County; Inverness, San Geronimo, Olema and San Anselmo, Marin County; Golden Gate Park and Sutro Forest, in San Francisco; Pescadero, San Mateo County; Berkeley and Oakland, Alameda County; Menlo Park and Los Gatos, Santa Clara County; Mt. Diablo, Contra Costa County; Mt. St. Helena, Napa County. Found mostly on tree-covered areas, showing preference for redwood, pine and cypress trees. Is occasionally seen in shade trees of city parks, gardens and streets. Nesting dates known to us are May 9 and 19, for eggs. For brief notes on song, nesting and food of this Purple Finch see: W. Brewster, Bulletin Nuttall Orn. Club, II, 1877, p. 37; W. A. Cooper, Bulletin Nuttall Orn. Club, III, 1878, p. 8; D. A. Cohen, Condor, II, 1900, p. 90; W. B. Sampson, Condor, III, 1901, p. 37; C. Barlow, Condor, III, 1901, p. 169; A. S. Allen, Condor, XVII, 1915, p. 80; H. E. Hansen and W. A. Squires, Condor, XIX, 1917, p. 60; M. S. Ray, Condor, XVIII, 1916, p. 225; W. L. Dawson, Birds of California, 1923, p. 208; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 420.

CASSIN PURPLE FINCH
Carpodacus cassinii Baird

This Purple Finch, which belongs more particularly to the high mountains of the interior parts of the state, has been met with but twice in the Bay region. A single male bird was found in company with a flock of Juncos feeding in a eucalyptus tree five miles south of San Jose, January 1, 1896 (see C. Barlow, Condor, II, 1900, p. 132). A flock of twelve, four of them brightly colored males, visited a hillside neighborhood in Berkeley, December 21, 1916 (Mrs. A. S. Allen, MS). For brief accounts of habits, nesting and food of this species see: F. M. Bailey, Handbook, 1902, p. 312; H. S. Swarth, Condor, III, 1901, p. 66; M. S. Ray, Auk, XX, 1903, p. 187; J. Grinnell, Univ. Calif. Publ. Zool., V, 1908, p. 89; W. L. Dawson, Birds of California, 1923, p. 201; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 423.

CALIFORNIA LINNET
Carpodacus mexicanus frontalis (Say)

Also called House Finch, Redhead, and Red-headed Linnet.

Abundant permanent resident throughout practically the whole region; most numerous interiorly. Has been observed, both winter and summer, on the Farallon Islands; it was nesting there in May, 1904, and the first of June, 1911. Forages in large flocks during the winter, in small companies and pairs at other seasons; affects

almost every sort of association, for example, weedy stretches of open hills and fields, trees bordering water courses or roadsides, orchards, barnyards, parks, gardens, and isolated weed-covered city lots. Perches familiarly about houses and on telegraph and telephone wires. Nesting season begins by the first week in April (earliest eggs on the 9th at Los Gatos), and it lasts practically through August. Nests are to be found in trees, shrubs or vines from five feet to at least forty feet above the ground, and are frequently placed under eaves or about porches of houses. In fact the Linnet nests about buildings almost as willingly as does the English Sparrow. Also makes use of nests of certain other kinds of birds, re-lining them. For general accounts of habits, nesting, song, food and plumage see: F. M. Bailey, Handbook, 1902, p. 313; E. Adams, Bull. Cooper Orn. Club, I, 1899, p. 24; J. Mailliard, Condor, VII, 1905, p. 179; D. I. Shepardson, Condor, XVII, 1915, pp. 100, 204; E. C. Mailliard, Condor, XIX, 1917, p. 166; O. E. Plath, Condor, XXI, 1919, p. 30; H. Michener and J. R. Michener, Condor, XXVIII, 1926, p. 254; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 74; C. Keeler, Bird Notes Afield, 1907, pp. 92, 115, and Zoe, I, 1890, pp. 117, 172; H. W. Henshaw, Auk, XI, 1894, p. 255; J. Grinnell, Univ. Calif. Publ. Zool., VII, 1911, p. 179; F. E. L. Beal, U. S. Dept. Agric., Yearbook, 1904, p. 246, and Biological Survey Bulletin no. 30, 1907, p. 13; W. L. Dawson, Birds of California, 1923, p. 212; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 425.

AMERICAN RED CROSSBILL

Loxia curvirostra minor (Brehm)

Irregular winter visitant. No crossbills at all are observed some years anywhere in the Bay region. Other years they are of quite general occurrence, in small flocks, feeding on buds of deciduous trees and the seeds of conifers. Without specimens in hand, it is practically impossible to say whether birds seen are of the present race (*minor*) or of the next (*bendirei*). Has been taken at Hayward, Alameda County, January 26 and 30, 1899, March 22, 1909, and February 23 and April 1, 1914; and in the vicinity of Nicasio, Marin County, October 28, 1878, and February 21, 1909. Taken also at Berkeley, February 10, 1920, and reported from that locality the same year from January on until into April, as also in February of 1909. This race, presumably so, visited Golden Gate Park, San Francisco, many years ago, as well as in April (3), 1920. For brief accounts of crossbills in the Bay region see: W. O. Emerson, Bulletin Cooper Orn. Club, I, 1899, p. 30 (at Hayward); J. Mailliard, Bulletin Cooper Orn. Club, I, 1899, p. 54 (in Marin County); A. S. Allen, Condor, XXII, 1920, p. 73 (at Berkeley). For general accounts of the Crossbills in other parts of the West see: F. M. Bailey, Handbook, 1902, p. 314; P. M. Silloway, Condor, VII, 1905, p. 174; J. W. Preston, Condor, XII, 1910, p. 90; W. L. Dawson, Birds of California, 1923, p. 146.

BENDIRE RED CROSSBILL

Loxia curvirostra bendirei Ridgway

Has also been called Mexican Crossbill, and Sierra Crossbill.

An irregular winter visitant, in unknown numbers as compared with the preceding. Definitely identified specimens have been taken in Marin County (two, for example, March 5, 1895, at Nicasio), and in Golden Gate Park, San Francisco (several, November 26 to December 16, 1919). Reported also from Olema, Marin County. For brief accounts of the habits of this bird see: C. Barlow, Condor, II, 1900, p. 18, and Condor, III, 1901, p. 170; W. W. Price, Condor, VI, 1904, p. 73; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 428.

WILLOW AMERICAN GOLDFINCH
Spinus tristis salicamans Grinnell

Has also been called California Goldfinch, American Goldfinch, Thistle-bird, and Yellow-bird.

Common resident locally in the San Francisco Bay region. Restricted almost entirely at nesting time to tracts of willow and alder, and to weed patches in the immediate neighborhood. Especially fond of thistles. Localities at which it is known to have occurred are: Stewarts Point, Fort Ross, Duncan Mills, and Guerneville, Sonoma County; Point Reyes Station, Inverness and Nicasio, Marin County; about Lake Merced, San Francisco County; Berkeley, Piedmont, Oakland and Hayward, Alameda County; Montara, San Mateo County; Palo Alto and Los Gatos, Santa Clara County; Grizzly Island and Rio Vista, Solano County. The nesting season begins by the last of April and extends at least through June. Nests, most often found in willows, may be situated from three to fifteen feet above the ground. For general accounts of this Goldfinch see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 75; F. M. Bailey, Condor, XIX, 1917, p. 96; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 71; W. L. Dawson, Birds of California, 1923, p. 187; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 434.

GREEN-BACKED ARKANSAS GOLDFINCH
Spinus psaltria hesperophilus (Oberholser)

Has also been called Arkansas Goldfinch, Arkansas Finch, Arizona Goldfinch and Mexican Goldfinch.

Abundant resident throughout the region. Not as plentiful in the humid coastal portion as through the drier interior. Has been found in small numbers in winter on the Farallon Islands. To be looked for in trees and shrubs, but forages most commonly in patches of weeds along roadsides, in meadowlands, and on hill slopes; frequently seen in city parks and gardens where it feeds upon seeds of composite flowers including dandelions growing in lawns. Almost any tree or shrub, or tangle of vines, forms suitable shelter for nests, which may be situated from two to at least thirty feet above the ground. The normal nesting season extends from the last of March (27th in San Mateo County) to the last of July (31st at Los Gatos, Santa Clara County). An unusually late nesting date known to us is November 2, at Berkeley. For general accounts of habits, song, nesting and food see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 76; F. M. Bailey, Handbook, 1902, pp. 322, 323; J. Van Denburgh, Proc. Amer. Philosophical Soc., xxxviii, 1899, p. 170; C. Keeler, Bird Notes Afield, 1907, pp. 74, 75; C. A. Keeler, Zoe, I, 1890, p. 118; J. Mailliard, Condor, viii, 1906, p. 45; O. E. Plath, Condor, xxi, 1919, p. 30; W. L. Chambers, Condor, xvii, 1915, p. 166; R. S. Woods, Condor, xxvii, 1925, p. 71; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 73; W. L. Dawson, Birds of California, 1923, p. 191; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 435.

LAWRENCE GOLDFINCH
Spinus lawrencei (Cassin)

Present in summer irregularly and locally in limited numbers. Has been reported also in winter. Localities of record are as follows: Sonoma and Sebastopol, Sonoma County; Nicasio, Marin County; Vaca Mountain, Solano County; San Francisco; Berkeley and Hayward, Alameda County; Los Gatos, Santa Clara County. This Goldfinch is to be looked for in situations similar to some of those affected by the Green-backed Goldfinch, namely among live oaks and planted evergreen trees on hill-sides. Is definitely known to have nested at Tennessee Cove (in Marin County), at

Hayward, Berkeley and Los Gatos. Nests are situated six to fifteen feet above the ground near the ends of out-swaying branches of evergreen trees, and have been found during May and June. For brief accounts of this bird see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 76; J. G. Cooper, Ornithology of California, 1870, p. 171; R. S. Woods, Condor, xxvii, 1925, p. 71; W. L. Dawson, Birds of California, 1923, p. 197.

NORTHERN PINE SISKIN
Spinus pinus pinus (Wilson)

Has also been called Pine Finch and Pine Linnet.

Common resident of the San Francisco Bay region, in those sections which afford growths of conifers, either native or planted. Various localities of summer (as well as winter) occurrence are: near Gualala, Stewarts Point, Fort Ross, Seaview, and Cazadero, Sonoma County; vicinity of San Geronimo, Marin County; San Francisco (Golden Gate Park); Pescadero and vicinity of San Bruno, San Mateo County; Santa Clara, Santa Clara County; Berkeley and vicinity, Alameda County. More widely distributed in winter, appearing in other, interior, localities. The nesting season extends from early in April to July. Nests are usually situated from twelve to fifteen feet, and even as high as sixty feet, in cypresses or pines. They are built on the larger branches about five or six feet from the main trunks. For accounts of habits, nesting, song and food see: F. M. Dille, Condor, ii, 1900, p. 73; H. S. Swarth, Condor, iii, 1901, p. 66; H. F. Bailey, Condor, iv, 1902, p. 94; H. W. Carriger and J. R. Pemberton, Condor, ix, 1907, p. 18; R. M. Anderson, Condor, x, 1908, p. 234; V. F. Fox, Condor, xv, 1913, p. 129; F. N. Bassett, Condor, xxv, 1923, p. 137; F. M. Bailey, Handbook, 1902, p. 323; W. L. Dawson, Birds of California, 1923, p. 181; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 438.

ENGLISH HOUSE SPARROW
Passer domesticus domesticus (Linnaeus)

Also called English Sparrow and European House Sparrow.

Abundant resident. This alien species first made its appearance in the Bay region, at San Francisco, about 1871, and by 1886 was common throughout the portions that had become settled. Now found in greatest abundance in cities, but also invades rural districts, particularly in the autumn. Has even visited the Farallon Islands. Has not as yet begun to occupy, regularly, uncultivated and forested areas. Nests under eaves and on cornices of buildings, and in vines against houses. Nesting activities extend at least from March to August, and two and even three broods are reared each year. For accounts of the English Sparrow see: W. B. Barrows, U. S. Dept. Agric., Div. Orn. and Mamm., Bulletin i, 1889, p. 201; H. C. Bryant, Calif. Fish and Game Comm., Teachers' Bulletin no. 7, 1916, 8 pp.; J. Grinnell, Amer. Naturalist, liii, 1919, p. 471; O. W. Howard, Condor, viii, 1906, p. 67; H. R. Taylor, Condor, ix, 1907, p. 28; H. F. Duprey, Condor, ix, 1907, p. 199; W. L. Chambers, Condor, xviii, 1916, p. 83; E. R. Warren, Condor, xxviii, 1926, p. 270; W. L. Dawson, Birds of California, 1923, p. 223.

OREGON VESPER SPARROW
Pooecetes gramineus affinis G. S. Miller

Rather rare winter visitant. So far, reported from only four localities: Sebastopol, Sonoma County, September 27, 1884, "first seen" (recorded as *confinis*—L. Belding, Land Birds Pac. Dist., 1890, p. 141); Fulton, Sonoma County, January 26, 1899 (Calif. Acad. Sci.); Oakland, October 8 and 22, 1898, two specimens "from a flock"

in tall grass between two stubble-fields (see J. M. Willard, Bull. Cooper Orn. Club, 1, 1899, p. 30); Berryessa, Santa Clara County (no date—see R. C. McGregor, Condor, II, 1900, p. 35). For brief accounts, of this race or of the near-related Western Vesper Sparrow, see: W. L. Dawson, Birds of California, 1923, p. 241; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 440.

ALEUTIAN SAVANNAH SPARROW

Passerculus sandwichensis sandwichensis (Gmelin)

Rare midwinter visitant. Authenticated records as follows: Specimen (no. 11487 in Mus. Vert. Zool.), "Berkeley", November 27, 1891; Cerrito, Contra Costa County, November 11, 1921 (no. 43149, Mus. Vert. Zool.); ten miles east of Suisun (toward Rio Vista), Solano County, December 22, 1921 (no. 43148, Mus. Vert. Zool.).

KADIAK SAVANNAH SPARROW

Passerculus sandwichensis anthinus Bonaparte

Winter visitant. Verified instances of occurrence are as follows: salt marsh near Hayward, Alameda County, April 29, 1898; Richmond marsh, Contra Costa County, March 3, 1909; Cerrito, Contra Costa County, November 11, 1921; vicinity of Suisun, Solano County, November 24 and December 22, 1921.

WESTERN SAVANNAH SPARROW

Passerculus sandwichensis alaudinus Bonaparte

Has also been called Skylark Sparrow.

Abundant winter visitant on open ground throughout the region. Earliest arrival date, September 2, 1918, at Belvedere. Representative localities of occurrence are: Santa Rosa, Petaluma and Sebastopol, Sonoma County; Nicasio, Marin County; Berkeley, Oakland, Hayward and Bay Farm Island, Alameda County; San Gregorio, San Mateo County; Palo Alto, Santa Clara County; San Pablo and Point Richmond, Contra Costa County; Benicia, Solano County. Often observed in loose companies in tall grasses and weeds of roadsides, meadows, fields, both cultivated and uncultivated, marshes, both fresh and salt, and open, grassy hillsides. For brief accounts of this sparrow see: F. M. Bailey, Handbook, 1902, p. 332; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 77; W. L. Dawson, Birds of California, 1923, p. 247; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 442.

BRYANT SAVANNAH SPARROW

Passerculus sandwichensis bryanti Ridgway

Has also been called Titlark Sparrow, and Bryant Marsh Sparrow.

Common resident. Occurs in numbers in the tidal marshes surrounding San Francisco Bay; also locally on upland slopes within the fog belt. Especially numerous in Alameda, San Mateo and Marin counties. Places at which this race has been found are: Sebastopol and Petaluma, Sonoma County; Point Reyes, Black's Mountain, Nicasio, Tomales Point, Bolinas and Manzanita, Marin County; Lake Merced, the Islais Marsh, the Presidio, and Twin Peaks, in San Francisco County; Millbrae, San Bruno, San Mateo, Redwood City, Pescadero and San Gregorio, San Mateo County; Palo Alto, Santa Clara County; Oakland, Berkeley, Melrose, and Bay Farm Island, Alameda County; Point Richmond and San Pablo, Contra Costa County; and Suisun Marshes, Solano County. Makes its home as a rule on marshes where salicornia and salt-grass grow abundantly, but when occurring away from salt water inhabits grassy upper slopes of hills. (Some doubt is still felt as to whether the upland breeding birds belong to the same subspecies as the salt marsh birds). Nesting season

begins by the last of April. Earliest nesting record is for April 29; other nests have been found in May and June. Nests are situated on the ground in depressions under clumps of grass or marsh vegetation. For accounts of song, habits and nesting see: C. Keeler, *Bird Notes Afield*, 1907, p. 56, and Zoe, II, 1891, p. 171; M. S. Ray, *Condor*, XVIII, 1916, p. 225; W. A. Squires, *Condor*, XVIII, 1916, p. 228; W. A. Squires and H. E. Hansen, *Condor*, XIX, 1917, p. 60; J. Mailliard, *Condor*, XIX, 1917, p. 69; J. Mailliard and J. W. Mailliard, *Condor*, XXII, 1920, p. 63; H. H. Bailey, *Condor*, XXII, 1920, p. 188.

WESTERN GRASSHOPPER SPARROW

Ammodramus savannarum bimaculatus Swainson

Has also been called Yellow-winged Sparrow.

Rare, in spring and summer, locally. Known to have occurred in but a few places in the San Francisco Bay region: in summer at Berryessa, Santa Clara County; during the summer near Hayward, and in spring at Oakland, Alameda County; in spring in Moraga Valley, Contra Costa County; and in summer at Nicasio, Tocaloma, Tomales Point, and on Black's Mountain, in Marin County. To be looked for in scattering small colonies on open sunny hillsides clothed only with short grasses or low weeds. For accounts of habits, nesting and food see: J. Dixon, *Condor*, XVIII, 1916, p. 84; J. R. Pemberton, *Condor*, XIX, 1917, p. 24; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 78; W. L. Dawson, *Birds of California*, 1923, p. 263.

NELSON SHARP-TAILED SPARROW

Ammospiza caudacuta nelsoni (J. A. Allen)

Rare straggler into the Bay region. There are only two records of occurrence of this eastern sparrow in California, both of which pertain to the same locality. The specimens were secured "on the marsh" at Milpitas, Santa Clara County, May 6, 1891, and January 31, 1896 (see C. Barlow, *Condor*, II, 1900, p. 132).

WESTERN LARK SPARROW

Chondestes grammacus strigatus Swainson

Also called Western Lark Finch.

Fairly common in summer locally, a few also wintering, interiorly. Localities at which it has been observed (in spring and summer only, unless otherwise stated) are: Sebastopol and Cazadero, Sonoma County; Nicasio, Marin County (winter also); Berkeley (arriving as early as March 15), Oakland, Alameda (December 31), and Hayward, Alameda County; Calaveras Valley, Los Gatos, and Palo Alto (January 26), Santa Clara County; Walnut Creek, Contra Costa County; Vacaville, Solano County (winter also). Inhabits open hillsides sparsely clothed with brush, districts covered with scattering oaks, and orchards. Nesting activities begin by the last week in March (22nd, at Los Gatos), and continue through June. Nests are placed on the ground in clumps of grass, or up from the ground a few feet in low bushes or small oaks. For accounts of habits, nesting, song and food see: F. M. Bailey, *Handbook*, 1902, p. 336; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 79; S. D. Judd, *U. S. Biological Survey Bulletin* 15, 1901, p. 66; W. L. Dawson, *Birds of California*, 1923, p. 234; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 444.

HARRIS SPARROW

Zonotrichia querula (Nuttall)

Very rare winter visitant. But two individuals of this eastern bird have been seen in the San Francisco Bay region, of localities and dates as follows: Hayward, Alameda County, October 28, 1900; Berkeley, Alameda County, during the winter of 1912-13, apparently the same individual, on December 25, 28 and 30, and February 7 and 11. (See W. O. Emerson, *Condor*, II, 1900, p. 145; A. S. Allen, *Condor*, XVII, 1915, p. 80.) For general account see: H. Harris, *Auk*, XXXVI, 1919, p. 180.

GAMBEL WHITE-CROWNED SPARROW

Zonotrichia leucophrys gambelii (Nuttall)

Also called Intermediate Sparrow, Nuttall Sparrow (wrongly), and Western White-crowned Sparrow.

Winter visitant. Rare or wanting in the counties immediately touching the sea-coast, but more or less common interiorly. It is difficult to determine degree of abundance of this race of White-crowned Sparrow because immatures, and often adults, are scarcely to be distinguished in the field from the Nuttall Sparrow. Difference in song, when once recognized, is perhaps the most dependable field character. Arrives by the middle of September (September 16, at Berkeley) and remains at least until the third week in April (April 20, at Oakland). Frequents brush piles, low bushes on open hillsides, shrubbery along the edges of clearings, weed patches, and city parks and gardens, where usually seen in mixed flocks of Nuttall (White-crowned) and Golden-crowned sparrows. For accounts of this race of White-crowned Sparrow see: J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 81; J. Grinnell, *Univ. Calif. Publ. Zool.*, XII, 1914, p. 168; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 34, 1910, p. 75; W. L. Dawson, *Birds of California*, 1923, p. 326.

NUTTALL WHITE-CROWNED SPARROW

Zonotrichia leucophrys nuttalli Ridgway

Also called Gambel Sparrow and White-crowned Sparrow.

Abundant resident in a narrow belt fronting the ocean. Found in great numbers close to the seashore in Sonoma (up the Russian River as far as Duncan Mills), Marin, San Francisco and San Mateo counties, and common in parts of Alameda County bordering the Bay opposite the Golden Gate. Abundant in Golden Gate Park, and numerous on the University of California campus, at Berkeley. In fall and winter (September to April) appears at localities farther inland, as at Los Gatos, San Jose, Palo Alto, San Geronimo and Santa Rosa; has also been found on the Farallon Islands. Lives in lupines of wind-swept sand dunes and in brush of open hillsides, and also frequents low growing shrubbery of city parks and gardens. Nesting begins as early as the last of March and extends to the end of July. Nests are situated usually in low bushes a few feet above the ground, though sometimes they are placed either on the ground or at some height in scrub oaks or young pines. For accounts of distribution, habits, song, nesting and food see: C. L. Hubbs, *Auk*, XXXV, 1918, p. 321; J. Mailliard, *Condor*, II, 1900, p. 63; M. S. Ray, *Condor*, VIII, 1906, p. 44; L. P. Bolander, *Condor*, VIII, 1906, p. 73; J. Mailliard, *Condor*, XXI, 1919, p. 212, and *Condor*, XXII, 1920, p. 39; W. L. Finley, *American Birds*, 1907, p. 153, opp. p. 160; C. Keeler (here called "Gambel's Sparrow"), *Zoe*, I, 1890, p. 72, and *Bird Notes* Afield, 1907, pp. 64, 66, 67; S. D. Judd, *U. S. Biological Survey Bulletin* no. 15, 1901, p. 71; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 34, 1910, p. 75; W. L. Dawson, *Birds of California*, 1923, p. 331.

GOLDEN-CROWNED SPARROW
Zonotrichia coronata (Pallas)

One of the most abundant winter visitants; occurs throughout the whole San Francisco Bay region. Arrives in the fall earlier, and stays later in the spring, than most other winter-visiting birds. Has been observed as early as August 31 (in 1892, at Los Gatos, Santa Clara County), and is generally common by the last week of September. In the spring remains regularly as late as the first week in May (latest, May 8, 1919, at Berkeley). Has been observed twice on the Farallon Islands: on September 16, 1886 ("large numbers") and again on June 2, 1911. To be looked for on the ground, in shrubbery, brush patches, and in oaks, both on wild and cultivated ground; usually in company with white-crowned sparrows. Common in city parks and gardens, and in weed patches of vacant lots. Frequently brought to notice by its three-note song in minor key. For accounts of song, habits and food see: J. Mailliard, *Condor*, III, 1901, p. 78; J. Grinnell, *Condor*, v, 1903, p. 18; A. Head, *Condor*, VIII, 1906, p. 130; A. S. Allen, *Condor*, XVII, 1915, pp. 79, 81, 82; F. N. Bassett, *Condor*, XXII, 1920, p. 136; C. Keeler, *Bird Notes Afield*, 1907, p. 64, and *Zoe*, I, 1890, p. 72; F. E. L. Beal, *U. S. Biological Survey Bulletin* 34, 1910, p. 78; W. L. Dawson, *Birds of California*, 1923, p. 317; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 450.

WHITE-THROATED SPARROW
Zonotrichia albicollis (Gmelin)

Moderately rare winter visitant. This eastern sparrow has been observed in the San Francisco Bay region as follows: In Sonoma County, at Santa Rosa, October 13 and November 23, 1898, at Sonoma, October 27, 1896, and at Petaluma, March 16, 1903; in Marin County, at or near San Geronimo, December 11, 1907, January 22, 1905, January 26, 1901, and January 6, 1918, and at Lake Lagunitas, November 16, 1924; near San Francisco, December 23, 1888; in San Mateo County, at Pescadero, December 29, 1900, and at Fair Oaks, October 6, 1895; in Santa Clara County, at Stanford University, December 26, 1923; in Alameda County, at Berkeley, January 28 to February 15, 1915, and also on various dates in the winters of 1916, 1917, 1918, 1919, and in 1923, up to April 20, and at Hayward, January 2 to 14, and November 20, 1889. In nearly every case has been seen in company with flocks of other *Zonotrichias*, both White-crowns and Golden-crowns, and in one case with a flock of *Juncos*. For brief accounts of this sparrow in California see: J. Mailliard, *Condor*, III, 1901, p. 72; M. W. Wythe, *Condor*, XVII, 1915, p. 101; E. H. Quayle, *Condor*, XXVI, 1924, p. 197.

WESTERN CHIPPING SPARROW
Spizella passerina arizonae Coues

Common summer resident locally. Seemingly much less numerous now than in former years. First individuals seen as early as February 25 (at Palo Alto); becomes common by the middle of April; last birds seen in the fall on September 21 (at Berkeley). Observed most frequently in sparsely wooded parts of the Bay region. Has been reported from the following localities: Cazadero, Petaluma, Santa Rosa and Sebastopol, Sonoma County; Nicasio and San Anselmo, Marin County; Berkeley, Oakland, Hayward and Sunol, Alameda County; San Jose, Palo Alto, Calaveras Valley and Los Gatos, Santa Clara County; Mt. St. Helena, Napa County; and Vacaville, Solano County. Recorded once in San Francisco. Seen twice on the Farallon Islands: May 22, 1887, and June 2, 1911. To be looked for especially among scattering oaks; sometimes seen in shade trees of gardens, city streets and parks.

For descriptions of habits, nesting and food see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 82; J. Grinnell, Univ. Calif. Publ. Zool., v, 1908, p. 93; C. Barlow, Condor, III, 1901, p. 171; A. A. Saunders (nesting in Montana), Condor, XII, 1910, p. 199; F. E. L. Beal, U. S. Biological Survey Bulletin 34, 1910, p. 80; F. E. L. Beal and W. L. McAtee, U. S. Dept. Agric., Farmers' Bulletin 506, 1912, p. 25; W. L. Dawson, Birds of California, 1923, p. 302; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 452.

BREWER SPARROW
Spizella breweri Cassin

Rare straggler in the San Francisco Bay region in winter. Has been found at Redwood City, San Mateo County, December 7 (1893) and February 17 (1897) (see C. Littlejohn, Condor, XIV, 1912, p. 41); and in Marin County (see L. Belding, Land Birds Pac. Dist., 1890, p. 158). Habitat preference is for low-growing bushes of warm, dry, open hillsides. For general accounts of habits and nesting of the Brewer Sparrow see: J. G. Tyler, Condor, XII, 1910, p. 193, and Pacific Coast Avifauna no. 9, 1913, p. 82; F. M. Bailey, Handbook, 1902, p. 343; M. S. Ray, Condor, XII, 1910, p. 85; W. L. Dawson, Birds of California, 1923, p. 312; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 456.

CALIFORNIA BLACK-CHINNED SPARROW
Spizella atrogularis cana Coues

Rare as a summer visitant in eastern Alameda County, where found on hillsides sparsely clothed with "black sage". Apparently established for nesting May 27 (1889) (see D. A. Cohen, Bulletin Cooper Orn. Club, I, 1899, p. 107). For accounts of habits, nesting and song, see also: J. Grinnell and H. S. Swarth, Univ. Calif. Publ. Zool., x, 1913, p. 273; L. M. Huey, Condor, XVII, 1915, p. 60; W. L. Dawson, Birds of California, 1923, p. 309.

EASTERN SLATE-COLORED JUNCO
Junco hyemalis hyemalis (Linnaeus)

Also called Eastern Snowbird.

Rare, irregular winter visitant. Individual examples of this eastern race of Junco have been taken at various points in the San Francisco Bay region, as follows: Napa County: St. Helena, February 1 and 4, 1899; Alameda County: Berkeley, January 24, 1897, and April 3, 1919, Hayward, March 20, 1880, and November 21, 1899; Santa Clara County: Mt. Hamilton, November 28, 1903, Berryessa, February 12, 1891, Mountain View, February 28, 1903, Palo Alto, November 24, 1907. In nearly every instance these Slate-colored Juncos have been discovered foraging with flocks of one or another of the more common races of Junco.

NORTHWESTERN OREGON JUNCO
Junco oreganus oreganus (J. K. Townsend)

Also called Oregon Snowbird, Shufeldt Junco and Coues Junco.

Winter visitant, in lesser numbers than the Sierra Junco, arriving the latter part of September and remaining until the latter part of April (specimens from Oakland, of dates September 17 and April 21). Localities of verified occurrence are as follows: Camp Meeker and vicinity of Santa Rosa, Sonoma County; Nicasio, Marin County; Hayward and Oakland, Alameda County. This race of Junco has been reported also from the Farallon Islands. Forages in the foliage of oaks, cypresses and eucalyptus, and upon the ground in the vicinity of these trees.

SIERRA NEVADA OREGON JUNCO
Junco oreganus thurberi Anthony

Also called Oregon Junco, Thurber Junco, Oregon Snowbird, and Western Snowbird.

Abundant winter visitant throughout the whole Bay region. First individuals believed to be of this subspecies appear the middle of October, and the bulk remain in the spring until the middle of April. Inhabit tree-covered areas, showing preference for conifers, but also affecting oaks and eucalyptus, where they forage in scattering companies either in the foliage or on the ground beneath or adjacently. For general accounts of habits, nesting and food see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 83; W. F. Bade, Sierra Club Bulletin, VIII, 1912, p. 158; C. Keeler, Bird Notes Afield, 1907, p. 68; W. H. Osgood, Osprey, II, 1897, p. 19; F. S. Daggett, Condor, III, 1901, p. 119; C. Barlow, Condor, III, 1901, p. 172; A. M. Ingersoll, Condor, XV, 1913, p. 84; M. S. Ray, Auk, XX, 1903, p. 89, Condor, XX, 1918, p. 76, and Condor, XXI, 1919, p. 184; J. Grinnell, Auk, XXII, 1905, p. 387, and Univ. Calif. Publ. Zool., V, 1908, p. 95; A. S. Allen, Condor, XVII, 1915, p. 80; I. G. Wheelock, Auk, XXII, 1905, p. 59; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 82 (pertains probably to all our races of Junco); W. L. Dawson, Birds of California, 1923, p. 291; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 459.

POINT PINOS OREGON JUNCO
Junco oreganus pinosus Loomis

Permanent resident locally from the Golden Gate and the vicinity of Berkeley south through the Santa Cruz Mountains. Known localities of nesting are: Alma, in Santa Clara County; King Mountain, La Honda, Redwood City and San Bruno, in San Mateo County; and Berkeley, Alameda County (breeds regularly of late years; specimens examined). Stragglers in autumn have been taken at Mailliard, Marin County (November 4, 1909), at the golf links, San Francisco (November 13, 1919), and at Hayward, Alameda County (October 31, 1908). Forages and nests in groves of planted evergreen trees and in native redwoods; comes familiarly about dwellings. Nesting begins by the last of March and continues through May. Nests may be situated not only on the ground but on branches of cypress trees, and occasionally in appropriate recesses about the eaves of buildings. For accounts of distribution, nesting and food of this race see: L. M. Loomis, Auk, X, 1893, p. 47, and Auk, XI, 1894, p. 265; H. B. Kaeding, Bulletin Cooper Orn. Club, I, 1899, p. 81; M. S. Ray, Condor, XIII, 1911, p. 210, Condor, XXI, 1919, p. 187, and Osprey, VI, 1902, p. 26; M. W. Wythe, Condor, XIX, 1917, p. 185; J. Dixon, Condor, XXVI, 1924, p. 197.

NOTE.—Either Point Pinos or Sierra Juncos are found nesting in certain other isolated sections of the Bay region. Adults and young or nests and eggs have been observed as follows: Cazadero and Camp Meeker, Sonoma County (July 2) (recorded as *thurberi*: see W. A. Squires, Condor, XVIII, 1916, p. 232); Marin County (July and August) (recorded as *thurberi*: see J. Mailliard, Condor, II, 1900, p. 65); Golden Gate Park (July 5), Sutro Forest and Lake Merced (summer season), San Francisco (subspecies questioned: see W. A. Squires, Condor, XVIII, 1916, p. 202, and Condor, XIX, 1917, p. 60); Stanford University arboretum (until July 11) (recorded as *thurberi*: see W. K. Fisher, Condor, VI, 1904, p. 108). It is probable that the records from south of Golden Gate all pertain to the race *pinosus*.

CALIFORNIA BELL SPARROW
Amphispiza belli belli (Cassin)

Has also been called Bell Finch.

Resident locally and in limited numbers. Found only in the drier parts of the region, away from the coast. Known localities of occurrence are as follows: Nicasio, and summit and east slope of Mount Tamalpais, Marin County; the foothills of Black Mountain, and Los Gatos, in Santa Clara County; west side of Mount Diablo, Contra Costa County; hills back of Leona Heights, Oakland, and Berkeley (head of Claremont Canyon), in Alameda County; near Vacaville, Solano County. Restricted to dry hillsides clothed with chamisal (*Adenostoma fasciculatum*). Nests with eggs or young of this species have been found in the Bay region during May and June (May 9, 1898, near Los Gatos; May 25, 1913, and June 16, 1920, near Leona Heights; June 2 on Mount Tamalpais; June 23 near Los Gatos). For accounts of habits and nesting of the Bell Sparrow see: W. M. Pierce, Condor, VIII, 1906, p. 152; J. Grinnell and H. S. Swarth, Univ. Calif. Publ. Zool., x, 1913, p. 278; W. L. Dawson, Birds of California, 1923, p. 277; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 464.

CALIFORNIA RUFIOUS-CROWNED SPARROW
Aimophila ruficeps ruficeps (Cassin)

Also called Red-capped Finch.

Common resident locally. Has been reported from the following places: Rincon Valley, Sonoma County; Nicasio, Marin County; Vacaville, Solano County; Mount Diablo, Contra Costa County; Berkeley hills, hills back of Leona Heights, and Arroyo Mocho and vicinity, Alameda County; Black Mountain (near Stanford University) and the Mount Hamilton range, Santa Clara County. Closely restricted to open, sunny hillsides clothed sparsely with chaparral, particularly California sage. Has been known to visit regularly a hillside garden in Berkeley. Nesting season extends from the last of April (April 27, Santa Clara County) to well into July (July 8, southern Alameda County). Nests are situated beneath small sage bushes, sunk flush with the surface of the ground. For accounts of habits, song, nesting and food of this or a closely related subspecies see: C. Barlow, Condor, IV, 1902, p. 107; N. K. Carpenter, Condor, IX, 1907, p. 158; H. W. Myers, Condor, XI, 1909, p. 131; J. R. Pemberton, Condor, XII, 1910, p. 123; C. O. Esterly, Condor, XXII, 1920, p. 154; R. Simpson, Condor, XXVII, 1925, p. 97; L. P. Williams, Osprey, II, 1897, p. 27; W. Brewster, Bulletin Nuttall Orn. Club, II, 1877, p. 37, and IV, 1879, p. 47; W. L. Dawson, Birds of California, 1923, p. 268; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 467.

SONG SPARROW
Melospiza melodia (Wilson)

[the subspecies represented in the Bay region]

Of the ten races of Song Sparrow to be encountered in the San Francisco Bay region five are permanent and common residents, while the other five are winter visitors in but small numbers. Of those races found in the region throughout the year two are associated with fresh-water marshes and stream-sides, and three are associated with salt-water or brackish marshes. Each of the resident races occupies a fairly distinct territory, so that determination of a race on the basis of area inhabited is one method to be used in field identification. (See J. Grinnell, Univ. Calif. Publ. Zool., x, 1913, pp. 191-194.) It is deemed practicable to treat of the mode of occurrence of the ten races of Song Sparrows separately, as set forth immediately beyond.

Curiously, published information concerning the life history of this, so common a bird, is practically wanting. We have found deplorably little in the literature which

seemed worth citing in regard to the behavior, voice, food or even the nesting of any of our subspecies of Song Sparrow. Whether or not the races differ among themselves in matters other than structure remains to be found out.

PERMANENT RESIDENTS

(of fresh water areas)

MARIN SONG SPARROW

Melospiza melodia gouldii Baird

Also called, in part, Samuels Song Sparrow.

Abundant resident of the region lying north of the Bay, in Sonoma, Marin, Napa and Solano counties. In Sonoma County has been found common at Cazadero, Guerneville, Freestone and Santa Rosa; in Marin County, at Point Reyes, Inverness, Nicasio, Olema and Bolinas; in Solano County, in canyons among the hills west of Vacaville. Restricted, as a rule, to areas of fresh water marshland and to stream-sides, where it is to be found in willow thickets, bottomland shrubbery, and tangles of blackberry and other vines.

SANTA CRUZ SONG SPARROW

Melospiza melodia santaecrucis Grinnell

Has also been called Samuels Song Sparrow, California Song Sparrow, and Heermann Song Sparrow.

Abundant resident of the fresh-water areas of San Francisco, San Mateo, Santa Clara, Alameda and Contra Costa counties; thus geographically complementary to the Marin Song Sparrow found north of the Bay. In San Francisco County it ranks second in point of numbers among the small native land birds. Lives in dense tangles of vines and shrubbery bordering streams, also in willow thickets and patches of rank-growing vegetation on moist ground, wherever such occur in the region. Nesting season begins the first of April and extends through June (nests found April 4 and June 29 at Los Gatos). Nests are built usually in tangles of blackberry vines or else in densely foliated bushes, in any case usually within two feet of the ground. The account of the food of the song sparrows of California by F. E. L. Beal (U. S. Biological Survey, Bulletin 34, 1910, p. 84) probably pertains largely to the present race, since it is known that the observations were made by him chiefly at Hayward. His general conclusions doubtless apply quite as well to the other subspecies.

(of salt marsh areas)

SAMUELS SONG SPARROW

Melospiza melodia samuelis (Baird)

Abundant resident on the tidal marshes along the north side of the Bay, from Marin County to Solano County; also at a few points on the south side of San Pablo Bay, in Contra Costa County. Localities of known occurrence are: the tidal sloughs just south of Petaluma, and Second Napa Slough, Sonoma County; Larkspur and St. Vincent, Marin County; Vallejo, Solano County; Selby and Pinole, Contra Costa County. This race is complementary to the Marin Song Sparrow in that it inhabits salt-water areas on the north side of San Francisco Bay, instead of the fresh-water areas there.

SALT MARSH SONG SPARROW

Melospiza melodia pusillula Ridgway

Also called Samuels Song Sparrow and Alameda Song Sparrow.

Abundant resident of salt marshes in the counties around the south arm of the Bay, being thus geographically the counterpart of the Samuels Song Sparrow which inhabits the tide marshes on the north side of the Bay. Also, complementary to the Santa Cruz Song Sparrow of the *fresh* water areas south of the Bay. Representative marshes where this race may be looked for are located at: Richmond, Contra Costa County; Bay Farm Island, Melrose, and Alviso, Alameda County; Palo Alto, Santa Clara County; San Mateo, San Mateo County, and the bay shore of San Francisco as far north as the Islais Marsh. Nesting season begins in March. Nests are located very close to the ground in masses of salicornia or in clumps of grindelia.

SUISUN SONG SPARROW

Melospiza melodia maxillaris Grinnell

Also called Heermann Song Sparrow.

Common resident of the brackish marshes bordering Suisun Bay, that is, from Benicia and Port Costa east into the delta region of the Sacramento and San Joaquin rivers. Numerous in the tule patches at Grizzly Island, in the marshes around Suisun, at Cordelia Slough, and at Antioch and Martinez.

WINTER VISITANTS

RUSTY SONG SPARROW

Melospiza melodia morphna Oberholser

Also called Sooty Song Sparrow.

Of the winter-visiting Song Sparrows to the Bay region this race, although limited in numbers, is the commonest. Its earliest appearance has been recorded as September 23 (1919), at Berkeley, and its latest as March 27 (1916 and 1918), also at Berkeley. Between these dates it has been seen at the following localities: Sebastopol, Sonoma County; Grizzly Island, Solano County; Nicasio, Marin County; Berkeley, Oakland and Hayward, Alameda County; Pescadero Creek, San Mateo County; San Jose and Berryessa, Santa Clara County. To be looked for in shrubbery and tangles of vines along stream sides, or in dense, low-growing plants in parks or gardens. For account of this race in California see: A. S. Allen, *Condor*, xxii, 1920, p. 16 (here under the name *rufina*); for account of the same race in Oregon see: W. L. Finley, *American Birds*, 1907, p. 151.

YAKUTAT SONG SPARROW

Melospiza melodia caurina Ridgway

A rare mid-winter straggler from Alaska. One specimen taken January 20, 1920, at edge of salt marsh on Bay Farm Island, Alameda County (no. 7069, coll. A. B. Howell).

MODOC SONG SPARROW

Melospiza melodia fisherella Oberholser

Seemingly a rare winter visitant within our limits. Four specimens have been examined, nos. 5069, 5070, *Mus. Vert. Zool.*, taken December 29 and 30, 1908, at the edge of the salt marsh near Petaluma, Sonoma County; and nos. 22936, 22937, *Calif. Acad. Sci.*, taken December 16, 1897, near Hayward, Alameda County. For brief account of nesting (in Plumas County, California) see: J. Mailliard, *Condor*, xxi, 1919, p. 75.

MERRILL SONG SPARROW
Melospiza melodia merrilli Brewster

This race, which summers in the northern part of the Great Basin and is a frequent winter visitant in California east of the humid coast belt, has been found but twice in the Bay region; namely, at St. Helena, Napa County, December 21 and 22, 1897 (see R. C. McGregor, Bulletin Cooper Orn. Club, 1, 1899, p. 35, where recorded under the name *ingersolli*), and at Palo Alto, Santa Clara County, December 23, 1902 (specimen, no. 35848, in Mus. Vert. Zool.). For general account see: H. J. Rust, Condor, XXI, 1919, p. 145 (in Idaho).

MENDOCINO SONG SPARROW
Melospiza melodia cleonensis McGregor

Also called Samuels Song Sparrow.

A race resident in the humid coast belt immediately to the north of the San Francisco Bay region. Occasional wanderers may be found invading our territory, as proved by an immature male taken on a fresh-water marsh at Olema, Marin County, September 17, 1909 (specimen no. 10570, in Mus. Vert. Zool.).

NORTHEASTERN LINCOLN SPARROW
Melospiza lincolni lincolni (Audubon)

Occurs sparsely as a fall transient. Authenticated instances are as follows: Sebastopol, Sonoma County, October 15 (1884); near Daly City, San Mateo County, October 21 (1923); San Francisco, September 13 (1919) (see J. Mailliard, Condor, XXII, 1920, p. 43). For accounts of the habits of this race see: C. R. Keyes, Condor, VII, 1905, p. 16; W. M. Pierce, Condor, XVIII, 1916, p. 34; J. Grinnell, Univ. Calif. Publ. Zool., v, 1908, p. 98; W. L. Dawson, Birds of California, 1923, p. 359; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 470.

FORBUSH LINCOLN SPARROW
Melospiza lincolni gracilis (Kittlitz)

Fairly common winter visitant, locally, between the middle of September and the second week of April. Definite localities of occurrence, with dates where known, are as follows: Alameda County: Piedmont, October 3, and Oakland, October 15, December 18, and February 29, Berkeley, April 12; Marin County: Inverness, September 19, San Geronimo, September 15 and February 10, and Fairfax, April 9; Mount St. Helena region, in December; San Mateo County: Daly City, October 21, Redwood City, and San Gregorio, in December; Santa Clara County: Palo Alto, December 20, January 19, March 29 and April 27; Morganhill, March 7; Pacheco Pass, April 19 and 20. To be looked for in damp meadows grown to tall grass or in willow thickets along the slower stream courses. For accounts of the habits of this sparrow see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 85; J. Mailliard, Condor, XIV, 1912, p. 74; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 470.

SWAMP SPARROW
Melospiza georgiana (Latham)

Rare fall visitant. One instance: A bird-of-the-year captured (netted by "Italians") near Daly City, San Mateo County, October 21, 1923 (see J. Grinnell, Auk, XLII, 1925, p. 247).

FOX SPARROW

Passerella iliaca (Merrem)

[the subspecies represented in the Bay region]

The Fox Sparrow, considered as a species, is a common winter visitant in the San Francisco Bay region. Whichever of the subspecies is concerned (see enumeration next following), the associational preference is pronounced for hillsides and canyon walls heavily clothed with chaparral, tangles of shrubbery and vines along stream courses, and, when the birds occur in city parks and gardens, dense, low-growing shrubs and vines. Ten races are known to occur in the region, but there is nothing decisive known as regards local occurrence or behavior by which any of them may be separately distinguished; and the differences in structure and color in most cases are so slight as to make field identification uncertain. The relative number of each subspecies apparently varies from year to year and to some extent from place to place. For accounts of habits, song and nesting of various races of Fox Sparrow see following references: C. Barlow, *Condor*, III, 1901, p. 172; L. Belding, *Condor*, v, 1903, p. 79; C. R. Keyes, *Condor*, VII, 1905, p. 17; A. S. Allen, *Condor*, XVII, 1915, p. 82, and *Condor*, XXII, 1920, p. 16; J. Mailliard, *Condor*, XXIII, 1921, p. 178, and *Condor*, XXIV, 1922, p. 48, and *Condor*, XXVI, 1924, p. 112; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 85; F. M. Bailey, *Handbook*, 1902, p. 362; C. Keeler, *Bird Notes Afield*, 1907, p. 70, and *Zoe*, I, 1890, p. 117; W. H. Osgood, *Osprey*, II, 1897, p. 20; H. R. Taylor, *Zoe*, II, 1891, p. 123; J. Mailliard, *Proc. Calif. Acad. Sci.*, 4th ser., IX, 1919, pp. 276, 280; W. L. Dawson, *Birds of California*, 1923, p. 365; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 472. For distribution of the various races see: H. S. Swarth, *Univ. Calif. Publ. Zool.*, XXI, 1920, pp. 75-224; the following statements of occurrence of the several races are based upon Mr. Swarth's determinations of specimens.

EASTERN FOX SPARROW

Passerella iliaca iliaca (Merrem)

Very rare midwinter visitant. Single birds have been secured or closely inspected at each of the following localities and on the dates named: San Geronimo, Marin County, January 26, 1901; Nicasio, Marin County, February 6, 1906; Hayward, Alameda County, December 12, 1898; Berkeley, Alameda County, November 8, 1926.

ALBERTA FOX SPARROW

Passerella iliaca altivagans Riley

Very rare winter visitant. Only five records of occurrence known, four for Hayward, Alameda County (October 17, 1906; November 19, and December 4, 1898; March 27, 1899); and one from Fulton, Sonoma County (January 24, 1899).

SHUMAGIN FOX SPARROW

Passerella iliaca unalaschcensis (Gmelin)

Rare winter visitant. Specimens have been secured at the following three localities: Mount St. Helena, Napa County (April 10 to 14, 1919); Oakland (November 12, 1909); Alameda (October 15, 1916); Berkeley (February 15, 1899).

VALDEZ FOX SPARROW

Passerella iliaca sinuosa Grinnell

Fairly common winter visitant. Most numerous back from the more humid coastal districts. Earliest date in the fall is September 28 (1908), at Oakland, and the latest known date in the spring is March 31 (1911), at Bolinas, Marin County. Places where this fox sparrow has been found are: Camp Meeker, Sonoma County; Bolinas, San Geronimo and Nicasio, Marin County; San Francisco; San Bruno and Pescadero, San Mateo County; Palo Alto and Los Gatos, Santa Clara County; Berkeley, Oakland and Hayward, Alameda County.

KADIAK FOX SPARROW

Passerella iliaca insularis Ridgway

Fairly common winter visitant, especially in Marin County. Earliest record of occurrence is for October 3 (1897), at San Geronimo, Marin County, and latest date in spring is March 14 (1901) at Oakland, Alameda County. Specimens of this race have been taken at San Geronimo and Nicasio, Marin County; San Francisco; Berkeley, Oakland, Piedmont and Hayward, Alameda County; Pescadero Creek, San Mateo County; Palo Alto, Santa Clara County.

YAKUTAT FOX SPARROW

Passerella iliaca annectens Ridgway

Probably the most abundant winter-visiting Fox Sparrow to the Bay region as a whole (with the exception of *P. i. brevicauda*, locally, in Marin County). The earliest appearance in the fall has been recorded as September 16 (1902), at Palo Alto, Santa Clara County, and the latest spring date is for April 20 (1900), at Nicasio, Marin County. Other localities at which this race has been found are: Sebastopol and Fulton, Sonoma County; Point Reyes, Bolinas, Olema, and San Geronimo, Marin County; Oakland, Berkeley, and Hayward, Alameda County; Daly City, Baden, San Bruno, Pescadero, and Pescadero Creek, San Mateo County; Los Gatos, Santa Clara County.

TOWNSEND FOX SPARROW

Passerella iliaca townsendi (Audubon)

Early winter visitant in limited numbers. Earliest date, September 20 (1900), at Hayward, and latest, December 16 (1905), also at Hayward. Specimens have been taken at the following localities: Camp Meeker, Sonoma County; Olema and San Geronimo, Marin County; Berkeley, Oakland and Hayward, Alameda County; upper Pescadero Creek, San Mateo County.

SOOTY FOX SPARROW

Passerella iliaca fuliginosa Ridgway

Rather rare, or very local, winter visitant in most winters. Known from but few localities: Lake Merced, San Francisco (December 23, 1917); Berkeley (various dates, in several different years, from October 2 to January 5); and the Farallon Islands (May 31, 1911) (this record originally published under the name *townsendi*: see W. L. Dawson, Condor, XIII, 1911, p. 182).

THICK-BILLED FOX SPARROW

Passerella iliaca megarhynchus Baird

Very rare midwinter visitant, only two specimens from the San Francisco Bay region having been identified as belonging to this race: Nicasio, Marin County (January 30, 1901); Berkeley, Alameda County (November 14, 1925).

YOLLA BOLLY FOX SPARROW

Passerella iliaca brevicauda Mailliard

An abundant winter visitant locally; seemingly restricted to the northern half of the Bay region, and chiefly to Marin County. The earliest date of arrival is September 23 (1897) at San Geronimo, and the latest date for occurrence in spring is April 29 (1880), at Nicasio. Recorded also from Mount St. Helena, Napa County, April 10 to 14, 1919; but whether migrant or wintering there was not known (see J. Mailliard, Proc. Calif. Acad. Sci., 4th ser., IX, 1919, p. 276). Also found more recently, January 29 and 30, 1924, at La Jota, Napa County (Calif. Acad. Sci.).

SAN FRANCISCO SPOTTED TOWHEE
Pipilo maculatus falcifer McGregor

Also called Oregon Towhee, Spotted Towhee, and Oregon Ground Robin.

Common resident in all suitable parts of the region, with the exception of the more arid northeastern portion, where replaced by the race *falcinellus*, which see. Particularly notable as one of the commonest breeding birds on the San Francisco peninsula. Other localities of plentiful occurrence are: Guerneville and Cazadero, Sonoma County; Inverness and Nicasio, Marin County; Berkeley, Oakland, and Hayward, Alameda County; Santa Clara, San Jose and Los Gatos, Santa Clara County. Its usual habitat consists of tangles of shrubbery and vines along streams, or heavy chaparral on shaded canyon sides. Often to be found in dense or untrimmed shrubbery in city gardens and parks. Nesting season extends ordinarily from the latter part of April (earliest for eggs, the 4th, at Alameda) to the middle of July (eggs on the 11th, at Los Gatos); nests are situated usually but a few feet above the ground in berry thickets or bushes, but up to an extreme height of twelve feet, and also not infrequently upon the ground. For a general account of the habits of the San Francisco Spotted Towhee see: D. A. Cohen, Bull. Cooper Orn. Club [Condor], I, 1899, p. 61. The following references upon habits, notes and food of the Spotted Towhee in other parts of the state doubtless apply quite closely to this race also: F. M. Bailey, Handbook, 1902, p. 365; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 86; C. Barlow, Condor, III, 1901, p. 173; H. W. Myers, Condor, XII, 1910, p. 166; J. J. Williams, Condor, IV, 1902, p. 68; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 86.

SACRAMENTO SPOTTED TOWHEE
Pipilo maculatus falcinellus Swarth

Also called Oregon Towhee and San Diego Towhee.

Common resident in the northeastern portion of our region, in the Mount St. Helena country and in the vicinity of Vacaville, Solano County. This is one of the races which is typical of the interior valleys of the state, and which reaches into the San Francisco Bay region on the eastern side. In preferred habitat, nesting, and habits in general, similar to preceding race, which see. For account of habits and nesting see: J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 477.

SAN FRANCISCO BROWN TOWHEE
Pipilo fuscus petulans Grinnell and Swarth

Also called California Towhee, Brown Bird, and Brown Finch.

An abundant resident of nearly all parts of the region with the exception of the San Francisco peninsula, where it is notably uncommon, and of Solano, Napa, and eastern Sonoma counties, where it is replaced by the race next listed. Inhabits thick-growing shrubbery, the margins of chaparral, tangles of vines, and brush piles; usually one of the commonest birds about city parks, gardens and backyards. The nesting season begins by the middle of April, and nests have been found even so late as the first week in September. Nests are situated well above the ground in thick bushes or low trees. For accounts pertaining to this race of Brown Towhee see: F. M. Bailey, Handbook, 1902, p. 367; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 89. The following accounts, pertaining to the California Brown Towhee (*Pipilo fuscus crissalis*), the race occurring farther south and very closely resembling the San Francisco Brown Towhee, may be of interest in connection with our bird because of undoubted similarity of habits: J. Mailliard, Condor, VIII, 1906, p. 45; H. W.

Myers, Condor, XII, 1910, p. 166; W. M. Pierce, Condor, XVII, 1915, p. 100; D. R. Dickey, Condor, XVIII, 1916, p. 93; R. Hunt, Condor, XXIV, 1922, p. 193, and Condor, XXV, 1923, p. 134; W. L. Dawson, Birds of California, 1923, p. 401.

SACRAMENTO BROWN TOWHEE
Pipilo fuscus carolae McGregor

Abundant resident of the drier, interior portion of the region lying north and east of San Francisco Bay. This race is thus geographically complementary to the preceding one. Is found in numbers in the vicinity of Vacaville, Solano County, and is probably the species inhabiting the brush and chaparral of the Mount St. Helena region. For habits of this bird see references under the preceding subspecies to which this race is so similar in appearance that it is not to be distinguished out of hand. Also see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 86; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 480.

GREEN-TAILED TOWHEE
Oberholseria chlorura (Audubon)

Also called Green Finch.

Rare straggler in the region, only two instances having been recorded: A single bird was observed in Golden Gate Park, San Francisco, May 9, 1884 (see W. O. Emerson, Ornithologist and Oologist, IX, 1884, p. 93), and one was secured near San Jose in the winter of 1889 or 1890 (see J. Van Denburgh, Proc. Amer. Philosophical Soc., XXXVIII, 1899, p. 174). For brief accounts of the habits and nesting of this bird in California see: F. M. Bailey, Handbook, 1902, p. 368; J. Grinnell, Univ. Calif. Publ. Zool., V, 1908, p. 103; J. E. Law, Condor, XXVIII, 1926, p. 133; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 482.

PACIFIC BLACK-HEADED GROSBEAK
Zamelodia melanocephala capitalis (Baird)

Common summer resident widely through the Bay region; least numerous in the immediate vicinity of San Francisco. Arrives about the middle of April (earliest April 9, at Berkeley) and remains well into September (latest September 23, at Berkeley). Found as a straggler on the Farallon Islands: two seen and one of these collected on May 28, 1887 (see W. E. Bryant, Proc. Calif. Acad. Sci., 2nd ser., I, 1888, p. 47). Although present in nearly all tree-covered country, is most plentiful in deciduous trees such as willow, alder, maple and black oak, and the various orchard trees. A regular and often unwelcome visitor to fruit growing districts during the season of ripening fruit. The nesting period extends from the last of April until the middle of July; nests are situated as a rule well up in willows, alders or orchard trees. For accounts of habits, song, nesting and food see: F. M. Bailey, Handbook, 1902, p. 373, and Auk, XIII, 1896, p. 120; A. Head, Condor, IV, 1902, p. 119, and Condor, VI, 1904, p. 35; L. H. Miller, Condor, XV, 1913, p. 92; F. M. Bailey, Condor, XVIII, 1916, p. 201; W. O. Emerson, Zoe, I, 1890, p. 80; W. L. Finley, American Birds, 1907, p. 45, and Bird-Lore, XII, 1910, p. 163; C. Keeler, Bird Notes Afield, 1907, p. 95; W. L. McAtee, U. S. Biological Survey Bulletin no. 32, 1908, p. 60; F. E. L. Beal, U. S. Biological Survey Bulletin no. 34, 1910, p. 93; W. L. Dawson, Birds of California, 1923, p. 419; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 484.

CALIFORNIA BLUE GROSBEAK
Guiraca caerulea salicarius Grinnell

Also called Western Blue Grosbeak.

For the Bay district there is but one record: observed at Hayward, Alameda County, May 1, 1876 (see J. G. Cooper, Proc. U. S. Nat. Mus., II [1879], 1880, p. 248). For accounts of habits, song, nesting and food see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 88; W. L. McAtee, U. S. Biological Survey Bulletin no. 32, 1908, p. 78; J. Dixon, Condor, XVII, 1915, p. 204; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 490.

LAZULI BUNTING
Passerina amoena (Say)

Also called Lazuli Finch and Blue Finch.

A common summer resident practically throughout the Bay region. Earliest arrivals appear the last week in April (very earliest, the 18th, at Berkeley). Departs in August. Found most commonly on hillsides where there are patches of brush and small trees; often along stream courses, though not close to the water itself. Occasional individuals visit city gardens and parks. The nesting season extends through May and June; nests are situated in bushes or other low vegetation, usually within three feet of the ground. Some localities of recorded occurrence are: Cazadero, Santa Rosa and Sebastopol, Sonoma County; Point Reyes, Nicasio and San Anselmo, Marin County; Berkeley, Hayward, and Niles Canyon, Alameda County; San Jose and Los Gatos, Santa Clara County. A male bird was once observed, the first of June, 1911, on the Farallon Islands (see W. L. Dawson, Condor, XIII, 1911, p. 182). For descriptions of habits, nesting and song see: F. M. Bailey, Handbook, 1902, p. 375; C. Keeler, Bird Notes Afield, 1907, p. 97; N. K. Carpenter, Condor, IX, 1907, p. 199; J. Grinnell, Condor, XIV, 1912, p. 105; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 89; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 491.

WESTERN TANAGER
Piranga ludoviciana (Wilson)

Also called Louisiana Tanager.

Transient throughout the Bay region as a whole, but also found as a summer resident locally. Two definite instances of nesting are known, both for Sonoma County: at Mark West Springs, May 19, 1884, and at Seaview, May 17, 1908 (see J. Mailliard, Condor, XIII, 1911, pp. 50-51). Tanagers found by other observers at Gualala River, Cazadero and Guerneville (Sonoma County) during the month of June, and on Mount St. Helena, Napa County, in May, indicate probable nesting of the birds in these localities also. As a transient the species appears with some irregularity in numbers; in most years only a few individuals are observed, and for but brief periods during the spring and fall migrations, mostly during May and August. Earliest spring date, at Berkeley, April 28 (1919), and latest fall date, at San Anselmo, Marin County, October 4 (1903). On the Farallon Islands a company was once observed, on September 13 (1886). On several occasions, however, very large numbers have appeared in certain orchard districts in late spring, remaining for some time and making serious inroads upon the cherry crop. Besides showing preference for fruit districts, may be observed in oak covered areas, in tree growth along the edges of dense forests, and may even be encountered in shade trees of city streets. For general accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p.

380; C. Keeler, Bird Notes Afield, 1907, p. 104; C. Barlow, Condor, III, 1901, p. 174; J. H. Bowles, Condor, IV, 1902, p. 16 (for Washington State); W. O. Emerson, Condor, V, 1903, p. 64; P. M. Silloway, Condor, VI, 1904, p. 14; C. C. Van Fleet, Condor, X, 1908, p. 181; E. Adams, Condor, XI, 1909, p. 70; M. Kellogg, Condor, XXVI, 1924, p. 227; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 23; W. L. Dawson, Birds of California, 1923, p. 431; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 493.

WESTERN PURPLE MARTIN
Progne subis hesperia Brewster

Also called Purple Martin.

Migrant through parts of the Bay region, but at best in limited numbers. The first appear in the early part of April (on the 9th, in 1885, at San Jose). Localities from which the species has been reported are: Sebastopol and Petaluma, Sonoma County; Olema and Nicasio, Marin County; Lake Merced, San Francisco; Searsville Lake, San Mateo County; parts of Contra Costa County; Mt. Hamilton range and San Jose, in Santa Clara County. Known to have remained through the nesting season in the vicinity of Sebastopol, Olema and Nicasio. Nests are located in holes of pine and oak trees; not so far observed in this region about human dwellings. For brief notes (all we have) on the habits of the Martin in California see: P. I. Osburn, Condor, XI, 1909, p. 208; R. M. Perez, Condor, XII, 1910, p. 133; J. Mailliard, Condor, XXI, 1919, p. 76; H. C. Bryant, Condor, XXVI, 1924, p. 195; R. C. Ross, Condor, XXVII, 1925, p. 209; W. L. Dawson, Birds of California, 1923, p. 520.

NORTHERN CLIFF SWALLOW
Petrochelidon albifrons albifrons (Rafinesque)

Has also been called Eave Swallow.

Common summer resident in rural districts almost throughout the region. Arrives as early as the first week in March (March 5, 1913, in vicinity of Berkeley), and recorded as remaining until September in various localities, as at San Jose (September 9, 1886), and in the Mt. St. Helena region. While ordinarily nesting in colonies on cliffs, large numbers of the birds are also commonly found building the gourd-shaped mud nests close together under the eaves or on the walls of old barns. May and June are the usual nesting months. For accounts of the habits, nesting and food of the species see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 90; F. M. Bailey, Handbook, 1902, p. 384; E. R. Warren, Condor, XV, 1913, p. 14; M. S. Ray, Condor, XVIII, 1916, p. 227; W. S. Wright, Condor, XXVI, 1924, p. 153; N. K. Carpenter, Condor, XX, 1918, p. 91; J. Grinnell, Univ. Calif. Publ. Zool., XII, 1914, p. 183; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 28; W. L. Dawson, Birds of California, 1923, p. 523; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 497.

BARN SWALLOW
Hirundo erythrogaster Boddaert

Common summer resident throughout the greater part of the Bay region. First individuals arrive by the third week in March (earliest March 14, 1923, at Suisun, Solano County), the species becoming abundant by early April; last birds seen about middle of September (the 18th in 1914, near Alameda). One pair appeared on the Farallon Islands on May 21 (1887) but remained only until June 2 (see W. E. Bryant, Proc. Calif. Acad. Sci., 2nd ser., I, 1888, p. 48). Typical localities where this swallow is to be found are Sebastopol, Sonoma County; Inverness and Nicasio,

Marin County; Suisun and Benicia, Solano County; San Francisco at Lake Merced; Pescadero, San Mateo County; Hayward, Bay Farm Island and Alvarado, Alameda County; and San Jose and Palo Alto, Santa Clara County. Nests are constructed in barns or outhouses, or under bridges, only one or two pairs of the birds building in one place. For accounts of habits and food see: F. M. Bailey, Handbook, 1902, p. 385; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 91, and Condor, XIII, 1911, p. 168; C. Keeler, Bird Notes Afield, 1907, pp. 86, 87, 117; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 30; W. L. Dawson, Birds of California, 1923, p. 536; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 499.

TREE SWALLOW
Iridoprocne bicolor (Vieillot)

Also called White-bellied Swallow.

Common as a migrant, and as a summer resident locally. Has been observed also, sporadically, at various times almost throughout the winter. Recorded in January at Alameda, Hayward and Niles, Alameda County; in February at San Jose, and in January at Palo Alto, Santa Clara County; in March at Sebastopol, Sonoma County, and Grizzly Island, Solano County; in April at Nicasio, Marin County, and Hayward, Alameda County; in September at San Jose; in December at Point Reyes, Marin County. Known as a summer resident in parts of Marin County; for example, Tennessee Cove, Point Reyes and Inverness; in Sonoma County, at Sebastopol, near Cazadero, and Shellville (nesting June 1); in Solano County, at Suisun (nesting April 17); on the western side of Santa Clara County, at Palo Alto (young just leaving nest, May 28); and in Alameda County, at Oakland, whence nests have been reported. Nests are located in holes such as are to be found in oaks or in willows. For notes on habits and nesting, consult: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 92; C. R. Keyes, Condor, VII, 1905, p. 42; M. S. Ray, Condor, XV, 1913, p. 113; W. L. Dawson, Birds of California, 1923, p. 539; C. L. Whittle, Auk, XLIII, 1926, p. 247 (in New England).

NORTHERN VIOLET-GREEN SWALLOW
Tachycineta thalassina lepida Mearns

Migrant in fair numbers through certain parts of the region; a few remain through the summer locally. Has been observed in spring at Sebastopol, Sonoma County (January 1 [one specimen taken], February 22, March 1, and May 25); at Nicasio, Marin County (March 15); at Palo Alto, Santa Clara County (March 23); in Pine Canyon, Mount Diablo (April 1); near Santa Rosa (May 28) and Petaluma (May 31), Sonoma County. Has been seen during the summer near Vacaville, Solano County (July 3); at Los Gatos, Santa Clara County (irregularly during summer months); at Sunol, Alameda County (July 21); and on the Farallon Islands (one record only, June 1) (see W. L. Dawson, Condor, XIII, 1911, p. 182). Young on the wing observed during the first half of September in the Mt. St. Helena region. Nests of this species are usually situated in woodpecker excavations in old or dead trees, especially oaks. For accounts of habits, nesting and food see: F. M. Bailey, Handbook, 1902, p. 386; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 92; J. Grinnell, Univ. Calif. Publ. Zool., V, 1908, p. 106; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 32; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 501.

AMERICAN BANK SWALLOW
Riparia riparia riparia (Linnaeus)

Common summer resident locally. Has been reported from Contra Costa County; at Hayward, Alameda County; Año Nuevo Point, San Mateo County; Lake Merced and the ocean shore, south of San Francisco; Nicasio, Marin County; and at Sebastopol, Sonoma County. Arrives at least as early as the second week in April. Nests in colonies. Nesting tunnels are excavated in sandy banks along streams and lakes, and in earth bluffs along the ocean shore. Eggs at Lake Merced May 13; small young even as early as May 17 (H. W. Carriger, MS). For notes concerning this swallow see: M. S. Ray, *Condor*, ix, 1907, p. 176; N. K. Carpenter, *Condor*, xx, 1918, p. 90; L. B. Potter, *Condor*, xxvi, 1924, p. 191; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 27; W. L. Dawson, *Birds of California*, 1923, p. 533; D. Stoner, *Auk*, XLIII, 1926, p. 198.

ROUGH-WINGED SWALLOW
Stelgidopteryx serripennis (Audubon)

Summer visitant; not common. Found in but a few localities in the Bay region: parts of Marin (Bolin Bay, etc.) and Contra Costa (Lafayette) counties, near Hayward, Alameda County, and near San Jose, Edenvale, and Pacheco Pass, Santa Clara County. Arrives around San Jose about March 20 (first seen March 8) (see L. Belding, *Land Birds Pac. Dist.*, 1890, p. 193). Lives usually along dry water courses, where it nests in holes in sand or clay banks. For accounts of the species see: J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 93; J. Grinnell, *Univ. Calif. Publ. Zool.*, XII, 1914, p. 186; W. L. Dawson, *Birds of California*, 1923, p. 529; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 503.

CEDAR WAXWING
Bombycilla cedrorum Vieillot

Also called Cedar-bird.

Common late winter visitant, frequently remaining until last of May (May 27, 1919, at Berkeley). Rather irregular in occurrence, appearing in large flocks most years; in other years few or none are present, the occurrence of the species in a locality apparently being governed by variations in food supply. Most numerous in counties east of the Bay. Observed once on the Farallon Islands. Forages in flocks of varying size wherever pepper trees are found, and, in fruit season, in cherry trees; also may be observed, foraging or resting, in such other trees as oak, cypress, bay and eucalyptus. Often a familiar bird along city streets, in parks and in orchards. For accounts of this species see: J. Grinnell, *Condor*, III, 1901, p. 146; P. M. Silloway, *Condor*, VI, 1904, p. 13; J. M. Davis, *Condor*, XVI, 1914, p. 182; A. D. DuBois, *Condor*, XXII, 1920, p. 154; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 93; F. M. Bailey, *Handbook*, 1902, p. 389; A. A. Saunders, *Auk*, XXVIII, 1911, p. 323; J. Grinnell, *Auk*, XIV, 1897, p. 318; W. L. Dawson, *Birds of California*, 1923, p. 550; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 504.

NORTHERN PHAINOPEPLA
Phainopepla nitens lepida Van Tyne

Resident locally; for the most part rare in the region. In Arroyo Mocho, southern Alameda County, in June, 1907, and in April and July, 1908, birds of this species were observed, some of them immatures, indicating nesting (see J. R. Pemberton, *Condor*, x, 1908, p. 238). At the head of Vaca Valley, Solano County, on May 2

and 3 (1914) several males were seen, as also along the hills west of Vacaville, July 3 and 9 (1912) and May 1 (1914); so that nesting is very probably of regular occurrence in that region also (field notes in Mus. Vert. Zool.). Observed in the foothills near San Jose, October 28, 1898, and in an orchard at Berryessa in early November, 1899 (see C. Barlow, Condor, II, 1900, p. 133). A single bird was secured in Ygnacio Valley, near Walnut Creek, January 1, 1894 (Mus. Vert. Zool.). For accounts of habits, song, nesting and food see: M. F. Gilman, Condor, v, 1903, p. 42; H. W. Myers, Condor, IX, 1907, p. 101, Condor, XI, 1909, p. 22, and Condor, XII, 1910, p. 166; F. A. Merriam, Auk, XIII, 1896, p. 38; F. M. Bailey, Handbook, 1902, p. 390; I. G. Wheelock, Auk, XXII, 1905, p. 67; W. L. Dawson, Birds of California, 1923, p. 554; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 505.

CALIFORNIA LOGGERHEAD SHRIKE
Lanius ludovicianus gambeli Ridgway

Also called Butcher-bird, California Shrike, and White-rumped Shrike.

Permanent resident. Inhabits the warmer valleys and sunny sides of hills almost throughout the region. Abundant in most of Sonoma, Solano, Contra Costa, Alameda and Santa Clara counties. Less numerous close to the seacoast. There is one record of occurrence on the Farallon Islands, in 1886 (see W. E. Bryant, Proc. Calif. Acad. Sci., 2nd ser., I, 1888, p. 48). Avoids dense growths of trees or brush, preferring tracts of scattering small trees, on both cultivated and uncultivated land, from which trees the birds forage out into the surrounding fields. Frequents orchards, and observed characteristically perched on telegraph wires along roads and occasionally even along city streets. The nesting season begins as early as the last of February and extends through June; nests may be looked for in dense-foliaged trees such as oaks and cypress. For descriptions of habits, nesting, song and food see accounts by: W. L. Finley, American Birds, 1907, p. 115; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 95, Condor, xv, 1913, p. 18, and Condor, XXI, 1919, p. 122; W. L. Atkinson, Condor, III, 1901, p. 9; C. O. Esterly, Condor, XIX, 1917, p. 25; C. A. Keeler, Zoe, I, 1890, p. 118; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 33; C. H. Richardson, Condor, X, 1908, p. 92; W. L. Dawson, Birds of California, 1923, p. 592; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 506.

WESTERN WARBLING VIREO
Vireo gilvus swainsonii Baird

Also called Warbling Flycatcher and Swainson Warbling Greenlet.

Abundant summer resident. Distributed generally throughout the Bay region. Shows preference for deciduous tree growths such as willow, bay, maple and alder along stream courses and shady canyons. Especially during migration found foraging in shade trees of city parks and streets. Arrives the last week of March (as early as the 12th or 15th in some seasons) and leaves mostly about the last of August; but an individual has been noted as late as October 6, in Berkeley. Nests, situated usually rather high in tree foliage, are to be found from about the last week of April nearly throughout June. For descriptions of habits, nesting and food see following accounts: A. Head, Condor, VIII, 1906, p. 149; W. L. Finley, American Birds, 1907, p. 176, and Condor, v, 1903, p. 63; H. J. Rust, Condor, XXII, 1920, p. 85 (nesting in Idaho); C. Keeler, Bird Notes Afield, 1907, p. 88; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 39; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 508.

CASSIN SOLITARY VIREO
Vireo solitarius cassinii Xantus

Sparingly transient and summer resident. Instances of occurrences have been reported from the following localities: Guerneville, Cazadero and Santa Rosa, Sonoma County (in summer, April 24 to August 23); Howell Mountain, Napa County (April, and June, nesting); San Geronimo ("fall") and Nicasio (April 5), Marin County; Berkeley (all summer); Bryant, on San Pablo Creek, Contra Costa County (May 7, nest); Lexington (see M. S. Ray, *Condor*, II, 1900, p. 126), Alum Rock and near Almaden (see C. Barlow, *Condor*, II, 1900, p. 133), Santa Clara County (nesting). To be looked for in the foliage of bay, sycamore and golden oak adjoining stream courses. Nesting season occupies May and June in this region, and the nests are situated in the lower parts of trees and fastened to slender forking branches. For descriptions of habits, song, nesting and food see following accounts: C. Barlow, *Condor*, III, 1901, pp. 119, 175; W. L. Finley, *Condor*, V, 1903, p. 62; A. Head, *Condor*, VIII, 1906, p. 149; J. Grinnell, *Univ. Calif. Publ. Zool.*, V, 1908, p. 109; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 40; W. L. Dawson, *Birds of California*, 1923, p. 570; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 511.

CALIFORNIA HUTTON VIREO
Vireo huttoni huttoni Cassin

Also called Hutton Flycatcher and Hutton Greenlet.

Common resident; especially numerous within the oak-covered areas of the interior portions of the Bay region. To be found in numbers at the following localities: Mt. St. Helena region; Guerneville, Sebastopol and Santa Rosa, Sonoma County; Nicasio, San Geronimo, Inverness, and San Anselmo, Marin County; Golden Gate Park and Lake Merced, San Francisco; Hayward, Berkeley and Oakland, Alameda County; Mount Diablo, Contra Costa County; San Mateo and Pescadero, San Mateo County; Calaveras Valley, Menlo Park, Palo Alto, San Jose and Los Gatos, Santa Clara County. Nesting season known to begin as early as first week in March; nests are situated in the outer foliage of live oaks. For accounts of habits, nesting and food see: C. C. Van Fleet, *Condor*, XXI, 1919, p. 162; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 41; I. G. Wheelock, *Auk*, XXII, 1905, p. 65; W. L. Dawson, *Birds of California*, 1923, p. 576; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 513.

LEAST BELL VIREO
Vireo bellii pusillus Coues

Has also been called California Least Vireo.

Rare migrant. But one record of occurrence in the Bay region, a single specimen having been secured in Redwood City, San Mateo County, April 5, 1905 (see C. Littlejohn, *Condor*, XIV, 1912, p. 41). For accounts of this species see: J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 98; J. Grinnell, *Condor*, XIV, 1912, p. 106; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 514.

BLACK-AND-WHITE WARBLER
Mniotilta varia (Linnaeus)

An eastern species found only as a rare migrant in the Bay region. First recorded instance of occurrence is for Farallon Islands, a male being secured there by W. O. Emerson, May 28, 1887 (see W. E. Bryant, *Proc. Calif. Acad. Sci.*, 2nd ser., I, 1888,

p. 48). More recently has been reported on the University of California campus, on the following occasions: March 18, 1915 (see T. I. Storer, *Condor*, xvii, 1915, p. 131); at intervals during March, 1919 (several observers); October 3 to 20, 1924 (M. W. Wythe, MS). For general account of this warbler see: F. M. Chapman, *Warblers of North America*, 1907, p. 38.

CALAVERAS NASHVILLE WARBLER

Vermivora ruficapilla gutturalis (Ridgway)

Transient. But one instance of occurrence in the Bay region: two individuals observed in the fall (September 15) on north side of Grizzly Peak (near Berkeley), in Contra Costa County, where they were seen foraging through the foliage of bay trees and willows in a ravine (see J. Grinnell, *Condor*, xvi, 1914, p. 37). For descriptions of habits, song and nesting see following accounts: C. Barlow, *Condor*, iii, 1901, p. 175; C. W. Bowles and J. H. Bowles, *Condor*, viii, 1906, p. 68 (in Washington state); W. H. Osgood, *Nidologist*, iii, 1896, p. 140; F. M. Chapman, *Warblers of North America*, 1907, p. 97; W. L. Dawson, *Birds of California*, 1923, p. 451; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 516.

EASTERN ORANGE-CROWNED WARBLER

Vermivora celata celata (Say)

A rather rare winter visitant to the region locally. One specimen secured at Piedmont, Alameda County, October 4 (1908), by Miss L. Kellogg (see J. Grinnell, *Pacific Coast Avifauna* no. 11, 1915, p. 145). Other instances have been reported (birds closely seen) in Berkeley, on various dates between November 30 (1918) and March 2 (1919). The birds in these instances were foraging in live oaks or else in shrubbery bordering paths on the University campus. For accounts of habits and song see: F. M. Chapman, *Warblers of North America*, 1907, p. 86; C. L. Whittle, *Condor*, xxiv, 1922, p. 76.

LUTESCENT ORANGE-CROWNED WARBLER

Vermivora celata lutescens (Ridgway)

Has been called Orange-crowned Warbler and Lutescent Warbler.

Common summer visitant widely through the hilly parts of the region. Most plentiful on sparsely wooded canyon sides, or slopes dotted with heavy chaparral. Arrives earliest of the summering warblers, in some years as early as February 15, anyway by the first of March; leaves mostly by the middle of September (latest date at Berkeley, October 31, 1920). Nests are usually located on the ground on shaded banks or on steep slopes near the bottoms of ravines, and have been found from April 5 to June 7. For accounts of this bird see: F. M. Chapman, *Warblers of North America*, 1907, p. 90; H. W. Carriger, *Bulletin Cooper Orn. Club*, i, 1899, p. 72; J. Mailliard, *Condor*, iii, 1901, p. 72; W. L. Finley, *Condor*, vi, 1904, p. 131; A. S. Allen, *Condor*, xvii, 1915, p. 83; F. M. Bailey, *Handbook*, 1902, p. 405; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 51; W. L. Dawson, *Birds of California*, 1923, p. 443.

DUSKY ORANGE-CROWNED WARBLER

Vermivora celata sordida (C. H. Townsend)

In the San Francisco Bay region this race has been found sparingly as a fall and winter visitant. Well-grounded instances of occurrence are as follows: Hayward, Alameda County, January 25 and February 8 (see W. O. Emerson, *Condor*, vii, 1905,

p. 112); Berkeley, Alameda County, February 23 (see J. Grinnell, *Condor*, xxii, 1920, p. 112); Palo Alto, Santa Clara County, November 12 and December 29; near Daly City, San Mateo County, October 21. For accounts of nesting and habits see: C. H. Richardson, *Condor*, x, 1908, p. 68; C. G. Abbott, *Condor*, xxviii, 1926, p. 57; W. L. Dawson, *Birds of California*, 1923, p. 447.

TENNESSEE WARBLER

Vermivora peregrina (Wilson)

Rare vagrant. One instance: one picked up dead in north Berkeley, October 14, 1925 (see R. Ellis, Jr., *Condor*, xxviii, 1926, p. 47). For general account see: F. M. Chapman, *Warblers of North America*, 1907, p. 83.

CALIFORNIA YELLOW WARBLER

Dendroica aestiva brewsteri Grinnell

Has also been called Western Yellow Warbler and Summer Warbler.

Common summer resident throughout the region. Most numerous in growths of willow, cottonwood and alder along stream courses. Arrives about the middle of April (April 13 at Sunol, Alameda County) and remains at least until the first week in September. Later records of Yellow Warblers (up to October 12), unsupported by specimens, probably pertain to the race next listed. While often met with foraging in chaparral, shows decided preference for deciduous trees as nesting sites, and often makes its home in orchards and shade trees in city parks and gardens. An early date for eggs is May 11, at Palo Alto. For descriptions of habits, nesting, song and food see: F. M. Chapman, *Warblers of North America*, 1907, p. 113; F. M. Bailey, *Handbook*, 1902, p. 411; C. Keeler, *Bird Notes Afield*, 1907, p. 117; C. Barlow, *Nidologist*, i, 1893, p. 44; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 47; W. L. Dawson, *Birds of California*, 1923, p. 460; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 521.

ALASKA YELLOW WARBLER

Dendroica aestiva rubiginosa (Pallas)

Probably not uncommon as a fall migrant through the region. Has been definitely identified from the vicinity of Hayward, Alameda County, September 8 to October 8 (see W. O. Emerson, *Condor*, vii, 1905, p. 113); Oakland, September 24; Moraga Valley, Contra Costa County, September 14; Redwood City, San Mateo County, October 12 and 14. In habits, voice, etc., doubtless similar to preceding race, from which it is scarcely to be distinguished out of hand. For account of *rubiginosa* see: F. M. Chapman, *Warblers of North America*, 1907, p. 120.

CANADIAN BLACK-THROATED BLUE WARBLER

Dendroica caerulescens caerulescens (Gmelin)

But one occurrence of this eastern species known for the region: Farallon Islands, one individual remaining for about three weeks in November (1886), dying on the 17th (see W. E. Bryant, *Proc. Calif. Acad. Sci.*, 2nd ser., i, 1888, p. 48). For extended account of this bird in its eastern habitat see: F. M. Chapman, *Warblers of North America*, 1907, p. 133.

ALASKA MYRTLE WARBLER

Dendroica coronata hooveri McGregor

Has also been called Hoover Warbler, Yellow-crowned Warbler, and Yellow-rumped Warbler.

Common winter visitant throughout the region. Earliest date October 17 (1903) at San Anselmo, Marin County; latest date April 19 (1901), at Palo Alto, Santa Clara County. Some other localities where it has been observed are: St. Helena, Napa County; Sonoma and Sebastopol, Sonoma County; Nicasio, Marin County; Rio Vista, Solano County; Berkeley, Oakland and Hayward, Alameda County; Berryessa, Santa Clara County. Often associates with Audubon Warblers, to which they are so similar in habits, and in color characters during the winter months, that mistaken identity is apt to occur. Before leaving in spring (during April), however, the plumage has become sufficiently changed to make field distinguishment of the two races easy. For accounts of distribution, habits and song of this warbler see: R. C. McGregor, *Bulletin Cooper Orn. Club*, I, 1899, p. 31; F. M. Chapman, *Warblers of North America*, 1907, p. 141; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 46.

PACIFIC AUDUBON WARBLER

Dendroica auduboni auduboni (J. K. Townsend)

The most abundant winter-visiting warbler throughout the San Francisco Bay region. Arrives about the last week of September or the first of October and remains in numbers until the middle of April. Extreme dates are September 23 and April 28, at Berkeley. Seen among the Douglas spruces near Fort Ross, Sonoma County, on May 11, when the birds' actions led the observer to think it likely that they were about to nest there (see J. Mailliard, *Condor*, x, 1908, p. 133). May be observed either singly or in scattered companies foraging through oak foliage or among the bare branches of trees and bushes. Visits city gardens and even porches and sunny walls of buildings where the birds seek flies. In spring shows preference for blossoming eucalyptus trees. Is also sometimes to be found insect-hunting among the weeds and grasses of hill slopes and meadowlands. For accounts of habits, voice, nesting and food see as follows: F. M. Bailey, *Handbook*, 1902, p. 414; J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 99; J. Grinnell, *Univ. Calif. Publ. Zool.*, v, 1908, p. 112; F. M. Chapman, *Warblers of North America*, 1907, p. 147; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 43; J. H. Bowles, *Condor*, iv, 1902, p. 118; C. S. Sharp, *Condor*, v, 1903, p. 79; W. O. Emerson, *Condor*, vi, 1904, p. 78; W. L. Dawson, *Birds of California*, 1923, p. 472; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 524.

MAGNOLIA WARBLER

Dendroica magnolia (Wilson)

Of rare occurrence as a transient: Farallon Islands, May 29 and June 2, 1911, two specimens secured (see W. L. Dawson, *Condor*, xiii, 1911, p. 182). For accounts of this eastern species see: F. M. Chapman, *Warblers of North America*, 1907, p. 121; W. Brewster, *Bulletin Nuttall Orn. Club*, ii, 1877, p. 1; C. H. Andros, *Ornithologist and Oologist*, xii, 1887, p. 182.

BLACK-THROATED GRAY WARBLER

Dendroica nigrescens (J. K. Townsend)

An irregular transient, and possible summer visitant locally. Has been observed in either spring or fall, or both, at Berkeley (September 26, October 3, November 1), and Hayward (May 11 and October 14), Alameda County; in the Mt. Hamilton country (April), and San Jose (October 16), Santa Clara County; at San Geronimo, Marin County (September 18), in the Mount St. Helena country (first two weeks in September), at Cazadero (April 28), Santa Rosa, Sebastopol and Fort Ross, Sonoma

County, and on Howell Mountain, Napa County (April and June). Its occurrence at Fort Ross in the month of May was reported as a possible instance of the species remaining through the nesting season. It is to be looked for, either singly or in small flocks, in the evergreen oaks of these various localities. For accounts of life history of this bird see articles as follows: F. M. Chapman, Warblers of North America, 1907, p. 151; C. Barlow, Bulletin Cooper Orn. Club, I, 1899, p. 96, and Condor, III, 1901, p. 177; C. W. Bowles, Condor, IV, 1902, p. 82; W. L. Finley, American Birds, 1907, p. 127; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 529.

BLACK-THROATED GREEN WARBLER

Dendroica virens (Gmelin)

Another warbler that has been found only as a rare migrant upon the Farallon Islands. Two birds were observed there in the same year (1911), one on May 29, and the other on June 1, by W. L. Dawson (Condor, XIII, 1911, p. 168). A general account of this eastern warbler may be found in: F. M. Chapman, Warblers of North America, 1907, p. 157.

TOWNSEND WARBLER

Dendroica townsendi (J. K. Townsend)

Fairly common winter visitant in the San Francisco Bay region generally, arriving the first week in October and remaining well into April. Extreme dates at Berkeley are September 13 and April 23. It has been found as follows: In Sonoma County, in the vicinity of Santa Rosa, Sebastopol and the Mount St. Helena region; in Marin County, in and near San Geronimo; in Alameda County, at Berkeley (regularly numerous on the University campus), Oakland and Hayward; in San Mateo County, on Pescadero Creek, on King Mountain, and at Woodside; in Santa Clara County, at Santa Clara, Palo Alto, and on Black Mountain. Has also been seen, as a migrant, on the Farallon Islands, May 22 (1887). This warbler shows a preference for foraging in the upper foliage of live oaks, bay trees and conifers. For general description of this species see: F. M. Chapman, Warblers of North America, 1907, p. 154; for manner of occurrence see: J. Grinnell, Condor, VII, 1905, p. 52; as to food see: F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 46.

HERMIT WARBLER

Dendroica occidentalis (J. K. Townsend)

Has also been called Western Warbler.

Occurs irregularly as a migrant through our region. Has been reported as follows: Petaluma, Sonoma County, May 1; Berryessa, Santa Clara County, in April; Hayward, Alameda County, March 4 (1880); Berkeley, August 27 (1885), September 15 (1919), May 10 to 12, 1915 (several individuals noted in live oaks), and April 24, 1926 (two individuals). Also there is a record for San Geronimo, January 30, which would indicate occasional wintering of individuals. For accounts of nesting habits, in the Sierra Nevada, see: C. Barlow, Auk, XVI, 1899, p. 156; C. Barlow, Condor, III, 1901, p. 179; M. S. Ray, Condor, XVI, 1914, p. 61; W. L. Dawson, Birds of California, 1923, p. 490; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 532.

OVEN-BIRD

Seiurus aurocapillus (Linnaeus)

Has been recorded once, as a transient visitor to the Farallon Islands. Two birds were observed there May 29, 1911, by W. L. Dawson (Condor, XIII, 1911, p. 167). For general account of this species see: F. M. Chapman, Warblers of North America, 1907, p. 219; C. S. Butters, Nidologist, III, 1896, p. 131.

ALASKA WATER-THRUSH

Seiurus noveboracensis notabilis Ridgway

Rare transient. Only one record for the San Francisco Bay region: Two birds seen along stream on "Bootjack Trail" leading to Muir Woods, Marin County, August 13, 1916 (see H. E. Hansen, Condor, xviii, 1916, p. 231). For account of habits see: W. L. Kells, Nidologist, i, 1894, pp. 42, 58.

TOLMIE WARBLER

Oporornis tolmiei (J. K. Townsend)

Has also been called Macgillivray Warbler.

Occurs sparingly as a summer visitant to rather moist hilly territory, chiefly towards the seacoast. Most common in the Point Reyes district. Arrives the first week in April (April 3, in 1926). Has been found in the nesting season as follows: In Sonoma County at Sonoma and Sebastopol; in Marin County at Nicasio, San Geronimo and Inverness; in Santa Clara County at San Jose and Los Gatos; and in Alameda County at Hayward, Redwood Canyon and Berkeley. For nesting site, chooses such vegetation as wild blackberry thickets, brakes, ceanothus and other close-growing shrubbery, usually over seepage slopes. For accounts of habits, nesting and song see: J. Mailliard, Condor, xi, 1909, p. 65; M. W. Wythe, Condor, xviii, 1916, p. 123; D. A. Cohen, Bulletin Cooper Orn. Club, i, 1899, p. 82; F. M. Chapman, Warblers of North America, 1907, p. 249; W. L. Dawson, Birds of California, 1923, p. 497; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 534.

WESTERN YELLOW-THROAT

Geothlypis trichas occidentalis Brewster

Resident of marshy territory in the interior: vicinity of Santa Rosa, Sonoma County, and on Suisun marshes, Solano County. Has appeared occasionally elsewhere as a transient: Berkeley, May 21 (1919); Guerneville, Sonoma County, August 30 (1913). For accounts of habits and nesting see: A. W. Johnson, Condor, vi, 1904, p. 129; W. L. Finley, American Birds, 1907, p. 35; L. Bolander, Condor, ix, 1907, p. 23; W. L. Dawson, Birds of California, 1923, p. 504.

SAN FRANCISCO YELLOW-THROAT

Geothlypis trichas sinuosa Grinnell

Also called Salt Marsh Yellow-throat; Western Yellow-throat, in part.

Common resident locally in immediate vicinity of San Francisco Bay. Breeds abundantly at Lake Merced, San Francisco County, and in swampy land around the south arm and north side of the Bay, as far as North Vallejo. An occurrence has been noted at Grizzly Island, Solano County, October 5 (1916), and at Olema, Marin County. Makes its home among tules, clumps of tall grasses and willow thickets along the edges of sloughs, slow-moving streams, and lakes. Shows preference for fresh-water marshes, though, especially in fall and winter, frequents those of brackish and even salt water. Nesting season extends from April to middle of June; nests are located near the ground within the shelter of tules, close-growing willows, or other marsh vegetation. For accounts of habits, nesting, song and food see: M. S. Ray, Condor, xviii, 1916, p. 225; G. W. Schussler, Condor, xx, 1918, p. 62; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 49.

TULE YELLOW-THROAT

Geothlypis trichas scirpicola Grinnell

Rare winter visitant, straggling north from the metropolis of the race, in southern California. Specimen (no. 28945, Mus. Vert. Zool.): male, Lake Merced, San Francisco County, December 23, 1917.

LONG-TAILED YELLOW-BREASTED CHAT

Icteria virens longicauda Lawrence

Fairly common summer visitant to the warm interior valleys, selecting nesting grounds in willow thickets bordering the lower, sluggish courses of streams. Has been reported in summer from San Jose and Agnew, in Santa Clara County; from Hayward and Irvington (eggs, May 23), Alameda County; from Lafayette, Contra Costa County; Rio Vista, Solano County; and from Sonoma County. Occurs sparingly elsewhere as a transient: Berkeley, May 11; San Francisco; Marin County, "rare spring visitant"; Petaluma; Guerneville. Dates of first appearance: Hayward, April 14; Sebastopol, Sonoma County, April 29; San Jose, April 29. For accounts of habits, nesting and song see: J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 101; F. M. Chapman, Warblers of North America, 1907, p. 268; J. Grinnell, Condor, XIV, 1912, p. 106; M. H. Lee, Condor, XXII, 1920, p. 172; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 539.

GOLDEN PILEOLATED WARBLER

Wilsonia pusilla chryseola Ridgway

Has also been called Green Black-cap Warbler; Green Black-cap Flycatcher; Pileolated Warbler.

Common summer visitant. Occurs throughout the region wherever are found growths of willow and tangles of other vegetation along stream courses and on shaded canyon sides. Appears about the last week of March (our earliest date, March 15, at Berkeley) and remains until the last of August or first of September (a late date is September 30, for San Geronimo, Marin County). Nesting season extends from May to July, with nests located from a few inches to three feet above the ground in dense willow or other streamside growths. For accounts of nesting, song and food see: C. Barlow, Nidologist, I, 1893, p. 44; J. J. Schneider, Condor, II, 1900, p. 33; F. M. Chapman, Warblers of North America, 1907, p. 279; C. S. Sharp, Condor, VIII, 1906, p. 75; F. M. Bailey, Condor, XIX, 1917, p. 50; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 51; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 540.

NOTE.—The Alaska Pileolated Warbler (*Wilsonia pusilla pileolata*) probably occurs as a transient through the region; but specimens in hand, which are required for the decisive determination of this race, have not come to our notice. It is likely this race which was found by W. E. Bryant (Proc. Calif. Acad. Sci., 2nd ser., I, 1888, p. 49) on the Farallon Islands, September 12, 1886, and May 22, 1887.

AMERICAN REDSTART

Setophaga ruticilla (Linnaeus)

Within the Bay region two occurrences of this eastern species have been recorded: a bird was taken at Hayward, Alameda County, June 20, 1881, by W. O. Emerson (Zoe, I, 1890, p. 45), and one was observed on the Farallon Islands, June 1, 1911, by W. L. Dawson (Condor, XIII, 1911, p. 182). For an account of this bird in the eastern states, see: F. M. Chapman, Warblers of North America, 1907, p. 287.

AMERICAN PIPIT

Anthus rubescens (Tunstall)

Has also been called Titlark.

Abundant winter visitant throughout the region, varying locally in numbers from year to year. Occurs in flocks on mud flats and sea beaches, grassy meadows and open hillsides, stubble fields and plowed ground, and even invades vacant lots and park lawns in the cities. Arrives usually during October (earliest, September 28, at Berkeley), and departs mostly by the middle of April; last seen at Palo Alto, April 27. For notes on habits see: F. M. Bailey, Handbook, 1902, p. 431; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 101; C. Keeler, Bird Notes Afield, 1907, p. 74; S. G. Jewett, Condor, xxvi, 1924, p. 230 (nesting, in Oregon); W. L. Dawson, Birds of California, 1923, p. 831; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 542.

NORTHERN AMERICAN DIPPER

Cinclus mexicanus unicolor Bonaparte

Has also been called Water Ouzel.

Fairly common resident locally, along permanent streams. Forages in, and at the edges of, turbulent water, and nests are located in niches of mossy rocks closely adjacent. Has been reported from Austin Creek, Sonoma County; Lagunitas Creek and Muir Woods, in Marin County; on water courses in the canyons near La Honda and Pescadero, in San Mateo County; and on Stevens Creek, and near Los Gatos, in Santa Clara County. For descriptions of habits and nesting see: F. M. Bailey, Handbook, 1902, p. 433; J. M. Willard, Bulletin Cooper Orn. Club, I, 1899, p. 23; J. S. Burcham, Condor, VI, 1904, p. 50; M. S. Ray, Condor, IX, 1907, pp. 173, 175; H. C. Bryant and A. M. Bryant, Condor, XVII, 1915, p. 98; J. Mailliard, Condor, XX, 1918, p. 13; M. P. Skinner, Condor, XXIV, 1922, p. 18 (in Yellowstone Park); C. W. Michael, Condor, XXIV, 1922, p. 98, and Condor, XXVIII, 1926, p. 45; W. L. Dawson, Birds of California, 1923, p. 731; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 543.

WESTERN MOCKINGBIRD

Mimus polyglottos leucopterus (Vigors)

A sparse winter visitant to the San Francisco Bay region. Individuals have been observed in gardens and city suburbs, especially about pepper, cypress and fruit trees, at the following places: Vacaville, Solano County; San Geronimo, Marin County; San Francisco (this possibly a bird escaped from captivity); Redwood City; Stanford University; San Jose; Hayward; Berkeley; Oakland. Earliest occurrence in the fall is September 5, and time of last appearance in spring is "latter part of April". For general account of distribution see: J. Grinnell, Auk, XXVIII, 1911, p. 293. For description of habits, nesting, song and food consult: F. M. Bailey, Handbook, 1902, p. 436; W. O. Emerson, Bulletin Cooper Orn. Club, I, 1899, p. 27, and Condor, VIII, 1906, p. 51; C. H. Richardson, Condor, VIII, 1906, p. 56; D. R. Dickey, Condor, XXIV, 1922, p. 153; J. G. Tyler, Pacific Coast Avifauna no. 9, 1913, p. 103; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 52; W. L. Dawson, Birds of California, 1923, p. 714; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 547.

CATBIRD

Dumetella carolinensis (Linnaeus)

So far as known this species has been observed but once within the state: on the Farallon Islands, a single bird secured, September 4, 1884 (see C. H. Townsend, *Auk*, II, 1885, p. 215).

SONOMA CALIFORNIA THRASHER

Toxostoma redivivum sonomae Grinnell

Has also been called Sickie-billed Thrush.

Fairly common permanent resident in those portions of the San Francisco Bay region which support a brushy cover. Places north of the Bay near which it is sure to be found are: San Geronimo, Guerneville, Freestone, Mount St. Helena and Vacaville; south of the Bay: Palo Alto, Los Gatos, Hayward, Piedmont, Berkeley and Mt. Diablo. Inhabits the low dense vegetation of the chaparral belts, where it forages on or near the ground. Nests have been found from February until June, and are located in thick bushes or low trees. For notes on distribution, habits, song, food and nesting, of this or the very similar subspecies *redivivum*, see: J. Grinnell, *Auk*, xxxiv, 1917, p. 427; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 55; S. W. Denton, *Ornithologist and Oologist*, ix, 1884, p. 122; W. O. Emerson, *Ornithologist and Oologist*, ix, 1884, p. 133; F. M. Bailey, *Handbook*, 1902, p. 440; J. J. Williams, *Condor*, III, 1901, p. 69; A. S. Allen, *Condor*, xvii, 1915, p. 83; W. L. Dawson, *Birds of California*, 1923, p. 698; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 548.

NORTHERN ROCK WREN

Salpinctes obsoletus obsoletus (Say)

Abundant permanent resident on the Farallon Islands; only sparingly resident on the mainland, locally, as along the ocean cliffs in Marin County, the rocky outcrops of Mount St. Helena, and on dry, rocky hillsides in eastern Alameda County and southeastern Santa Clara County. Eggs found near Tesla, Alameda County, March 23, 1924, and April 21, 1923 (H. W. Carriger, MS). Stragglers occur elsewhere, in fall and winter, as at San Geronimo, South San Francisco, Hayward, and in the Berkeley hills. Reported as at one time "resident" in the latter locality (see T. S. Palmer, in Belding, *Land Birds Pac. Dist.*, 1890, p. 229). Notes on habits and nesting of the Rock Wren on the Farallon Islands are to be found in the following papers: M. S. Ray, *Auk*, xxi, 1904, p. 440; W. L. Dawson, *Condor*, XIII, 1911, p. 183; W. E. Bryant, *Proc. Calif. Acad. Sci.*, 2nd ser., I, 1888, p. 49. For accounts of habits, song and nesting of this bird in other parts of California see: J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 103; J. Grinnell, *Univ. Calif. Publ. Zool.*, v, 1908, p. 118; W. L. Dawson, *Birds of California*, 1923, p. 683; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 550.

DOTTED CANYON WREN

Catherpes mexicanus punctulatus Ridgway

Rare resident locally in interior parts of the region. Has been found nesting in the rocky foothills east of Berryessa, Santa Clara County (see C. Barlow, *Condor*, II, 1900, p. 133), and near Tesla, Alameda County, eggs May 24, 1925 (H. W. Carriger, MS). Seen also on Mount Diablo (see L. Belding, *Land Birds Pacific District*, 1890, p. 230), and in late summer, among the rocks of a narrow canyon on Mount St. Helena (see W. K. Fisher, *Condor*, II, 1900, p. 138). General accounts of the habits, song

and nesting of the Dotted Canyon Wren elsewhere within the state are to be found as follows: J. Grinnell, *Condor*, VI, 1904, p. 44; W. M. Pierce, *Condor*, IX, 1907, p. 16; N. K. Carpenter, *Condor*, XXI, 1919, p. 28; A. Wetmore, *Condor*, XXIII, 1921, p. 63 (pertains to a related subspecies); F. M. Bailey, *Handbook*, 1902, p. 445 (under "Canyon Wren"); W. L. Dawson, *Birds of California*, 1923, p. 690; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 552.

VIGORS BEWICK WREN

Thryomanes bewickii spilurus (Vigors)

Common permanent resident throughout the counties south and east of the Golden Gate. Can easily be located in such places as Golden Gate Park, vicinity of Merced Lake, La Honda, Palo Alto, Los Gatos, Hayward and Berkeley. Preferred habitat, chaparral-covered hills, tangled growths along ravines, brush piles, and even shrubbery of city gardens. Nests from about the middle of April till the latter part of June, often choosing nesting sites, either natural or artificial, about dwellings. For general accounts of habits, song, nesting and food see: W. L. Finley, *American Birds*, 1907, p. 91; W. O. Emerson, *Ornithologist and Oologist*, IX, 1884, p. 87; H. R. Taylor, *Zoe*, I, 1890, p. 276; A. S. Allen, *Condor*, XVII, 1915, p. 84; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 57; W. L. Dawson, *Birds of California*, 1923, p. 667.

NICASIO BEWICK WREN

Thryomanes bewickii marinensis Grinnell

Has also been called Vigors Wren.

Common resident in the humid coastal portions of the region north of the Golden Gate. Found readily in vicinity of San Geronimo, Nicasio, and Inverness, Marin County, and around Guerneville, Freestone, Santa Rosa and Sebastopol, Sonoma County. To be looked for in tangles of low-growing vegetation on hillsides, or in willow and alder thickets along canyons. General accounts of habits, nesting, etc., cited under preceding race, doubtless apply as well to the Nicasio Wren.

SAN JOAQUIN BEWICK WREN

Thryomanes bewickii drymoecus Oberholser

Has been called Vigors Wren and Bewick Wren.

Common resident in the interior parts of the region, in Contra Costa, Solano, and Napa counties. This is the race found in the vicinity of Walnut Creek, Mount Diablo and Vacaville. Affects the chaparral and other growths like those favored by Vigors and Nicasio Bewick wrens. The three races of this wren are so similar externally that we may infer their habits and behavior to be practically identical; therefore see literature cited under Vigors Bewick Wren. See also: J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 555.

WESTERN HOUSE WREN

Troglodytes aëdon parkmanii Audubon

Has also been called Parkman Wren.

Common in summer in most parts of the Bay region not included in the redwood belt. Notably numerous in the oak belts of Santa Clara, Alameda, and Contra Costa counties. Arrives usually as early as March 1 (earliest date, February 24, 1894, at Berryessa, Santa Clara County), though in some years not until the first of April. Departs in the fall for the most part by September 10. While nesting chiefly in cavities of oak trees, several cases are reported of nesting in "artificial" sites. For

accounts of habits, nesting, food, etc., see: J. G. Cooper, Bulletin Nuttall Orn. Club, I, 1876, p. 79; F. A. Merriam, Auk, XIII, 1896, p. 122; W. O. Emerson, Condor, VII, 1905, p. 144; A. S. Allen, Condor, XXIII, 1921, p. 166; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 60; W. L. Dawson, Birds of California, 1923, p. 674; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 556.

WESTERN WINTER WREN
Nannus hiemalis pacificus (Baird)

Fairly common permanent resident in the denser forests of the immediate coast district of San Mateo, Marin and Sonoma counties. Known to nest in the redwoods of Pescadero Creek, San Mateo County, and in dark pine-shaded ravines near Inverness and the redwood groves on Lagunitas Creek, in Marin County. Appears irregularly as a mid-winter visitant elsewhere in the Bay region. Has been seen as early in the fall as November 1 at Berkeley, and October 16 at Hayward, and as late in the winter as February 17 in Stevens Creek Canyon, Santa Clara County, and March 15 near Berkeley. Frequents in winter the masses of drift along streams, and brush tangles on shaded hillsides. Notes on habits, song and nesting may be found in: F. M. Bailey, Handbook, 1902, p. 449; J. Grinnell, Condor, IV, 1902, p. 126; H. H. Sheldon, Condor, X, 1908, p. 121; J. M. Davis, Condor, XX, 1918, p. 190; W. L. Dawson, Birds of California, 1923, p. 679; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 558.

TULE MARSH WREN
Telmatodytes palustris paludicola (Baird)

Has also been called California Marsh Wren and Long-billed Marsh Wren.

Common permanent resident of tule swamps wherever such occur, in the coast belt both north and south of the Golden Gate and around the south arm of San Francisco Bay. In fall and winter spreads out more widely, visiting weedy and marshy places generally. May be located any time at Merced Lake, and at fresh-water ponds near Alvarado, Alameda County. For accounts of habits, nesting and food consult: F. M. Bailey, Handbook, 1902, p. 450; C. Keeler, Bird Notes Afield, 1907, p. 57; M. S. Ray, Condor, XVIII, 1916, p. 226; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 62; W. L. Dawson, Birds of California, 1923, p. 657.

SUISUN MARSH WREN
Telmatodytes palustris aestuarinus Swarth

Abundant permanent resident of the swampy areas of Solano and Napa counties. The tule patches bordering San Pablo and Suisun bays provide the typical nesting grounds of this race. A fall straggler has been taken at Palo Alto. In habits our different races of marsh wren are probably almost identical. For account of distribution see: H. S. Swarth, Auk, XXXIV, 1917, p. 310.

WESTERN MARSH WREN
Telmatodytes palustris plesius (Oberholser)

A winter visitant to marshy places. Specimens recorded from Palo Alto, Berkeley, Point Reyes and Tomales Point (see H. S. Swarth, Auk, XXXIV, 1917, p. 314). Since the races of marsh wrens are not distinguishable from one another with certainty out of hand, the relative abundance of each in winter cannot be stated upon the evidence so far accumulated.

TAWNY BROWN CREEPER
Certhia familiaris occidentalis Ridgway

Also called California Creeper.

Occurs as a fairly common permanent resident in the humid coastal portions of the region. To be found in the heaviest forests of Marin (Olema, Muir Woods), Sonoma (Sebastopol) and San Mateo (Pescadero Creek, etc.) counties, where shows a marked preference for the redwoods and Douglas firs. What is now thought to have been this subspecies nested one summer (1918) among the trees around the Greek Theater, at Berkeley. A specimen of this race is available (*Mus. Vert. Zool.*) taken at Berkeley November 14, 1891. For brief accounts of the habits and food of this race of creeper see: J. Grinnell, *Condor*, iv, 1902, p. 126; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 66.

SIERRA NEVADA BROWN CREEPER
Certhia familiaris zelotes Osgood

Has been called California Creeper and Western Creeper.

Occurs as a sparing and irregular mid-winter visitant on the eastern side of San Francisco Bay. Has been identified from Hayward, Alameda and Berkeley. Dates from the latter locality, and presumed to concern this race, range from December to March. Also, known to remain through the summer and nest in the inner mountains north of the Bay; for example, in Alpine Valley, northeast of Santa Rosa, Sonoma County (*Mus. Vert. Zool.*). A general account of the habits of the Sierra Nevada Brown Creeper is to be found in: J. G. Tyler, *Pacific Coast Avifauna* no. 9, 1913, p. 105. For accounts of nesting see: C. Barlow, *Condor*, ii, 1900, p. 59; J. Grinnell, *Condor*, ix, 1907, p. 59; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 561.

SLENDER-BILLED WHITE-BREASTED NUTHATCH
Sitta carolinensis aculeata Cassin

Has also been called Western Nuthatch and Slender-billed Nuthatch.

A permanent resident locally in certain interior parts of the region, where adheres closely to tracts of oaks, both for food and for nesting purposes. Found thus in Sonoma County in the vicinity of Sebastopol and Santa Rosa, in southern Santa Clara County, and in Contra Costa County in the neighborhood of Lafayette. In at least some instances, as during 1918, it has been seen at intervals throughout both summer and winter among the bays and oaks of Strawberry Canyon at Berkeley. It has been noted rarely as a winter visitant also at Hayward, Alameda County, Redwood City, San Mateo County, San Geronimo, Marin County, and Cazadero, Sonoma County. For accounts of habits, nesting and food see: F. M. Bailey, *Handbook*, 1902, p. 453; M. S. Ray, *Condor*, xx, 1918, p. 75; H. Michener, *Condor*, xxvii, 1925, p. 38; I. G. Wheelock, *Auk*, xxii, 1905, p. 63; W. L. Dawson, *Birds of California*, 1923, p. 638; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 564.

RED-BREASTED NUTHATCH
Sitta canadensis Linnaeus

Has also been called Canada Nuthatch.

Irregularly common fall and winter visitant. Very local in manner of occurrence, and may skip certain apparently suitable sections altogether when common nearby at the same time. Frequents redwood and pine timber; sometimes visits the planted pines and cypresses of parks and gardens. May arrive as early as the last of August

and has remained as late as April 28 (these records at Berkeley). There are records for Golden Gate Park, in December and February, and even for the Farallon Islands, in September. Has been found in summer in Douglas firs west of Cazadero, Sonoma County. For brief accounts of habits, nesting and voice see: C. Keeler, *Bird Notes Afield*, 1907, p. 60; W. L. Dawson, *Birds of California*, 1923, p. 643; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 568.

NORTHERN PIGMY NUTHATCH

Sitta pygmaea pygmaea Vigors

Fairly common permanent resident locally in the coast district of Marin and Sonoma counties. Apparently restricted to the tracts of pines, such as occur in the vicinity of Olema, Inverness, and on the seacoast near Plantation. Seems to avoid the redwoods altogether. For general information in regard to habits, nesting and food see: F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 67; I. G. Wheelock, *Auk*, xxii, 1905, p. 62; J. Grinnell, *Univ. Calif. Publ. Zool.*, v, 1908, p. 123; C. Gignoux, *Condor*, xxvi, 1924, p. 31; W. L. Dawson, *Birds of California*, 1923, p. 646; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 571.

CALIFORNIA PLAIN TITMOUSE

Baeolophus inornatus inornatus (Gambel)

Has also been called Plain-crested Titmouse.

Common permanent resident locally in the interior parts of the region. Does not ordinarily invade the immediate coast belt; avoids redwoods and other conifers. Nests usually in live oaks or blue oaks. Especially characteristic of the oak belt in the Santa Clara and Santa Rosa valleys, and on the Mount Hamilton range. For accounts of habits, nesting, voice and food see: E. Adams, *Osprey*, ii, 1898, p. 81; F. M. Bailey, *Handbook*, 1902, p. 456; C. Keeler, *Bird Notes Afield*, 1907, p. 111; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 68; J. Grinnell, *Condor*, xxv, 1923, p. 176; D. S. Jordan, *Condor*, xxvii, 1925, p. 241; W. L. Dawson, *Birds of California*, 1923, p. 601; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 572.

NORTHWESTERN CHESTNUT-BACKED CHICKADEE

Penthestes rufescens rufescens (J. K. Townsend)

Has also been called Chestnut-sided Chickadee.

Common permanent resident in the forested coastal district of Sonoma County south to the vicinity of Freestone and southeast to near Sebastopol; also locally to the eastward, on Mount St. Helena, and in Rincon Valley, three miles northeast of Santa Rosa. Nests are to be found in cavities of oaks and willows. For accounts of distribution see: J. Mailliard, *Condor*, x, 1908, p. 181; J. Grinnell, *Auk*, xxi, 1904, p. 364.

MARIN CHESTNUT-BACKED CHICKADEE

Penthestes rufescens neglectus (Ridgway)

Has also been called California Chickadee.

Common permanent resident in the woods of western Marin County. May be found in numbers in the redwood tracts at Mill Valley, Muir Woods, around Mount Tamalpais, at San Geronimo and Lagunitas, and in the pines and alders of the Point Reyes district, as around Inverness.

SANTA CRUZ CHESTNUT-BACKED CHICKADEE
Penthestes rufescens barlowi (Grinnell)

Has also been called California Chickadee, Barlow Chickadee, and Chestnut-backed Titmouse.

Common permanent resident in the forested parts of the coast belt south of San Francisco Bay. While usually showing preference for the redwoods, also inhabits tracts of willow and planted groves of eucalyptus and cypress. Nests near the Presidio, in Golden Gate Park, and in the arboretum at Stanford University (young leaving nest April 27). Found east of the Bay only as a rare straggler, once at Berkeley and a few times at Hayward. For nesting habits and distribution see: M. S. Ray, Condor, XIII, 1911, p. 211, and Condor, XVIII, 1916, p. 226; J. Grinnell, Auk, XXI, 1904, p. 375.

PACIFIC COAST BUSH-TIT
Psaltriparus minimus minimus (J. K. Townsend)

Sometimes called also Least Titmouse.

Abundant permanent resident practically throughout the region, save for Napa and Solano counties which are occupied by the slightly different race next listed. Inhabits all sorts of shrubbery and trees, cultivated as well as wild. Shows greatest preference, perhaps, for live oaks, especially as nesting sites. An early date for nest-building is February 27, in Strawberry Canyon, Berkeley. For accounts of voice, nesting and food see: J. Grinnell, Condor, v, 1903, p. 85; W. L. Finley, American Birds, 1907, p. 105; W. L. Finley, Bird-Lore, XI, 1909, p. 225; I. G. Wheelock, Auk, XXII, 1905, p. 68; G. Willett, Condor, XVI, 1914, p. 168; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 74; R. C. Miller, Condor, XXIII, 1921, pp. 121, 184.

CALIFORNIA BUSH-TIT
Psaltriparus minimus californicus Ridgway

Common permanent resident of suitable parts of Napa and Solano counties, in other words, the less humid interior section of the Bay region north of Carquinez Strait (see Swarth, Auk, XXXI, 1914, p. 499). So closely similar to the preceding as not to be distinguishable except on the basis of specimens in hand. The literature cited under the preceding head applies to one or the other or to both races. See also: J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 579.

INTERMEDIATE WREN-TIT
Chamaea fasciata fasciata (Gambel)

Has also been called Ground Wren and Ground Tit.

An abundant permanent resident widely through the counties south and east of San Francisco Bay, that is, in San Francisco, San Mateo, Santa Clara and Alameda counties. To be found almost entirely in the low-growing bushes, shrubs, or vines that constitute the chaparral of the hills and canyons of these counties. Here are afforded appropriate shelter and nesting sites as well as the favorite food. Dates for eggs range from April 1 to May 18. During the late summer and autumn months individuals often appear in shrubbery of city gardens and parks. General accounts of habits, notes, nesting and food are to be found as follows: F. M. Bailey, Handbook, 1902, p. 460; C. Keeler, Bird Notes Afield, 1907, pp. 63, 70; J. Grinnell, Condor, XV, 1913, p. 178; W. C. Newberry, Condor, XVIII, 1916, p. 65; L. Miller, Condor, XXIII, 1921, p. 97; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 71; W. L. Dawson, Birds of California, 1923, p. 822.

PALLID WREN-TIT

Chamaea fasciata henshawi Ridgway

A permanent resident of the drier, interior parts of the region to the northeast of San Francisco Bay. Geographically complementary to the Intermediate and Ruddy wren-tits of the other sections of this region, and likewise to be found in the chaparral belt. It is this race that occurs in the ranges of hills immediately west of Vacaville, Solano County. Accounts of habits, voice, nesting and food cited under the Intermediate Wren-tit probably apply closely to this race also. See also: J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 582.

RUDDY WREN-TIT

Chamaea fasciata rufula Ridgway

An abundant resident in the coast belt on the north side of San Francisco Bay, in Marin and Sonoma counties; also to the south of San Francisco, on the ocean-facing slope of San Mateo County. Found almost exclusively in the chaparral of sunny hillsides. Manzanita, ceanothus and other low-growing shrubs on the slopes of Mt. Tamalpais and on the hills around Muir Woods afford ideal shelter for this wren-tit. For accounts of habits, voice, nesting and food, refer to literature cited under preceding races. No differences have been detected in these matters between the several subspecies of the wren-tit.

WESTERN GOLDEN-CROWNED KINGLET

Regulus satrapa olivaceus Baird

Has also been called Golden-crested Wren.

A winter visitant to well-shaded, woodsy places almost wherever these occur. Irregular in appearance (earliest October 13, in Stevens Creek Canyon, Santa Clara County); none seen some seasons until late November or even December. Departs early, by the first of March usually; latest date, March 11, at Lake Lagunitas, Marin County. In some years none at all has been detected on the eastern side of the Bay. A very few have been found to remain through the summer, and nest, in northwestern Sonoma County, near Guerneville, and along the South Fork of the Gualala River (see H. H. Sheldon, *Condor*, x, 1908, p. 123). For general accounts see: F. M. Bailey, *Condor*, xix, 1917, p. 50; W. L. Dawson, *Birds of California*, 1923, p. 796; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 586.

EASTERN RUBY-CROWNED KINGLET

Corthylio calendula calendula (Linnaeus)

Midwinter visitant in seemingly nearly equal numbers with the western race (next listed), and to be seen in the same types of environment. Indistinguishable, except by comparison of museum specimens. Has been positively identified from the following localities: Petaluma, Sonoma County; San Geronimo, Marin County; Moraga Valley, Contra Costa County; Berkeley, Oakland, Piedmont and Hayward, in Alameda County; Palo Alto and Stevens Creek Canyon, Santa Clara County. Earliest and latest dates among these occurrences are October 13 and February 11, respectively. Natural history may safely be considered as exceedingly close to that of the next race.

WESTERN RUBY-CROWNED KINGLET

Corthylio calendula cineraceus (Grinnell)

Abundant winter visitant throughout the region, affecting chaparral, garden shrubbery, and trees of all sorts. Arrives early in October; an early date is September 26, at Berkeley. Departs in the spring, mostly by the first week in April; a late date is

April 13, at Berkeley. For general accounts of song, habits, etc., see: A. Head, *Bird-Lore*, v, 1903, p. 52; A. W. Anthony, *Nidologist*, III, 1895, p. 16; M. S. Ray, *Condor*, XII, 1910, p. 130; M. S. Ray, *Condor*, xv, 1913, p. 113; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 81; W. L. Dawson, *Birds of California*, 1923, p. 801; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 589.

SITKA RUBY-CROWNED KINGLET

Corthylio calendula grinnelli (W. Palmer)

Somewhat rare mid-winter visitant, occurring chiefly in the immediate coast district. Has been reported authentically from Camp Meeker, Sonoma County, from Pescadero Creek and La Honda, in San Mateo County, from Palo Alto, Santa Clara County, from San Geronimo, Marin County, and from Hayward, Oakland and Berkeley, Alameda County. Earliest and latest dates are October 12 and March 11. To be found in the same environment as the Western Ruby-crowned Kinglet, and scarcely to be distinguished from that form out of hand.

WESTERN BLUE-GRAY GNATCATCHER

Poliophtila caerulea amoenissima Grinnell

Occurs in summer, and doubtless nests, rather sparingly in areas of broken chaparral or scrubby oak on the Mount Hamilton Range, in the hills of Alameda and Contra Costa counties, and in the Mount St. Helena country. Has appeared in late summer, fall, or winter, sometimes in numbers, at several points nearly or quite to the coast; for example, at Point Bonita (August), Rodeo Lagoon (August), and San Geronimo (August), in Marin County; at Berkeley (in every month from September to April, except January); at San Francisco (December); at Point San Pedro, San Mateo County (March); and at Palo Alto, Santa Clara County (April). For general accounts of nesting and habits see: C. Chamberlin, *Condor*, III, 1901, p. 33; H. W. Myers, *Condor*, IX, 1907, p. 48; W. L. Dawson, *Birds of California*, 1923, p. 809; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 593.

TOWNSEND SOLITAIRE

Myadestes townsendi (Audubon)

Rare and irregular mid-winter visitant. Our earliest fall date is November 11, at Lake Lagunitas, Marin County; our latest date, March 15, at Berkeley. Has been definitely observed at the following additional points: Oakland; Austin Creek, Sonoma County; San Geronimo, Marin County; Woodside, San Mateo County; and Los Gatos, Santa Clara County. To be looked for in pepper trees along suburban streets, as well as around toyon and cascara bushes in wild, hilly country. For accounts of habits, food, nesting and song see: F. E. L. Beal, *U. S. Dept. Agric. Bulletin* no. 280, 1915, p. 3; F. S. Hanford, *Condor*, XIX, 1917, p. 13; W. L. Dawson, *Condor*, XXI, 1919, p. 12; C. L. Whittle, *Condor*, XXIV, 1922, p. 78; J. Mailliard, *Condor*, XXVIII, 1926, p. 127; W. L. Dawson, *Birds of California*, 1923, p. 785; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 595.

PACIFIC RUSSET-BACKED THRUSH

Hylocichla ustulata ustulata (Nuttall)

Abundant in summer, nesting in lowland orchards, along willow-bordered streams, and in forested canyons, wherever in the whole region such occur. Arrives later than most of the summer visitants in the Bay region, about the last of April; an early date is April 15, at Berkeley. Departs by the last of August; the latest fall date known to us is September 24, at Berkeley. Nests are situated in low tangles of shrubbery.

An early date for eggs is May 18, at Palo Alto. Found on Southeast Farallon Island, May 29, 1911 (specimen in Calif. Acad. Sci.). For accounts of song, nesting, etc., see: C. Keeler, Bird Notes Afield, 1907, p. 96; W. L. Finley, American Birds, 1907, p. 199; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 86; J. Mailliard, Condor, xxii, 1920, p. 38; W. L. Dawson, Birds of California, 1923, p. 750; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 600.

ALASKA HERMIT THRUSH
Hylocichla guttata guttata (Pallas)

Sparse winter visitant. Specimens in the Museum of Vertebrate Zoology identified as of this subspecies are of data as follows: Berkeley, November 14; Oakland, December 21, February 1 and March 17 and 19.

DWARF HERMIT THRUSH
Hylocichla guttata nanus (Audubon)

Abundant winter visitant throughout practically the whole region. Arrives ordinarily about the middle of October; an early record is September 26, at San Geronimo. To be found in woods, in chaparral, in stream-side thickets, and in shrubbery of city gardens; in fact, it avoids only the most open ground of meadows, fields and hillsides. Departs about the first of April; a late spring date is April 21, at Berkeley. For accounts of food see: A. S. Allen, Condor, xvii, 1915, p. 84; F. E. L. Beal, U. S. Biological Survey Bulletin no. 30, 1907, p. 92. For general accounts see: W. L. Dawson, Birds of California, 1923, p. 739; J. Grinnell and T. I. Storer, Animal Life in the Yosemite, 1924, p. 602.

MONTEREY HERMIT THRUSH
Hylocichla guttata slevini Grinnell

A summer resident in small numbers in the most humid parts of the immediate coast district. Adheres closely to the denser redwood growths on shaded slopes and in canyon bottoms. Places where this thrush has been found are: Butano Creek, in San Mateo County; Bolinas Ridge, in Marin County; and Camp Meeker, Bohemian Grove, Guerneville, Cazadero, and South Fork of Gualala River, in Sonoma County; Howell Mountain, Napa County. For accounts of habits, nesting, and song, see: H. H. Sheldon, Condor, x, 1908, p. 121; J. Mailliard, Condor, x, 1908, p. 134, and Condor, xx, 1918, p. 192.

WESTERN ROBIN
Planesticus migratorius propinquus (Ridgway)

More or less abundant in winter throughout the whole region. Present in this winter-visitant role ordinarily from about November to March, but flocks occasionally appear as early as October 15 and they may remain as late as the last of April. The numbers vary from season to season apparently in accordance with the abundance here and elsewhere of such berries as the Christmas-berry (*Heteromeles*).

Also present through the summer, and breeding locally, in the cooler coastal strip. Not known in this permanent-resident status previously to 1915 south of Sonoma (Cazadero and Seaview) and Marin (Inverness and San Geronimo) counties; but of more recent years has appeared, and is spreading, south and east of the Bay. First noted through the summer in Golden Gate Park, San Francisco, in 1915 (see W. A. Squires and H. E. Hansen, Condor, xviii, 1916, p. 170); now nests regularly there (T. I. Storer, MS). First found nesting in the East Bay region in 1917, in the northern section of Oakland (A. S. Allen, Condor, xix, 1917, p. 185). Appeared first

through the summer on the University campus at Berkeley in 1920, and thereafter has increased steadily and spread to surrounding neighborhoods. An early nesting date is, for eggs, April 10 (1926), in Strawberry Canyon.

For accounts of the Western Robin relating to voice, behavior, food or nesting, see: W. L. Finley, *American Birds*, 1907, p. 199; F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 93; J. Grinnell, *Condor*, xxviii, 1926, p. 97; T. I. Storer, *Condor*, xxviii, 1926, p. 264; W. L. Dawson, *Birds of California*, 1923, p. 758; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 605.

COAST VARIED THRUSH
Ixoreus naevius naevius (Gmelin)

Has also been called Varied Robin and Oregon Robin.

A winter visitant; in some years widely distributed and numerous; in other years few in numbers and restricted to the special neighborhoods most favored by this species, namely, wooded hillsides affording such food, at least in part, as toyon berries and rain-soaked acorns. Arrives ordinarily in November and departs in March, with early arrivals the last of October and late departures the first week of April. The earliest date we have is October 21, at Lagunitas, Marin County. The latest date we know of for Berkeley is April 18 (1925); for Palo Alto, April 27 (1901). Was observed in Golden Gate Park, San Francisco, January 12, 1921. May be confidently looked for, in season, in such localities as Woodside, San Mateo County, Mill Valley and Muir Woods, Marin County, and Strawberry Canyon near Berkeley. For general accounts see: J. Grinnell, *Condor*, II, 1900, p. 5; J. Mailliard, *Condor*, x, 1908, p. 118; J. E. Law, *Condor*, xxiii, 1921, p. 66; W. L. Dawson, *Birds of California*, 1923, p. 768.

NORTHERN VARIED THRUSH
Ixoreus naevius meruloides (Swainson)

Winter visitant, for the most part, probably, in the eastern parts of the Bay region. Definite instances of occurrence are: Mount St. Helena, Napa County, October 5, 1919; Sebastopol, Sonoma County, November 15, 1884; Berkeley, Alameda County, February 2, 1925 (specimens examined in each case).

WESTERN MEXICAN BLUEBIRD
Sialia mexicana occidentalis J. K. Townsend

Common in winter, appearing in small companies which wander widely over open country, hilly as well as level. Also occurs throughout the summer, but only locally, and more sparingly. Nests regularly in coastal parts of the counties north of the Bay, especially along the sea-coast from the Russian River to the Gualala; south of the Bay, more restricted and adhering to oak belts: Berkeley hills, vicinity of Walnut Creek, Sunol, Calaveras Valley, Los Gatos, etc.; in rarer cases has nested in Berkeley (see E. D. Clabaugh, *Condor*, xxvi, 1924, p. 228), Hayward (see J. G. Cooper, *Amer. Naturalist*, x, 1876, p. 90), and San Francisco (see M. S. Ray, *Condor*, viii, 1906, p. 44). For general accounts see: W. L. Finley, *Condor*, ix, 1907, p. 124, and F. E. L. Beal, *U. S. Biological Survey Bulletin* no. 30, 1907, p. 97; W. L. Dawson, *Birds of California*, 1923, p. 774; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 615.

MOUNTAIN BLUEBIRD
Sialia currucoides (Bechstein)

Has also been called Arctic Bluebird.

Irregular and sparse mid-winter visitant, appearing in open pasture-lands or stubble-fields. Has been reported definitely as follows: Sonoma, Sonoma County, December 8 to March 9; Palo Alto, Santa Clara County, February 28; Livermore, January 30, San Leandro, January 1 and 6, Hayward, February 16, and near Tesla, March 23, in Alameda County. For general accounts see: W. L. Dawson, *Birds of California*, 1923, p. 781; J. Grinnell and T. I. Storer, *Animal Life in the Yosemite*, 1924, p. 622.

SUMMARY

The total number of birds formally listed in the preceding Directory, counting both species and subspecies, is 383. This number, then, includes all of the kinds up to the present time identified positively within the San Francisco Bay region. Eliminating the third term of trinomials, if one chooses to ignore subspecies, there is left 324 as the number of "full" species.

As is well known by those who have attempted to classify any local list of birds on the basis of seasonal or numeral status, it is difficult to arrive at definite figures in these regards. We offer the following classification, therefore, with full realization that someone else would probably differ from us, and would do so on quite defensible grounds.

On the basis of the data presented in the preceding Directory, we find that 121 out of the entire 383 may be grouped as permanent residents, 44 as summer residents, 131 as winter visitants, 38 as regular transients, 24 as rarities or vagrants more or less to be expected, 20 as of casual or "accidental" occurrence, not reasonably to be expected to recur soon, 3 as species formerly common enough, but now gone, and 2 as non-native, that is, introduced.

The species we group under the last four headings are as follows: Rarities, but to be expected: Horned Puffin, Xantus Murrelet, Royal Tern, Elegant Tern, Least Tern, Pink-footed Shearwater, Black Petrel, Blue-winged Teal, Emperor Goose, Wood Ibis, Common Snowy Heron, Florida Gallinule, Snowy Owl, Northern Black Swift, Costa Hummingbird, Clark Nutcracker, Pinyon Jay, Cassin Purple Finch, Brewer Sparrow, California Black-chinned Sparrow, Green-tailed Towhee, California Blue Grosbeak, Least Bell Vireo, Alaska Water-thrush. Casuals: Yellow-nosed Albatross, Pacific Man-o'-war-bird, King Eider, Roseate Spoonbill, Little Ringed Plover, Mexican Ground Dove, Bobolink, Nevada Cowbird, Nelson Sharp-tailed Sparrow, Harris Sparrow, Yakutat Song Sparrow, Mendocino Song Sparrow, Swamp Sparrow, Tennessee Warbler, Canadian Black-throated Blue Warbler, Magnolia Warbler, Black-throated Green Warbler, Oven-bird, American Redstart, Catbird. Species now gone: Wood Duck, California Condor, Southern Bald Eagle. Introductions: Ring-necked Pheasant, English House Sparrow.

The principle may again be stated, for emphasis, that the population of any given territory must be considered far from stationary. Changes are going on continually, even under normal conditions. And when a region is undergoing rapid settlement by the human species, as is the case with the San Francisco Bay region, the floral and consequently the faunal changes are exceedingly rapid and profound. Species of birds are disappearing, some never to return; some species are just about holding their own; a few others, it is true, are increasing in numbers and spreading; while, finally, there

are some new-comers, both through man's agency and through independent invasion from adjacent territories. On the whole, it looks as though the total number of species in the Bay region at the present time were undergoing decided reduction, due in major part to the elimination of habitats of wide diversity or of productive kinds. There is little doubt, too, that the aggregate number of individual birds, of all species together, is also becoming less, due to the expansion of closely built-up urban areas where practically no undomesticated bird-life of any sort can exist.

Even though such changes in the direction of diminution are in large part inevitable, they can and should be compensated for insofar as is practicable by the establishment of parks and natural preserves here and there, such as Muir Woods, and by the spread of popular appreciation of bird-life as a community asset, so that general protection and encouragement of this asset for its esthetic and other values will become second-nature throughout our citizenry.

INDEX

NOTE.—This index includes only the names, vernacular and scientific, of the birds as listed in the present paper, in the General Directory (pages 35 to 149). The vernacular synonyms given there are also included, but *not* the many other names, both common and scientific, which have been used elsewhere in literature for the same species and subspecies.

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